



MINERAL RESOURCES and ORE RESERVES

January 2009

Xstrata Alloys has adopted the 2004 Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (the JORC Code) as its mandatory standard for the estimation of public reporting of Mineral Resources, Ore Reserves and Exploration Results.

The estimation process is further based on the Xstrata Alloys procedure "HSEC-G-08-The Procedure for the estimation of Mineral Resources and Ore Reserves".

The Ore Reserves and Mineral Resources are declared as at the 30th of June 2008, unless stated otherwise for the particular commodity.

This statement covers four ore types currently being mined and beneficiated by Xstrata Alloys. The ore types are:

- Chromitite
- Vanadiferous Magnetite
- Quartzite
- PGE mineralized chromitite ore

In addition Xstrata Alloys mines Anthracite coal.

The Ore Reserve and Mineral Resource information in the tables on the following pages is based on information compiled by Competent Persons (as defined by the JORC and SAMREC Codes).

The Competent Person initials have been included after each mine or project for which the Competent Person have been responsible. Each of the Competent Persons has the appropriate professional membership and the relevant experience in relation to the Mineral Resources and/or Ore Reserves being reported by them to qualify as a Competent Person as defined in the JORC and SAMREC Codes. The Competent Persons have consented to the inclusion in the report of the matters based on their information in the form and context in which it appears. Copies of the consenting letter are kept with the legal department of Xstrata Alloys.

Metric units are used throughout. All data is presented on a 100% basis. All tonnage and grade information has been rounded to reflect the relative uncertainty in the estimates; there may therefore be small differences in the totals. Mineral Resources are reported inclusive of those Mineral Resources modified to produce Ore Reserves.

Commodity prices and exchange rates used to estimate the economic viability of Ore Reserves are based on long term forecasts applied at the time the estimate was calculated.

The detail background information for the estimation of the Mineral Resources and Ore Reserves can be requested from Xstrata Alloys.

This statement has been reviewed, extracted and compiled by Pieter-Jan Gräbe, Xstrata Alloys, (SACNASP).

Definitions

The following definitions (as per the JORC Code 2004), have been applied in estimating the Ore Reserves and Mineral Resources position of the Xstrata Zinc disclosed within this document.

Mineral Resource: a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

Inferred Mineral Resource: that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

Indicated Mineral Resource: that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

Measured Mineral Resource: that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Ore Reserve: the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

Probable Ore Reserve: the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

Proved Ore Reserve: the economically mineable part of a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

Consolidated Chrome Mineral Resource and Ore Reserve Statement

As at 30 June 2008

Tonnage are quoted in million metric tonnes
Grades are quoted as % Cr₂O₃

	Attributable (%)	Mining Method	Commodity	RESERVES				RESOURCES			
				Run-of-Mine		Saleable		Measured	Indicated	Inferred	Competent
				Proved	Probable	Proved	Probable				
Operating Mines											
Waterval West Mine	79.5%	UG	Ore	9.892	1.729	6.412	1.017	15.795	2.234	0.642	PJG/DR
			Cr ₂ O ₃	31.45%	29.07%	41.93%	41.93%	41.28%	42.04%	42.40%	
Kroondal Mine	79.5%	UG/OC	Ore	2.775	4.251	1.646	2.327	9.590	3.926	-	PJG/DR
			Cr ₂ O ₃	30.85%	27.16%	41.93%	41.93%	42.80%	42.31%	-	
Kroondal Gemini (Kroondal ext)	50.0%	UG/OC	Ore	6.414	6.938	4.038	4.067	9.788	7.729	0.977	PJG/DR
			Cr ₂ O ₃	31.70%	29.27%	41.93%	41.93%	43.08%	42.57%	42.52%	
Marikana East (Kroondal ext)	74.0%	UG	Ore	3.326	0.578	1.957	0.329	5.129	1.905	0.532	PJG/DR
			Cr ₂ O ₃	29.44%	27.91%	41.93%	41.93%	42.67%	42.09%	42.30%	
Thornclyffe Mine	79.5%	UG/OC	Ore	24.961	7.197	20.481	5.692	37.715	14.405	22.256	PJG/DR/BS/SV
			Cr ₂ O ₃	39.09%	38.26%	42.00%	42.00%	40.52%	40.61%	40.97%	
Helena Mine	79.5%	UG/OC	Ore	3.762	0.348	2.775	0.244	6.997	18.093	65.257	PJG/DR/BS/SV
			Cr ₂ O ₃	34.95%	33.81%	42.00%	42.00%	40.57%	40.10%	38.76%	
Horizon/Chromeden Mine	79.5%	UG/OC	Ore	-	-	-	-	0.064	14.483	8.657	PJG
			Cr ₂ O ₃	-	-	-	-	41.80	42.58%	42.08%	
Total				51.131	21.041	37.308	13.676	85.078	62.774	98.320	
Projects/Non-operating Mines											
Wonderkop	79.5%	UG	Ore	-	-	-	-	-	6.462	-	PJG
			Cr ₂ O ₃	-	-	-	-	-	40.10%	-	
Townlands Extension 9	79.5%	UG	Ore	-	-	-	-	-	14.958	-	PJG
			Cr ₂ O ₃	-	-	-	-	-	41.70%	-	
De Grooteboom	79.5%	UG/OC	Ore	-	-	-	-	0.848	0.641	-	PJG/DR/BS/SV
			Cr ₂ O ₃	-	-	-	-	40.36%	40.60%	-	
Boshoek	79.5%	OC/UG	Ore	-	-	-	-	0.503	19.205	0.142	PJG
			Cr ₂ O ₃	-	-	-	-	38.12%	40.33%	40.52%	
Klipfontein/Waterval Reserve	79.5%	UG	Ore	-	-	-	-	2.212	6.287	135.164	PJG/DR
			Cr ₂ O ₃	-	-	-	-	42.60%	42.58%	42.05%	
Marikana West	74.0%	UG	Ore	-	-	-	-	3.173	1.207	1.258	PJG/DR
			Cr ₂ O ₃	-	-	-	-	42.56%	42.39%	42.30%	
Total				-	-	-	-	6.735	48.761	136.564	
Grand Total Xstrata				51.131	21.041	37.308	13.676	91.814	111.535	234.884	

Definitions

OC = Opencast; UG = Underground

Notes

- The Mineral Resources and Ore Reserve estimates are tabulated on a total mine basis as at 30th June 2008.
- The Measured - and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Ore Reserves.
- Xstrata Alloy's chrome mining operations are all mining the chromitite deposits developed within the world renowned Bushveld Complex of South Africa. The Bushveld Complex is the largest known deposit of chrome ore in the world. The chrome ore are mined from shallow dipping (10° - 14°) tabular ore bodies referred to as the LG6/LG6A Chromitite Layers and the MG1 Chromitite Layer. The chromitite layers are mined mainly underground using trackless mechanized mining methods on a board-and-pillar mine lay-out design.
- Changes in the year on year tonnage and grade estimates are mainly due to mining depletion, and changes in the resource and reserve tonnages and grades due to additional geological information gained through exploration.
- The Mineral Resources are estimated as in-situ chromitite tonnages and grades to reflect the grades of the various individual chromitite layers. Xstrata is currently mining the LG6 - and MG1 Chromitite Layers which have different in-situ grade characteristics.
- Various chromitite layer configurations are mined which produce different ROM products. For this reason the Ore Reserves are estimated and declared as ROM Ore Reserves and Saleable Ore Reserves to reflect the diluting effect of the mining process and the subsequent beneficiation process which produce various high grade chromite products.
- The grade block models for Thornclyffe, Helena, Kroondal and Waterval have been updated with the latest geological information.

Competent Person

PJG - Pieter-Jan Gräbe, Xstrata Alloys, (SACNASP).
BS - Brian Smith, Xstrata Alloys, (PLATO).
DR - Dean Richards, Obsidian Consulting Services, (SACNASP).

Consolidated Vanadium Mineral Resource and Ore Reserve Statement

As at 30 June 2008

Tonnage are quoted in million metric tonnes
Grades are quoted as % V₂O₅ (in-situ)

	Attributable (%)	Mining Method	Commodity	RESERVES		RESOURCES			
				Proved (Mt)	Probable (Mt)	Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Competent Person
Operating Mines									
Rhovan	100%	OC	Magnetite Ore V ₂ O ₅ (in-situ)	15.480 0.48%	12.326 0.52%	39.266 0.51%	41.256 0.53%	128.221 0.51%	PJG
Total				15.480	12.326	39.266	41.256	128.221	

Definitions

OC = Opencast; UG = Underground

Notes

- The Mineral Resources and Ore Reserve estimates are tabulated on a total mine basis as at 30th June 2008.
- The Measured - and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Ore Reserves.
- Xstrata Alloy's vanadium mining operations are mining the vanadiferous magnetite deposits developed within the Bushveld Complex.. The Bushveld Complex is one of the largest known deposits of vanadiferous magnetite ore in the world. The magnetite ore is mined from shallow dipping (6° - 25°) stratified ore bodies. The magnetite ore is mined through opencast mining methods.
- Changes in the year on year tonnage and grade estimates are mainly due to mining depletion, reclassification and changes in the resource and reserve tonnages and grades due to additional geological information gained through exploration.
- Tacmin (Pty) Ltd (Open-pit Mine Engineering Consultants & Project Managers) estimated the Mineral Resources and Ore Reserves for Pit 1, Pit 2, Pit 4, Pit 5 and Pit 6.
- The geological grade block model for Pit 1 and Pit 2 were updated which resulted in a reclassification of some of the Mineral Resources.
- The geological grade block models for Pit 4, 5 and 6 were updated with new exploration data.
- A pit optimization exercise was done for Pits 1, 2, 4, 5 and 6 which resulted in reclassification of some of the Ore Reserves.
- Supporting documentation can be viewed at Xstrata Alloys.
- The attributable portion may change in the coming year with the introduction of a BEE partner.

Competent Person

PJG = Pieter-Jan Gräbe, Xstrata Alloys (SACNASP); Competent person for both Mineral Resources and Ore reserves.

Consolidated PGM Mineral Resource and Ore Reserve Statement

As at 30 June 2008

Tonnage are quoted in million metric tonnes
Grades are quoted as 3PGE + Au g/t

	Attributable (%)	Mining Method	Commodity	RESERVES		RESOURCES				
				Proved	Probable	Measured	Indicated	Inferred	Competent	
				(Mt)	(Mt)	(Mt)	(Mt)	(Mt)	Person	
Operating Mines/Project										
Mototolo JV	37.0%	UG/OC	UG2 Ore 3PGE + Au	4.853 3.67g/t	11.543 4.09g/t	8.732 3.96g/t	33.727 4.38g/t	12.299 4.15g/t	PJG/BS/DN/PS	
Eland Platinum	73.99%	UG/OC	UG2 Ore 3PGE + Au	6.964 3.38g/t	4.622 2.66g/t	22.228 4.01g/t	49.710 4.19g/t	94.946 4.59g/t	PJG/DN(X)/DR/CL	
Zilkaatsnek	73.99%	UG/OC	UG2 Ore 3PGE + Au	-	-	3.770 2.48g/t	0.595 2.84g/t	-	PJG/DN(X)/DR/CL	
Total tonnage and grade				Tonnage (t)	11.817	16.165	34.730	84.032	107.245	
				3PGE+Au (g/t)	3.50	3.68	3.83	4.26	4.54	

Definitions

OC = Opencast; UG = Underground

Notes

- **General**
 - The Mineral Resources and Ore Reserve estimates are tabulated on a total mine basis as at 30th June 2008.
 - The Measured - and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Ore Reserves.
 - Xstrata Alloy's platinum mining operations are mining the platinum bearing UG2 Chromitite Layer of the Bushveld Complex. The Bushveld Complex is the largest known deposit of PGM's in the world. The PGM ore is mined from a shallow dipping (10° - 14°) tabular ore-body referred to as the UG2 Chromitite Layer. The chromitite layer is mined underground using a trackless mechanized mining method on a board-and-pillar mine lay-out design.
 - Changes in the year on year tonnage and grade estimates are mainly due to mining depletion, reclassification and changes in the resource and reserve tonnages and grades due to additional geological information gained through exploration.
- **Mototolo JV**
 - The previous Mototolo statement was at the 31 December 2007 to coincide with the Anglo Platinum Resource and Reserve declaration.
 - **Mineral Resources**
 - Pieter-Jan Gräbe as the Competent Person for Xstrata Alloys has signed the Mineral Resources and Ore Reserves.
 - Re-evaluation of the Mineral Resources have resulted in a lower confidence in certain Indicated Mineral Resources with a resulting transfer of these resources to Inferred Mineral Resources (12.299Mt)
 - In October 2008 a new resource evaluation was conducted by Obsidian Consulting Services on behalf of Xstrata Alloys.
 - **Ore Reserves**
 - For the current statement Xstrata converted only the Mineral Resources within the 5-year detail mine plan window to Ore Reserves resulting in an Ore Reserve tonnage decrease from 27.346Mt to 16.396Mt.
 - The Proved Ore Reserve tonnage increases from 3.860Mt to 4.853Mt.
- **Eland Platinum**
 - Since Eland Platinum was acquired by Xstrata Alloys on the 26 October 2007 this is the first Resource and Reserve estimate published by Xstrata Alloys. Xstrata Alloys has created an updated geological grade and thickness block model based on historical data and exploration data gathered by Xstrata Alloys since acquisition. Post acquisition verification work to confirm the Ore Reserves previously reported by Eland Platinum is ongoing. The current Mineral Resource and Ore Reserve estimate contained in this report is based on the updated model, a new aeromagnetic interpretation and Xstrata's Mineral Resource and Ore Reserve Estimation procedures and policies. Eland Platinum previously reported a Mineral Resource of 183.61mt at 3.85g/t 3PGE + Au and an Ore Reserve of 42.03mt at 3.41g/t 3PGE + Au, which included the Mineral Resource and Ore Reserve estimate for Zilkaatsnek.

Exploration Results

Beestkraal - The Beestkraal Project comprise of 4 farms with a combined surface area of approximately 11 000ha. Exploration drilling has commenced during 2008 under 4 new order prospecting rights. Seven exploration boreholes have been completed to date (18th December 2008) which intersected both the Merensky Reef and UG2 Chromitite Layer. Two of the boreholes have been sampled and assayed. The diamond drill core has been sampled over the mineralized zones as 20 cm half core samples. The samples has been assayed SGS Lakefield, SA. The assay results for the two Merensky Reef intersections yielded a length weighted average 3PGE+Au grade of 8.57g/t over 64cm and the results for the two UG2 Chromitite Layer intersections, 7.34g/t over 69cm.

Exploration of the Beestkraal Project will continue during 2009 with diamond core drillholes and a planned aeromagnetic survey.

Competent Person – JT/DN(X)/PJG.

Madibeng -

The Madibeng Project is situated contiguous to Eland Platinum Mine and forms a natural extension of the Eland Platinum Mine. The project area comprises of the whole farm Hoekfontein 442 JQ and covers a surface area of approximately 3 247ha. Previous exploration boreholes and a high density aeromagnetic survey confirmed the presence of the UG2 Chromitite Layer on the farm. The UG2 Chromitite Layer varies in depth below surface, starting at 800m below surface.

Xstrata has started with an exploration drilling programme in September 2008 under a new order prospecting right. The exploration programme will continue during 2009.

Competent Person – JT/DN(X)/PJG.

Schietfontein -

The farm Schietfontein 437 JQ covers a total surface area of approximately 645ha and is underlain by the UG2 Chromitite Layer from sub-outcrop to a depth of approximately 1150m below surface. Exploration drilling commenced in July 2008 under 5 new order prospecting rights. Exploration drilling during 2008 comprised of 4 surface boreholes (including deflections). All 4 boreholes intersected the target reef and 3 of the intersections have been sampled and assayed. The mineralized zones have been sampled, starting above the reef zone, continuing through the reef zone into the footwall, by 20cm incremental samples. The half cores have been sampled. The assay results of the 3 intersection have yielded a length weighted average grade of 2.53 g/t (3PGE+Au) over 251cm.

Further exploration drilling is planned for 2009 including trenching to determine the sub-outcrop of the UG2 Chromitite Layer for the potential extension of the current opencast mining at Eland Platinum Mine.

Competent Person – JT/DN(X)/PJG.

Competent Person

BS - Brian Smith, Xstrata Alloys, (PLATO).

PJG - Pieter-Jan Gräbe, Xstrata Alloys, (SACNASP).

JT – Johan Terblanche, Xstrata Alloys, (SACNASP).

DN(X) – Daneal Nieuwoudt, Xstrata Alloys (SACNASP).

DN - Dietmar Nowak, Anglo Platinum Ltd, (SACNASP).

PS - Paul Stevenson, Anglo Platinum Ltd, (SACNASP).

DR – Dean Richards, Obsidian Consulting Ltd, (SACNASP).

CL – Carina Lemmer, Geological & Geostatistical Services, (SACNASP).

Consolidated Coal Resource and Coal Reserve Statement

As at 30 June 2008

Tonnage are quoted in million metric tonnes

	Attributable (%)	Mining Method	Commodity	RESERVES				RESOURCES			
				Run-of-Mine		Saleable		Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Competent Person
				Proved (Mt)	Probable (Mt)	Proved (Mt)	Probable (Mt)				
Operating Mines											
Maloma Colliery	75.00%	UG/OC	Anthracite	3.854	0.564	1.719	0.251	8.196	1.268	0.996	PJG/JF
Total				3.854	0.564	1.719	0.251	8.196	1.268	0.996	

Definitions

OC = Opencast; UG = Underground

Notes

- The Coal Resources and Coal Reserve estimates are tabulated on a total mine basis as at 30th June 2008.
- The Measured - and Indicated Coal Resources are inclusive of those Coal Resources modified to produce Coal Reserves.
- Maloma Colliery is mining anthracite from the coal belt of Swaziland. The coal is mined from a shallow dipping (10° - 14°) stratified coal seam. The coal seam, known as the Main Seam, is mined underground using a trackless mechanized mining method on a board-and-pillar mine lay-out design.
- Changes in the year on year tonnage and grade estimates are mainly due to mining depletion, reclassification and changes in the resource and reserve tonnages and grades due to additional geological information gained through exploration.
- The Coal Reserves have been estimated as ROM Coal Reserves and Saleable Coal Reserves to reflect the mining dilution and the subsequent beneficiation process.

Competent Person

JF - Johan Fourie, J.C. Fourie – Professional Mine Surveyor, (PLATO).

PJG - Pieter-Jan Gräbe, Xstrata Alloys (SACNASP).

Consolidated Silica Mineral Resource and Ore Reserve Statement

As at 30 June 2008

Tonnage are quoted in million metric tonnes
Grades are quoted as % SiO₂

	Attributable (%)	Mining		RESERVES		RESOURCES			
				Proved	Probable	Measured	Indicated	Inferred	Competent
		Method	Commodity	(Mt)	(Mt)	(Mt)	(Mt)	(Mt)	Person
Operating Mines									
Rietvley Silica Mine	79.50%	OC	Silica Ore	-	-	-	26.479	-	PJG
			SiO ₂	-	-	-	97.50%	-	
Total				-	-	-	26.479	-	

Definitions

OC = Opencast

Notes

- The Mineral Resources and Ore Reserve estimates are tabulated on a total mine basis as at 30th June 2008.
- Xstrata Alloy's silica mining operation is mining a quartzite deposit of the Transvaal Super Group of South Africa. The quartzite ore (silica) is used as an additive in the ferrochrome manufacturing process. The ore is mined through opencast mining methods and crushed, washed and sized on site at the mine to produce a final sized and quality graded product.
- Changes in the year on year tonnage and grade estimates are mainly due to mining depletion, reclassification and changes in the resource and reserve tonnages and grades due to additional geological information gained through exploration.

Competent Person

PJG - Pieter-Jan Gräbe, Xstrata Alloys (SACNASP).