



NATURAL CAPITAL

RELEVANT MATERIAL ISSUES

- Managing the environmental impact of our operations and conserving natural resources

RELEVANT IDENTIFIED RISKS

- Optimising the responsible usage of our productive natural resources (managing the complexity and availability of Merensky Reef)

The success of our business is ultimately dependent on bringing our mineral resources under management to account safely, efficiently and profitably, while serving as a responsible steward of those natural resources.

Mining activities have an impact on the natural environment: land is disturbed, water is consumed and its quality potentially affected and dust is generated in the air as well as greenhouse gas emissions as a result of the consumption of fossil-based power.

The application and management of water and power are arguably the most strategic of Northam's natural inputs, given the nature and depth of mining operations at the metallurgical processing infrastructure at Zondereinde. Booyssendal is a more modern, mechanised operation and its environmental footprint was a critical feature even in its design.

Northam minimises its impact on the environment and mitigates the environmental risks of our mining and processing activities by having in place policies and procedures. We seek to comply with all environmental legislation.

Northam serves as a responsible steward of its natural resources ►



NATURAL CAPITAL

MINERAL RESOURCE AND RESERVE STATEMENT

Resources and reserves reflected in this statement are reported on a Northam attributable basis, and include those which are either from properties that are wholly owned by Northam or its wholly-owned subsidiaries, or joint venture properties in which Northam holds a stake.

Mineral resources are reported inclusive of mineral reserves.

SCOPE OF REPORTING

Resources and reserves reflected in this statement include those from the following properties:

Zondereinde: the company's wholly-owned PGM mine, located in the Thabazimbi area of the Limpopo province and within the northern portion of the western limb of the Bushveld Complex. This includes both the Zondereinde and Middeldrift portions of the property;

Booysendal: 100% owned by Northam's wholly-owned subsidiary, Booysendal Platinum, and situated in the southern portion of the eastern limb of the Bushveld Complex;

Dwaalkop: located in the northern portion of the eastern limb of the Bushveld Complex, in which Northam holds a 50% stake through its wholly-owned subsidiary Mvelaphanda Resources Proprietary Limited. Dwaalkop is managed by Lonmin plc (Lonmin); and

Pandora: located in the Brits area of North West province and within the southern portion of the western limb of the Bushveld Complex, in which Northam holds a 7.5% stake. Pandora is managed by Lonmin.

KEY POINTS AND SIGNIFICANT REVISIONS FROM LAST YEAR

- The reassignment of UG2 and Merensky resources for the Booysendal South mine and the estimation of a Merensky reserve for the Booysendal South mine. This follows the completion of a feasibility study for mining of both UG2 and Merensky reefs in portions of the Booysendal South area.
- The incorporation of the UG2 resource and reserve contained within the Everest mining right into the Booysendal estimate. This follows the transfer of the Everest mining right to Booysendal Platinum in October 2015.
- An increase in the UG2 resource and reserve estimate at Zondereinde mine. This is due to a decrease in geological loss ascribed to potholing, and follows an extensive re-assessment of historical pothole losses and exploration data.

- The removal of a reserve estimate for Dwaalkop. The Lonmin Competent person attributes this to depressed economic conditions and no progress in a mining feasibility study.

REGULATORY COMPLIANCE

The mineral resource and mineral reserve statements for Northam have been prepared under the guidance of the company's lead competent persons who are duly registered with the Engineering Council of South Africa (ECSA; Private Bag X691, Bruma, 2026, South Africa; www.ecsa.co.za) and/or with the South African Council for Natural Scientific Professions (SACNASP; Private Bag X540, Silverton, 0127, South Africa; www.sacnasp.org.za). This ensures that the mineral resource and mineral reserve statements comply with the provisions of the South African Code for Reporting of Mineral Resources and Mineral Reserves of 2007, revised in 2016 (SAMREC 2016). The company's competent persons have taken cognisance of definitions included in the code. The mineral resource and mineral reserve quantities reported here are considered to be fully compliant in all material respects to the requirements of the SAMREC code, together with section 12 of the listing requirements of the JSE Limited. The lead competent persons have given written confirmation of such, together with permission to publish these estimates.

Definitions of the various mineral resource and mineral reserve categories as well as the requirements for reporting of exploration results may be found at www.samcode.co.za

STATUS OF MINERAL RIGHTS

Resources reflected in this statement include those of the Zondereinde, Booysendal North and Booysendal South mines (Booysendal South was formerly Everest mine) which are wholly owned by Northam or its wholly-owned subsidiaries. In addition, Northam holds a 7.5% stake in the Pandora joint venture and a 50% stake in the Dwaalkop joint venture, both of which are managed by Lonmin, through its subsidiaries, Eastern Platinum Limited and Western Platinum Limited respectively.

Northam holds new order mining rights over the Zondereinde, Booysendal and Everest mines. The Everest new order mining right was ceded to Booysendal in October 2015 in terms of section 11 of the Mineral and Petroleum Resources Development Act, No. 28 of 2002.

The Pandora mine operates under a new order mining right which was converted from an old order right in 2013.

The Dwaalkop joint venture holds a new order prospecting right over the Dwaalkop prospect. This right is subject to a renewal application. An application for a new order mining right was submitted in 2009 and is being processed.

NATURAL CAPITAL CONTINUED

Northam further holds eight new order prospecting rights over the Kokerboom prospect, granted in 2009. Kokerboom is an iron oxide copper gold and massive sulphide copper zinc exploration prospect covering some 1 000 000 hectares of the Northern Cape province. A prospecting work programme is currently in progress and no resource or reserve has yet been estimated. Exploration at Kokerboom is in its early stages, and only limited exploration costs have been incurred to date. As such, Kokerboom is not material to Northam's operations.

Northam disposed of its 20.3% ownership of Trans Hex Group Limited in May 2016. Therefore at the date of reporting, 30 June 2016, Northam had no further interests in the mineral rights of the Trans Hex Group.

CONTINUING OPERATIONS

The company confirms that it is not aware of any legal or arbitration proceedings, either pending or threatened, which may have or have had a material effect on the financial position of the company and its subsidiaries.

Further to this, the risk management section on pages 96 to 101 of this report analyses potential risks which may impact the company's ability to continue its activities.

ENVIRONMENTAL LIABILITIES

The company's environmental obligations are managed in terms of approved environmental management plans. Compliance with the plans is audited by independent external parties on a regular basis. Details of the environmental liabilities and the funding thereof are disclosed in the 2016 annual financial statements.

GROUP RESOURCES AND RESERVES

The following tables summarise the mineral resources and reserves attributable to Northam for both the current and previous year. Notes on the reporting criteria are pertinent, together with specific notes to this section.

Breakdowns of the mineral resources and reserves into their respective confidence categories may be found in the sections specific to each mining concession.

Summary of mineral rights held and managed by Northam

Property	Type of right	Status
Zondereinde mine	New order mining right	Converted mining right
Booyssendal mine	New order mining right	Converted mining right
Everest mine	New order mining right	Converted mining right
Pandora mine	New order mining right	Converted mining right
Dwaalkop prospect	New order prospecting right	Application for a new order mining right in process
Kokerboom prospect	New order prospecting rights	Eight new order prospecting rights granted

Prospecting and mining rights are held in good order, and Northam perceives no risk to its rights to continue prospecting for and mining of minerals over any of its properties.

Northam group resource estimate (combined measured, indicated and inferred)

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Mine	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Booyseendal North	87.82	5.06	14.29	87.82	5.06	14.29
	Booyseendal South	187.55	3.55	21.41	199.52	3.50	22.48
	Booyseendal North mine	16.97	3.23	1.76	17.05	3.23	1.77
	Booyseendal South mine	11.98	2.77	1.07	–	–	–
	Dwaalkop ¹	38.05	2.98	3.64	38.05	2.98	3.64
	Zondereinde	164.44	7.38	39.00	167.26	7.35	39.52
	Total	506.81	4.98	81.17	509.70	4.99	81.70
UG2	Booyseendal North	152.65	4.86	23.87	152.65	4.86	23.87
	Booyseendal South	235.67	3.20	24.26	320.41	3.27	33.65
	Booyseendal North mine	41.41	4.52	6.02	43.12	4.52	6.27
	Booyseendal South mine	126.76	3.07	12.51	–	–	–
	Dwaalkop ¹	37.56	4.35	5.25	37.56	4.35	5.25
	Pandora ¹	14.14	4.65	2.11	14.14	4.65	2.11
	Zondereinde	276.41	5.08	45.14	254.32	5.08	41.55
	Total	884.60	4.19	119.16	822.20	4.26	112.70
Combined	Booyseendal North	240.47	4.94	38.16	240.47	4.94	38.16
	Booyseendal South	423.22	3.36	45.67	519.93	3.36	56.13
	Booyseendal North mine	58.38	4.15	7.78	60.16	4.16	8.04
	Booyseendal South mine	138.74	3.04	13.58	–	–	–
	Dwaalkop ¹	75.61	3.66	8.89	75.61	3.66	8.90
	Pandora ¹	14.14	4.65	2.11	14.14	4.65	2.11
	Zondereinde	440.85	5.94	84.14	421.58	5.98	81.07
	Total	1 391.41	4.48	200.33	1 331.89	4.54	194.41

¹ Current resources and reserves of Pandora and Dwaalkop are quoted as at 30 September 2015 while those of the previous year are at 30 September 2014.



Compliance with our environmental management plans is audited by independent external parties on a regular basis

NATURAL CAPITAL CONTINUED

Northam group reserve estimate (combined proven and probable)

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Mine	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Booyssendal North mine	14.51	2.92	1.36	14.57	2.92	1.37
	Booyssendal South mine	9.36	2.58	0.78	–	–	–
	Dwaalkop ¹	–	–	–	13.66	2.61	1.15
	Zondereinde	21.01	5.51	3.72	25.45	5.35	4.38
	Total	44.88	4.06	5.86	53.68	3.99	6.90
UG2	Booyssendal North mine	41.53	3.00	4.00	43.14	3.00	4.16
	Booyssendal South mine	75.86	2.65	6.48	–	–	–
	Dwaalkop ¹	–	–	–	16.10	3.30	1.71
	Pandora ¹	1.21	4.10	0.16	1.29	4.11	0.17
	Zondereinde	58.64	4.24	7.99	47.67	4.06	6.22
	Total	177.24	3.27	18.63	108.20	3.52	12.26
Combined	Booyssendal North mine	56.04	2.98	5.36	57.71	2.98	5.53
	Booyssendal South mine	85.22	2.65	7.26	–	–	–
	Dwaalkop ¹	–	–	–	29.76	2.98	2.85
	Pandora ¹	1.21	4.10	0.16	1.29	4.11	0.17
	Zondereinde	79.65	4.58	11.71	73.13	4.51	10.60
	Total	222.12	3.43	24.49	161.89	3.68	19.15

¹ Current resources and reserves of Pandora and Dwaalkop are quoted as at 30 September 2015 while those of the previous year are at 30 September 2014.

COMPETENT PERSONS

The resource and reserve statement for the Zondereinde and Middelbult portions of Zondereinde mine were compiled by Charl van Jaarsveld, BSc (Hons) Geology, PrSciNat. (400268/05); chief geologist at Zondereinde mine, with 13 years' experience relevant to Bushveld-related resource and reserve estimation.

The Booyssendal resource statement was compiled by Meshack Mqadi, BSc (Hons) Geology, PrSciNat. (400703/15); chief geologist at Booyssendal North mine, with eight years' experience relevant to precious metal-related resource estimation.

The Booyssendal reserve statement was compiled by Willie Theron, BSc (Hons) Mining, PrCertEng, ECSA (200790030); general manager at Booyssendal UG2 North mine with 19 years' experience of Bushveld-related underground mining and reserve estimation.

Resource and reserve estimates for both Zondereinde and Booyssendal were reviewed by Damian Smith, BSc (Hons)

Geology, MSc, PrSciNat. (400323/04); principal member of Prospect Geoservices with 26 years' experience in mining and exploration geology, 21 years of which are relevant to Bushveld-related resource and reserve estimation.

The resource and reserve estimates for the Pandora joint venture were prepared and signed off by Dennis Hoffmann (Lonmin), while reserves were signed off by Andy Brown (Lonmin).

The resource and reserve estimates for the Dwaalkop joint venture were prepared by a team from Snowden Mining Industry Consultants (Resources) and from AMC Consulting Proprietary Limited (Reserves). Resources were signed off by Dennis Hoffmann (Lonmin), while reserves were signed off by Andy Brown (Lonmin).

Contact details for Northam's lead competent persons authorising publication of the resource estimates are contained within the notes on reporting criteria within this report.

GEOLOGICAL SETTING – THE BUSHVELD COMPLEX

The two-billion-year-old Bushveld Complex is the largest layered igneous complex in the world, and is the repository for around 85% of known global PGM resources. Extending over an area of some 67 000km² within the north-eastern portion of South Africa, it contains the intrusive, mafic-ultramafic Rustenburg Layered Suite (RLS), which outcrops as three main acicular limbs, namely the western, eastern and northern limbs (see figure below), and ranges in thickness from 7km to 12km.

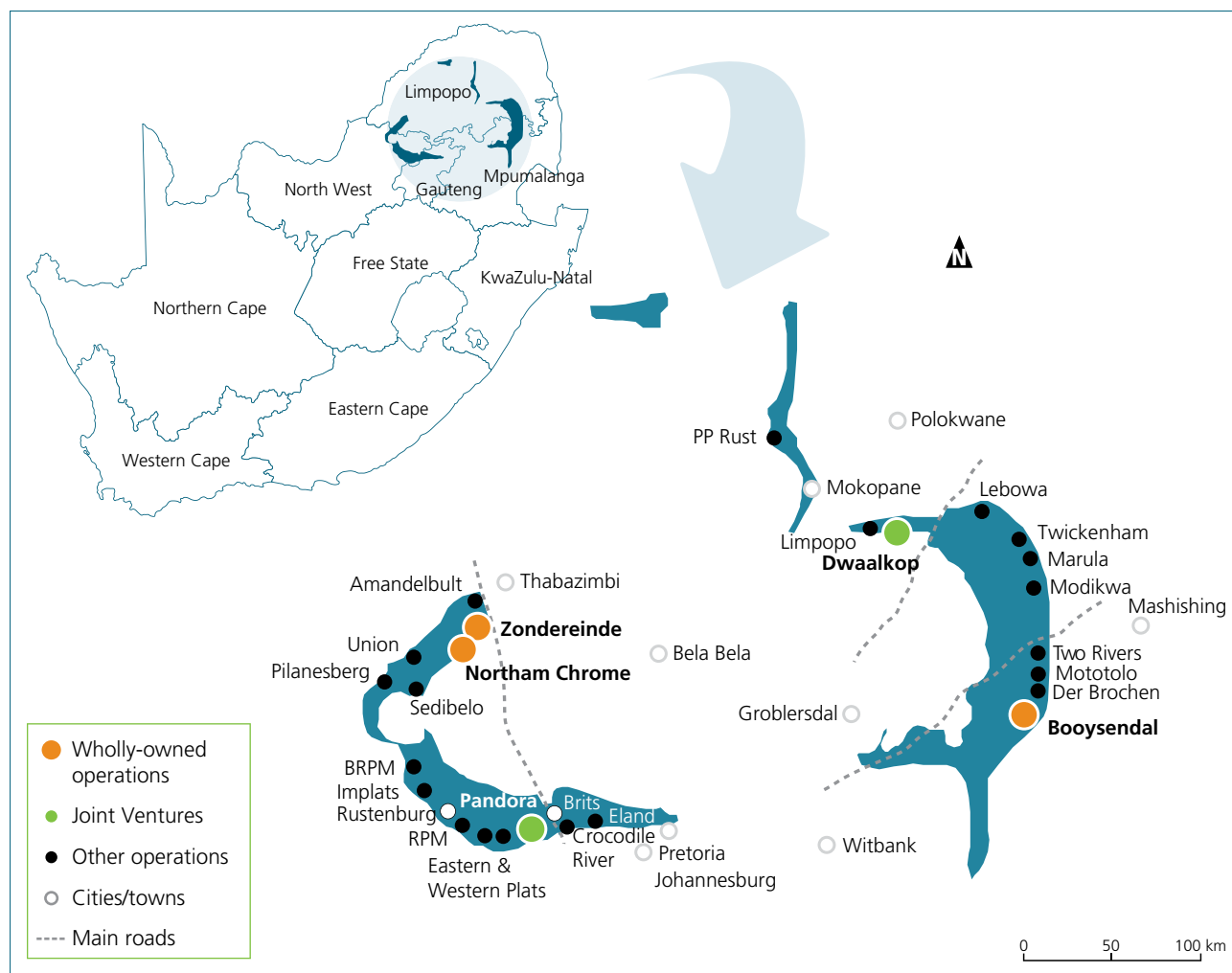
The magmatic layering in the RLS is laterally persistent and can be correlated throughout most of the complex. Layering is generally shallow dipping towards the centre of the complex. The RLS stratigraphy is sub-divided into five zones, which are, from lowest to highest, the marginal zone, the lower zone, the critical zone (which is further subdivided into a lower and upper unit), the main zone and the upper zone.

PGM and associated precious and base metal mineralisation is hosted in or adjacent to chromitite seams located within the upper critical zone of the RLS. There are two significant orebodies from which 75% of global primary PGM production is derived, these being the UG2 and Merensky reefs. The vertical separation between the UG2 and Merensky reefs is variable across the Bushveld Complex, ranging from 20m to 140m on the western limb and between 170m and 400m on the eastern limb.

Historically, PGM production was concentrated on the western limb but, in recent years, the eastern limb has been the focus of new mine development.

The two wholly-owned Northam properties, the Zondereinde and Booyensdal mines, contain resources of both the UG2 and Merensky reefs.

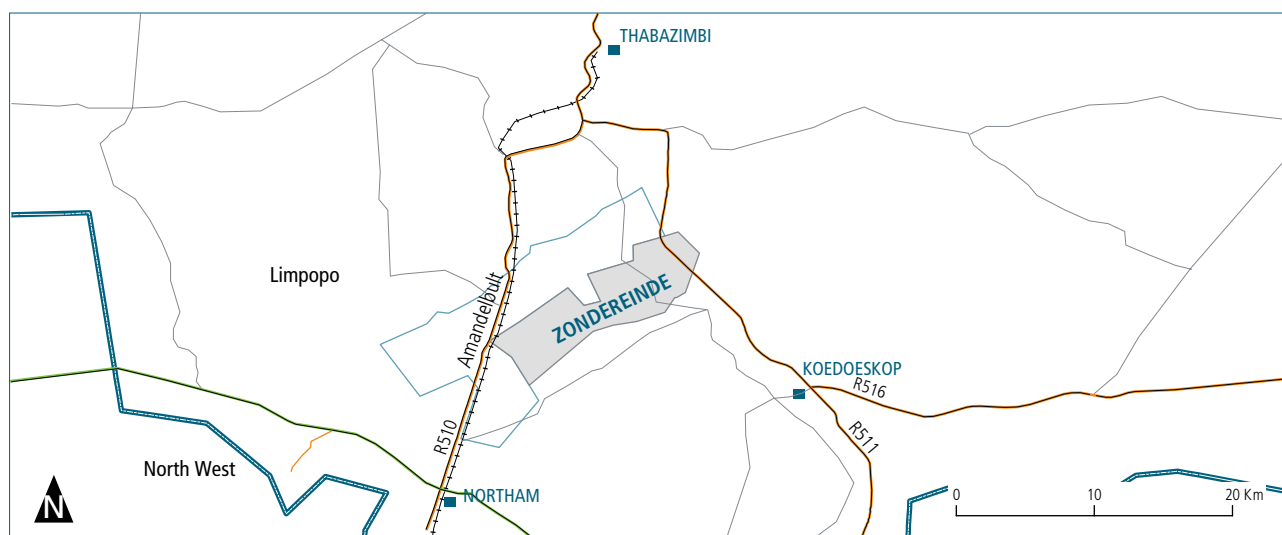
Bushveld location indicating current PGM mining operations



NATURAL CAPITAL CONTINUED

ZONDEREINDE MINE

Zondereinde mine location and access routes



Zondereinde mine is situated in the northern portion of the western limb of the Bushveld Complex, approximately 30km south of the town of Thabazimbi in the Limpopo province of South Africa. The mining concession covers some 7 625ha underlain by both the Merensky and UG2 orebodies, which dip at approximately 20° and extend from a depth of 1 100m to 2 900m below surface.

The company exploits both the Merensky and UG2 reefs of the upper critical zone of the Bushveld Complex. While there is lateral continuity of both reefs across the mine property, the Merensky reef displays a variety of reef types. The distribution of these is determined by a combination of surface exploration boreholes, ongoing prospect drilling from underground development and reef mapping in development and stoping. In contrast to the Merensky reef, the UG2 displays little variation in reef attributes.

The Bushveld sequence at Zondereinde is typical of the northern portion of the western limb. The critical zone stratigraphy is telescoped and dominated by mafic lithologies. Vertical separation between the UG2 and Merensky reefs is in the range of 20m to 40m.

Combined geological and extraction losses were discounted from the resources for both reefs. These comprised pothole and structural losses as well as other pillar losses. Discount losses vary per reef type and resource category, but average at 34% for Merensky reef. Discount losses for UG2 average 36% and are largely contained in regional support pillars designed to counter stress concentration resulting from mining in proximity to previously-mined Merensky reef.

Measured resources are defined in the areas accessible from holed on-reef development within three months of the estimation run and/or bounded by haulage borehole intersections and the nearest stope exposures. Indicated resources are defined in all other areas, down to a depth of 2 350mbc (18 level elevation). This is the depth to which the Zondereinde mine has a feasible mine plan, and is currently in the process of accessing via a deepening extension project.

Inferred resources extend from 18 Level to the down dip mine boundary.

HISTORY AND MINING ACTIVITIES

Development of Zondereinde mine started in 1986, following a five-year exploration programme. Mining of ore, commissioning of a PGM concentrator, smelter and base metal recovery plant and the sale of first PGMs came in 1993. The mine originally exploited only the Merensky reef resource but the commissioning of a UG2 concentrator in 2000, together with the necessary underground ore handling systems, allowed mining and processing of UG2 from this time onwards. The mine produces approximately 2 000 000 tonnes of ore per annum, generating in the order of 300 000oz of 3PGE+Au in final concentrate together with associated precious and base metal by-products.

Underground mining focuses on the exploitation of PGM ores by means of traditional narrow tabular reef drill and blast mining methods. A standard breast mining layout is used at Northam. The vertical interval (distance) between levels is 63m. With the orebody dipping at 20°, this provides a raise length of 180m allowing for six panels of 30m each per raise connection.

Strike gullies are aligned at 10° above the strike direction. A dip gully handles the ore transported via the strike gullies to three orepasses situated in the original raise, all of which are fitted with radial-door control chutes. Ore is transported to the main shaft ore passes by battery-powered locomotives (locos) pulling spans of eight hoppers. Broken ore is transported to a conventional shaft ore-pass system with separate rock handling facilities for Merensky reef, UG2 reef and waste.

Mining is successfully conducted using hydropowered equipment such as rock drills and high-pressure water jets in conjunction with electric scraper winches.

The underground workings are accessed from a twin shaft system. No 1 shaft extends to 13 level (2 039m below surface) and No 2 shaft serves workings down to 8 level (1 724m below surface). The shafts are 90m apart and are interconnected at an intermediate pump chamber (IPC) at 1 019m below surface, and also on levels 2, 4, 6, 7, 8 and 9. Workings below 13 level are serviced by decline access ways, designed to accommodate both people and materials, and equipped with a conveyor belt system that transports the broken rock.

MERENSKY REEF

The Merensky reef is a zone of mineralisation which straddles the base of the Merensky cyclic unit. In the area of Zondereinde mine, the Merensky reef consists of two sub-facies of the Zwartklip facies of the RLS, namely the normal and regional pothole sub-facies. The latter may be further subdivided into three reef types, each of which occurs at a specific stratigraphic level below that of the normal reef sub-facies. These being NP2 and P2, which constitute the main sources of ore, and FWP2 which, while not considered a primary mining target due to the undulating nature of this reef type, is successfully exploited in the south-western quadrant of the current mining area where it displays lesser disruption.

The stoping cut on the Merensky reef is dependent upon the reef type mined and the geozone in which it is located.

In all stoping cuts, the Merensky chromitite is exposed with a minimum of 10cm of the overlying mineralised Merensky pyroxenite as hanging wall.

The Merensky measured resource in June 2016 was essentially unchanged at 3.6Mt (800 000oz) compared to 3.23Mt (800 000oz) in June 2015.

The Merensky indicated resource has declined as a result of conversion to the measured category. The Merensky inferred resource is essentially unchanged.

UG2 REEF

The UG2 reef at Zondereinde mine is remarkably conformable when compared with the Merensky reef. Disruption, in the form of potholes and reef rolls, is extremely limited and localised. The reef consists of three chromitite seams separated by narrow pyroxenite partings. The lower seam, termed the main member, is generally in the order of 85cm thick, and is overlain by two leader seams, each in the order of 15cm thick. Total reef thickness, inclusive of a portion of mineralised reef footwall, is in the order of 150cm to 160cm. There is no basis for subdividing the UG2 reef into facies types.

Historically, UG2 mining has been limited to de-stressed areas underlying previously-mined Merensky reef. Furthermore, a full reef cut is mined, which enhances metal output, hanging wall stability and safe working practices.

The UG2 measured resource has increased from 5.48Mt (887 000oz) in June 2015 to 9.60Mt (1 556 000oz) in June 2016. This is the result of a decrease in geological loss following a study into pothole occurrence concluded during the year. In addition, exposed UG2 resource increased and improved mining extraction is being experienced as UG2 mining continues to migrate to areas where there is less influence of Merensky abutments. The UG2 indicated and inferred resources have also increased as a result of reduced pothole loss.

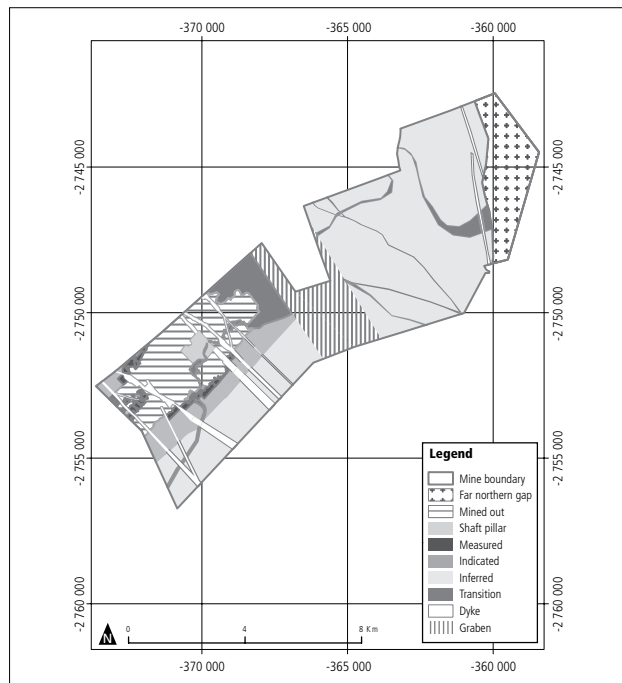


Zondereinde generates some 280 000oz of 3PGE+Au per annum

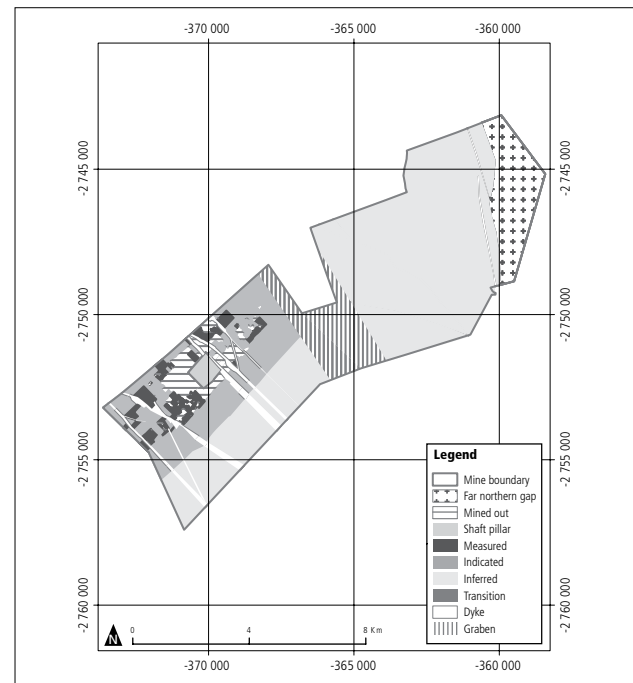
NATURAL CAPITAL CONTINUED

ZONDEREINDE RESOURCES AND RESERVES

Zondereinde Merensky resource classification 2016



Zondereinde UG2 resource classification 2016



Zondereinde resource estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Measured	3.26	7.70	0.80	3.23	7.68	0.80
	Indicated	14.59	7.16	3.36	17.48	7.00	3.94
	Inferred	146.59	7.39	34.84	146.55	7.38	34.79
	Total	164.44	7.38	39.00	167.26	7.35	39.53
UG2	Measured	9.60	5.04	1.56	5.48	5.04	0.89
	Indicated	47.04	5.04	7.62	38.50	5.04	6.23
	Inferred	219.77	5.09	35.96	210.34	5.09	34.43
	Total	276.41	5.08	45.14	254.32	5.08	41.55
Combined	Measured	12.86	5.72	2.36	8.71	6.02	1.68
	Indicated	61.63	5.54	10.98	55.98	5.65	10.17
	Inferred	366.36	6.01	70.80	356.89	6.03	69.22
	Total	440.85	5.94	84.14	421.58	5.98	81.07

Zondereinde reserve estimate

		as at 30 June 2016 4E PGE			as at 30 June 2015 4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Proven	3.97	5.78	0.73	3.97	5.66	0.72
	Probable	17.04	5.45	2.99	21.48	5.29	3.65
	Total	21.01	5.51	3.72	25.45	5.35	4.37
UG2	Proven	10.1	4.24	1.38	5.94	4.06	0.78
	Probable	48.53	4.24	6.61	41.73	4.06	5.45
	Total	58.64	4.24	7.99	47.67	4.06	6.23
Combined	Proven	14.07	4.67	2.11	9.91	4.70	1.50
	Probable	65.58	4.55	9.61	63.22	4.48	9.10
	Total	79.65	4.58	11.72	73.13	4.51	10.60

Prill splits %	Pt	Pd	Rh	Au	Cr ² O ³ %	Cu%	Ni%
UG2	57.7	30.9	10.3	1.0	27.6	0.021	0.123
Merensky	63.0	29.2	5.2	2.6	0.80	0.072	0.164

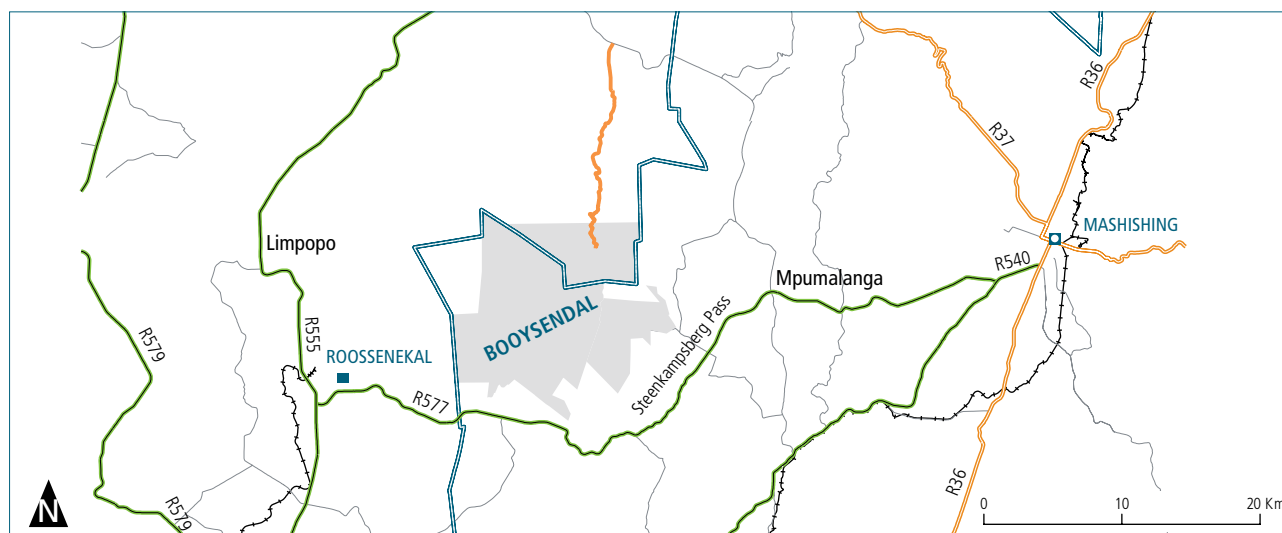


Zondereinde's concentrator plant

NATURAL CAPITAL CONTINUED

BOOYSENDAL MINE

Booyensdal location and access routes



The Booyensdal mining concession is located in the southern compartment of the eastern limb of the Bushveld Complex, approximately 35km west of the town of Mashishing (formerly Lydenburg), straddling the border of Limpopo and Mpumalanga provinces in South Africa.

The concession covers some 17 979 hectares and hosts both the UG2 and Merensky orebodies, which outcrop over a strike length of 14.5km and dip at approximately 10° to the west.

The resource estimate is informed by exploration data, including 586 boreholes, together with 2 214 UG2 channel samples from on-reef development and stoping within the UG2 section of the Booyensdal North Mine, together with the Everest UG2 mine. A further 126 channel samples from on-reef development and stoping within the Merensky section of the Booyensdal North Mine have been analysed. A total of 90% of the exploration drilling has been conducted within 2.5km down-dip of outcrop. Drill hole spacing in this near outcrop area ranges from 150m to 350m. Channel samples are located at 15m intervals within on-reef development and stoping.

A study to determine the feasibility of mining UG2 reef within the northernmost 8km of the Booyensdal strike, over a dip extent from outcrop of approximately 2km, was completed in September 2009. Development of a UG2 mine (UG2 section of the Booyensdal North Mine) in the northernmost 4km of strike

started in May 2010 and reached its steady-state production rate of 187 000 tonnes per month in October 2015.

A study to determine the feasibility of mining Merensky reef over a similar footprint to the UG2 section of the Booyensdal North Mine was completed in December 2015. This included development of an adit and extraction of a bulk sample. Development of the Phase 1 Merensky section of the Booyensdal North mine commenced immediately following this. It is expected to reach planned production rate of 22 000 tonnes per month in October 2016. A Phase 2 extension is planned which would grow production up to 75 000 tonnes per month.

A study to determine the feasibility of mining both UG2 and Merensky reef from four mining modules in the central and southern portions of Booyensdal was completed in June 2016. Development of three modules has commenced and they are expected to reach a steady-state production rate in June 2021.

The resource estimate for the Booyensdal concession is subdivided into four sections, these being; the combined UG2 and Merensky North mines (North mine); the remainder of the northern section of the concession (Booyensdal North); combined UG2 and Merensky South mines (South mine); and the remainder of the southern section (Booyensdal South). Mineral reserve estimates are presented for the North and South mines.

The Bushveld sequence at Booyssendal is similar to that found across the southern compartment of the eastern limb. The critical zone stratigraphy is fully developed, and middling between the UG2 and Merensky reefs is in the order of 175m in the northern and central portions of Booyssendal. The sequence is, however, subject to thinning in the far southern portion, which is linked to the Bushveld rocks abutting basement highs. The impact of this 'abutment' is further manifested in localised zones of disruption to surface morphology and internal structure of the two reefs. This has led to the characterisation of three geozones within the Booyssendal concession, these being the normal, slump and abutment geozones. Despite this progressive disruption to the south, the continuity of the reef surfaces is robust across the property.

The internal structure of the UG2 reef is similar to that found on the Bushveld western limb, while the Merensky reef is typical of the northern portion of the Bushveld eastern limb.

The UG2 reef consists of an upper leader chromitite and a lower main chromitite with a combined thickness of some 140cm. These seams are generally juxtaposed or merged, but can display variable internal silicate partings.

The Merensky reef is the upper mineralised portion of the Merensky pyroxenite, generally extending over 110cm. The Merensky reef is immediately overlain by a sequence of competent norites.

Resources were estimated over the reef channels. For the UG2 reef, the reef channel extends from the top of the leader chromitite to the base of the main chromitite seam. For the Merensky reef outside of the North mine area, the reef channel extends from the top of the Merensky pyroxenite to a sample grade cut off of 1g/t, with a minimum mining channel width of 80cm applied. The Merensky reef channel of the Booyssendal North and South mines is 210cm in thickness, extending from 20cm above the top of the Merensky Pyroxenite – this is the envisaged mining channel.

Geological losses were discounted from the resources for both reefs. These, for the Booyssendal North and South sections, comprised known pothole and structural losses, together with assumed pothole losses benchmarked to mean eastern limb losses. They amounted to 23% for the Merensky reef and 24% and 30% for the UG2 in the North and South sections respectively. In the UG2 mining sections, ongoing mining and exploration drilling has improved confidence in known geological losses, leading to the application of 12.5% total geological loss

for the UG2 reef of North mine and 15.0% total geological loss for the UG2 reef of South mine. Furthermore, a channel cut-off 4E grade of 2.5g/t was applied to estimated blocks in all three sections. In addition, a 30m thick surface oxidised zone was discounted along the lines of outcrop of both reefs.

Resource categorisation was based upon a combination of quantitative geostatistical parameters, together with a qualitative appreciation of orebody continuity informed by the resource database together with data from surrounding properties.

MINE DESIGN AND MINING ACTIVITIES

The UG2 sections of Booyssendal North and South mines are underground, mechanised bord and pillar mines, accessed from surface via ramp decline systems. The North mine decline system comprises three declines on the plane of reef and one decline situated 20m into the footwall of the reef, containing a belt for ore handling. Decline systems for the South UG2 mines comprise four declines on the plane of reef.

Mining sections extend over a dip length of 144m, equating to a vertical interval of 25m. Strike drives are inclined at 5° above the line of strike. Strike belts within the drives transport ore to the central decline dip belt system for transport to a UG2 concentrator plant on surface. Mechanised boom rigs and LHDs are employed in mining and development.

North UG2 mine is planned, with a remaining life of 20 years, to produce 2 250 000 tonnes of ore per annum at steady state, generating in the order of 160 000oz of metals in concentrate (3PGE+Au), together with associated precious and base metal by-products. Planning to increase the production from North UG2 mine by 360 000 tonnes of ore per annum, generating an additional 30 000oz of metals in concentrate (3PGE+Au) was concluded during the year, and implementation has commenced.

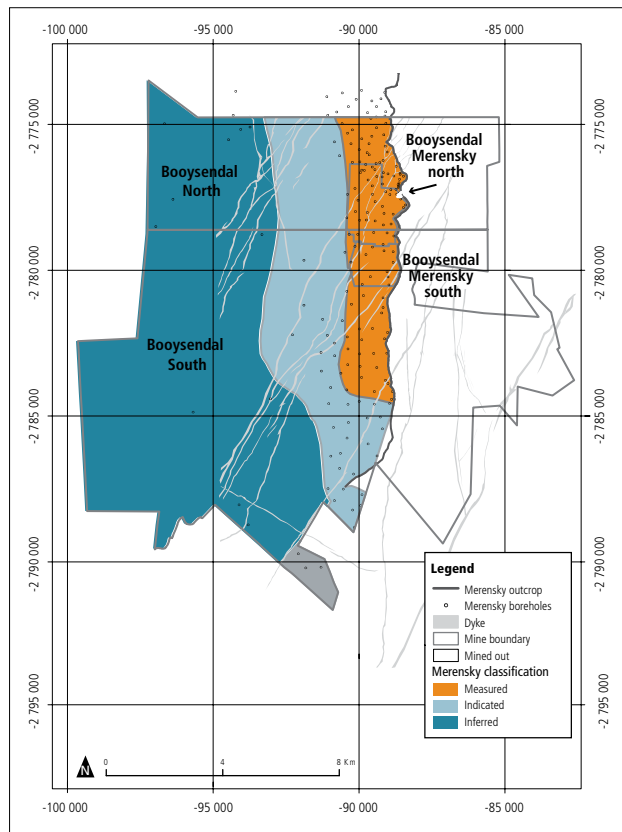
The initial two modules of South mine have estimated lives of greater than 20 years at a combined steady state production rate of 2 640 000 tonnes of ore per year, generating 215 000oz of metals in concentrate (3PGE+Au), together with associated precious and base metal by-products.

The North Merensky mine is essentially an analog of the UG2 South mines with all development on reef. Dependent upon prevailing market conditions, the phase 1 mine is planned to produce at 250 000 tonnes of ore per annum at steady state, generating in the order of 25 000oz of metals in concentrate (3PGE+Au), together with associated precious and base metal by-products.

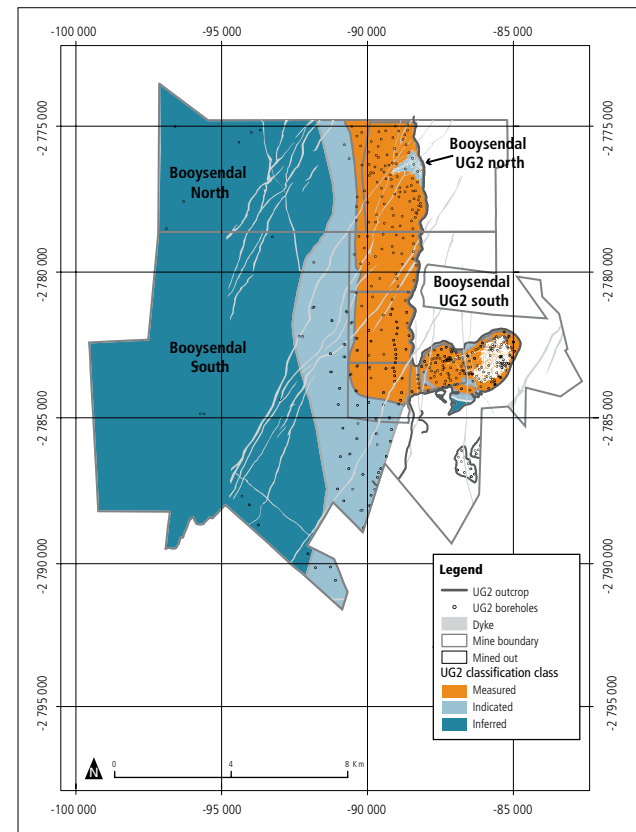
NATURAL CAPITAL CONTINUED

BOOYSENDAL RESOURCES AND RESERVES

Booyesendal Merensky resource classification 2016



Booyesendal UG2 resource classification 2016



Booyesendal's concentrator plant

NORTH MINE

UG2 reef

The UG2 measured resource for the Booyssendal North mine has decreased from 43.12Mt (6.27Moz) in June 2015 to 41.41Mt (6.02Moz) in June 2016, as a result of mining depletion.

Similarly, mining depletion has reduced the UG2 proven reserve from 43.14Mt (4.16Moz) in June 2015 to 41.53Mt (4.00Moz) in June 2016.

Merensky reef

The Merensky measured resource for the Booyssendal North mine has decreased from 17.05Mt (1.77Moz) in June 2015 to 16.97Mt (1.76Moz) in June 2016, as a result of mining depletion.

Similarly, mining depletion has reduced the Merensky proven reserve from 14.57Mt (1.37Moz) in June 2015 to 14.51Mt (1.36Moz) in June 2016.

Booyssendal North mine resource estimate

		as at 30 June 2016 4E PGE			as at 30 June 2015 4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Measured	16.97	3.23	1.76	17.05	3.23	1.77
	Total	16.97	3.23	1.76	17.05	3.23	1.77
UG2	Measured	41.41	4.52	6.02	43.12	4.52	6.27
	Total	41.41	4.52	6.02	43.12	4.52	6.27
Combined	Measured	58.38	4.15	7.78	60.16	4.16	8.04
	Total	58.38	4.15	7.78	60.16	4.16	8.04

Booyssendal North mine reserve estimate

		as at 30 June 2016 4E PGE			as at 30 June 2015 4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Proven	14.51	2.92	1.36	14.57	2.92	1.37
	Total	14.51	2.92	1.36	14.57	2.92	1.37
UG2	Proven	41.53	3.00	4.00	43.14	3.00	4.16
	Total	41.53	3.00	4.00	43.14	3.00	4.16
Combined	Proven	56.04	2.98	5.36	57.71	2.98	5.53
	Total	56.04	2.98	5.36	57.71	2.98	5.53

Prill splits %	Pt	Pd	Rh	Au	Cr ² O ³ %	Cu%	Ni%
UG2	57.2	32.6	9.4	0.8	25.1	0.008	0.087
Merensky	58.0	31.0	2.4	8.7	0.2	0.097	0.208

NATURAL CAPITAL CONTINUED

SOUTH MINE

UG2 reef

The UG2 measured resource for the Booyendal South mine, comprising four mining modules, is reported for the first time as 105.1Mt (10.24Moz).

UG2 proven reserve, reported for three of the four modules is 68.24Mt (5.84Moz). The probable reserve for the same is 7.62Mt (0.64Moz).

Merensky reef

The measured resource for the single Merensky module of Booyendal South mine is reported for the first time as 11.98Mt (1.07Moz).

The corresponding proven reserve is 9.36Mt (0.78Moz).

Booyendal South mine resource estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Measured	11.98	2.77	1.07	–	–	–
	Total	11.98	2.77	1.07	–	–	–
UG2	Measured	105.10	3.03	10.24	–	–	–
	Indicated	20.53	3.24	2.14	–	–	–
	Inferred	1.13	3.53	0.13	–	–	–
	Total	126.76	3.07	12.51	–	–	–
Combined	Measured	117.08	3.00	11.31	–	–	–
	Indicated	20.53	3.24	2.14	–	–	–
	Inferred	1.13	3.53	0.13	–	–	–
	Total	138.74	3.04	13.57	–	–	–

Booyendal South mine reserve estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Proven	9.36	2.58	0.78	–	–	–
	Total	9.36	2.58	0.78	–	–	–
UG2	Proven	68.24	2.66	5.84	–	–	–
	Probable	7.62	2.61	0.64	–	–	–
	Total	75.86	2.65	6.48	–	–	–
Combined	Proven	77.60	2.65	6.61	–	–	–
	Probable	7.62	2.61	0.64	–	–	–
	Total	85.22	2.65	7.25	–	–	–

Prill splits %	Pt	Pd	Rh	Au	Cr ² O ³ %	Cu%	Ni%
UG2	60.3	29.4	9.3	1.1	19.4	0.009	0.076
Merensky	57.9	30.9	2.3	8.9	0.1	0.083	0.186

BOOYSENDAL NORTH AND SOUTH

All categories of the Merensky and UG2 resources for Booyseendal North are unchanged from the previous reporting period. However, Booyseendal South is depleted by the resource reassigned to Booyseendal South mine.

Booyseendal North resource estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Measured	9.90	5.36	1.71	9.90	5.36	1.71
	Indicated	25.32	5.12	4.17	25.32	5.12	4.17
	Inferred	52.60	4.97	8.41	52.60	4.97	8.41
	Total	87.82	5.06	14.29	87.82	5.06	14.29
UG2	Measured	7.05	4.95	1.12	7.05	4.95	1.12
	Indicated	12.95	5.15	2.15	12.95	5.15	2.15
	Inferred	132.65	4.83	20.60	132.65	4.83	20.61
	Total	152.65	4.86	23.87	152.65	4.86	23.88
Combined	Measured	16.95	5.19	2.83	16.95	5.19	2.83
	Indicated	38.27	5.13	6.32	38.27	5.13	6.32
	Inferred	185.25	4.87	29.01	185.25	4.87	29.02
	Total	240.47	4.94	38.16	240.47	4.94	38.17

Prill splits %	Pt	Pd	Rh	Au	Cr ² O ³ %	Cu%	Ni%
UG2	56.8	33.8	8.6	0.7	25.8	0.006	0.085
Merensky	59.7	30.5	2.2	7.6	0.17	0.134	0.292

Booyseendal South resource estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Measured	15.92	2.94	1.51	27.90	2.87	2.57
	Indicated	51.94	3.31	5.53	51.94	3.31	5.53
	Inferred	119.69	3.74	14.37	119.68	3.74	14.38
	Total	187.55	3.55	21.41	199.52	3.50	22.48
UG2	Measured	–	–	–	68.63	3.54	7.82
	Indicated	85.08	3.58	9.80	100.07	3.50	11.25
	Inferred	150.59	2.99	14.46	151.71	2.99	14.59
	Total	235.67	3.20	24.26	320.41	3.27	33.66
Combined	Measured	15.92	2.94	1.51	96.53	3.35	10.39
	Indicated	137.02	3.48	15.33	152.01	3.43	16.78
	Inferred	270.28	3.32	28.83	271.39	3.32	28.96
	Total	423.22	3.36	45.67	519.93	3.36	56.13

Prill splits %	Pt	Pd	Rh	Au	Cr ² O ³ %	Cu%	Ni%
UG2	60.6	28.6	9.5	1.2	26.0	0.010	0.071
Merensky	57.8	32.2	2.5	7.5	0.56	0.120	0.268

NATURAL CAPITAL CONTINUED

PANDORA RESOURCES AND RESERVES

Pandora resource estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
UG2	Measured	1.85	4.80	0.29	1.89	4.80	0.29
	Indicated	10.55	4.61	1.56	10.55	4.61	1.56
	Inferred	1.74	4.73	0.26	1.70	4.73	0.26
Total		14.14	4.65	2.11	14.14	4.65	2.11
Combined	Measured	1.85	4.80	0.29	1.89	4.80	0.29
	Indicated	10.55	4.61	1.56	10.55	4.61	1.56
	Inferred	1.74	4.73	0.26	1.70	4.73	0.26
Total		14.14	4.65	2.11	14.14	4.65	2.11

Pandora reserve estimate*

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
UG2	Proven	0.16	3.81	0.02	0.11	3.78	0.01
	Probable	1.04	4.14	0.14	1.18	4.14	0.16
	Total	1.21	4.10	0.16	1.29	4.11	0.17
Combined	Proven	0.16	3.81	0.02	0.11	3.78	0.01
	Probable	1.04	4.14	0.14	1.18	4.14	0.16
	Total	1.21	4.10	0.16	1.29	4.11	0.17

Prill splits %	Pt	Pd	Rh	Au	Cr ² O ³ %	Cu%	Ni%
UG2	60.6	28.0	11.1	0.3	no data	0.004	0.024
Merensky	—	—	—	—	—	—	—

* Current resources and reserves of Pandora and Dwaalkop are quoted as at 30 September 2015 while those of the previous years are at 30 September 2014.

DWAALKOP RESOURCES AND RESERVES

All categories of the Merensky and UG2 resources are unchanged from the previous reporting period. All reserves have been removed from the estimate. The Lonmin competent person attributes this to depressed economic conditions and no progress having been made in a mining viability study.

Dwaalkop resource estimate

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Measured	–	–	–	–	–	–
	Indicated	21.83	2.89	2.03	21.83	2.89	2.03
	Inferred	16.22	3.10	1.62	16.22	3.10	1.62
	Total	38.05	2.98	3.64	38.05	2.98	3.65
UG2	Measured	–	–	–	–	–	–
	Indicated	20.85	4.35	2.92	20.85	4.35	2.92
	Inferred	16.71	4.35	2.34	16.71	4.35	2.34
	Total	37.56	4.35	5.25	37.56	4.35	5.26
Combined	Measured	–	–	–	–	–	–
	Indicated	42.68	3.60	4.94	42.68	3.60	4.94
	Inferred	32.93	3.73	3.95	32.93	3.73	3.95
	Total	75.61	3.66	8.90	75.61	3.66	8.89

Dwaalkop reserve estimate*

		as at 30 June 2016			as at 30 June 2015		
		4E PGE			4E PGE		
Reef	Category	Mt	g/t	Moz	Mt	g/t	Moz
Merensky	Proven	–	–	–	–	–	–
	Probable	–	–	–	13.66	2.61	1.15
	Total	–	–	–	13.66	2.61	1.15
UG2	Proven	–	–	–	–	–	–
	Probable	–	–	–	16.10	3.30	1.71
	Total	–	–	–	16.10	3.30	1.71
Combined	Proven	–	–	–	–	–	–
	Probable	–	–	–	29.76	2.98	2.85
	Total	–	–	–	29.76	2.98	2.85

Prill splits %	Pt	Pd	Rh	Au	Cr ₂ O ₃ %	Cu%	Ni%
UG2	47.1	42.8	7.9	2.2	no data	0.090	0.140
Merensky	56.8	31.9	4.2	7.2	no data	0.110	0.170

* Current resources and reserves of Pandora and Dwaalkop are quoted as at 30 September 2015 while those of the previous years are at 30 September 2014.

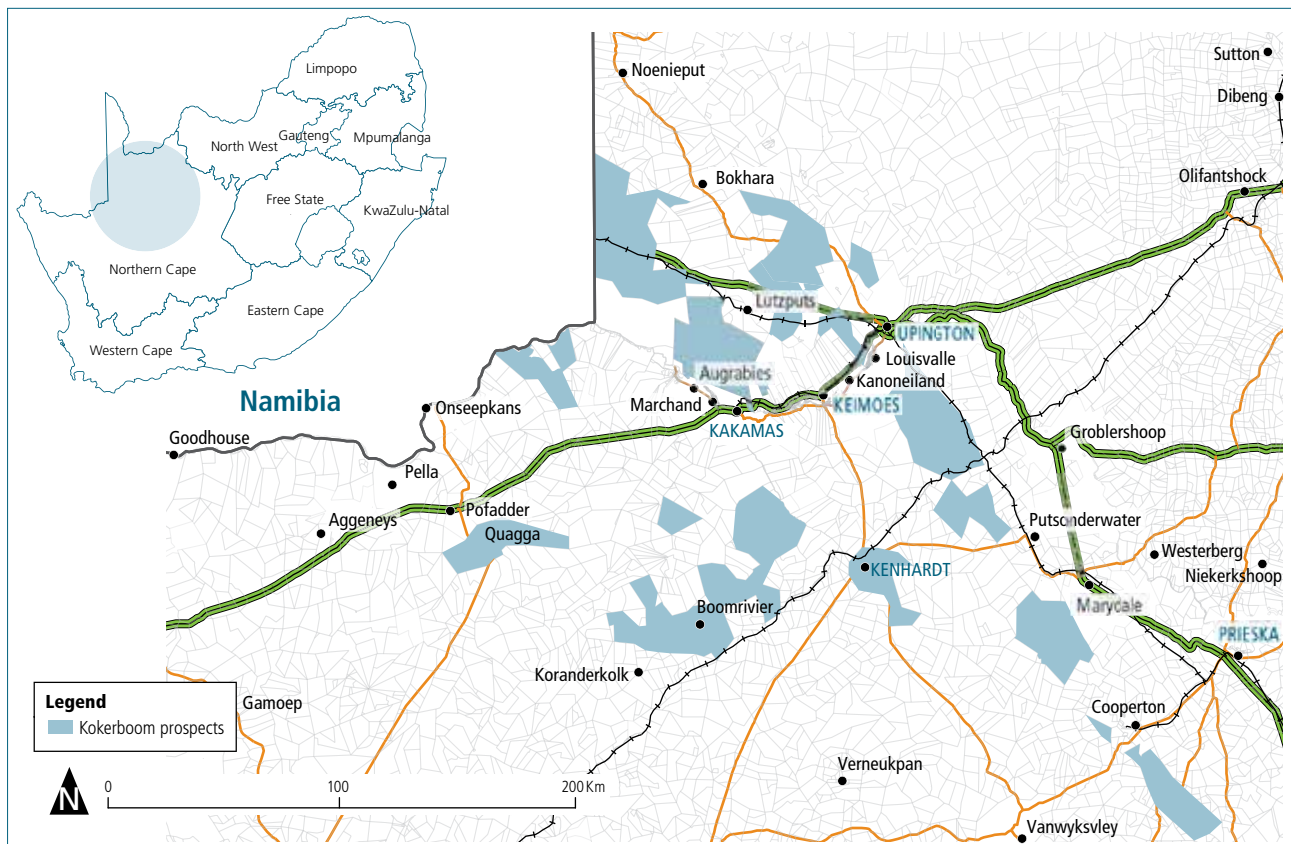
NATURAL CAPITAL CONTINUED

KOKERBOOM EXPLORATION PROSPECT

Kokerboom is an iron oxide copper gold and massive sulphide copper zinc exploration prospect covering some 1 000 000 hectares of the Northern Cape province of South Africa.

A prospecting work programme is currently in progress and no resource or reserve has yet been estimated. Exploration conducted to date includes; airborne magnetic and radiometric surveys, compilation and reviews of existing geochemical and surface mapping data, together with some limited surface mapping. Broad terrain delineation has been undertaken, but as yet, no distinct targets have defined for follow up work.

Kokerboom location plan



We take great care to uphold Northam's compliance with South Africa's strict environmental legislative framework

NOTES ON REPORTING CRITERIA

- Mineral resource tonnages and grades for Zondereinde are reported as estimates discounted for geological and mining pillar losses. All other mineral resources are reported as estimates discounted for geological losses.
- Mineral resource tonnages and grades are in situ estimates inclusive of internal waste dilution but exclusive of external waste dilution, unless otherwise stated.
- PGM grade is expressed as corrected 4E (combined platinum, palladium, rhodium and gold) grade; this being synonymous with 3PGE+Au and 4E PGE.
- PGM metal prill splits (platinum, palladium, rhodium and gold) are expressed as percentages of the combined 4E value.
- Base metal contents (chromite, copper and nickel) are expressed as average grades in weight percentage. These grades represent acid soluble proportions. Acid soluble percentages of Ni and Cu are closely correlated to the metals present as sulphide minerals.
- Structural losses, due to faults, dykes and joints, include the volumes of expected bracket pillars required to be placed on such features.
- Kriging parameters are applied to discrete mining areas in order to estimate tonnage and metal content.
- Kriging parameters are derived from the interrogation of extensive sampling databases.
- Rounding of numbers in the tables may result in minor computational discrepancies. Where this occurs, it is deemed insignificant.
- The most reasonable mining width is assumed, based on practical mining conditions. 4E grade, together with specific gravity are calculated for these widths.
- Total mineral resources and reserves attributable to Northam Platinum Limited are listed in the summary tables.
- Mineral resources for Pandora and Dwaalkop, reflecting Northam's 7.5% and 50.0% respective attributable interests, are quoted as at the end of September 2015 and 2014 and are provided by Lonmin.
- Measured and indicated mineral resources are reported separately and include those mineral resources modified to produce proven and probable mineral reserves.
- While mineral resources are quoted as in situ resources, all reserves provided by Northam are quoted at run-of-mine (ROM) grades and tonnages as delivered to the concentrator plants on site and are therefore, fully diluted.

- Modification of mineral resources to reserves is based on parameters derived from historical operating performance, current conditions and future planning criteria.
- Mineral reserves for Zondereinde mine are quoted to 18 level (2 350m below surface).
- Mineral reserves for Booysendal relate to the current and planned mining modules, the Booysendal North and South mines.
- Mineral reserves for Pandora and Dwaalkop are provided by Lonmin and reflect Lonmin's reserve modifying factors.
- In compliance with the SAMREC code, inferred mineral resources are not included in feasibility studies.

For economic studies and the determination of pay limits, consideration was made of both short- and long-term revenue drivers. The following long-term real global assumptions were used:

- Base metals (US\$ per metric tonne):
 - Ni 8 956
 - Cu 5 374
 - Chromite 47 (FOT)

Average exchange rate:

- US\$: ZAR 14.16
- PGE prices in US\$ per troy ounce:
 - Pt 1 433
 - Pd 896
 - Rh 1 254
 - Au 1 209
 - Ru 45
 - Ir 537

All references to tonnage are to the metric unit.

All references to ounces are troy with a conversion factor of 31.103475 used to convert from metric grammes to ounces.

Contact details for lead competent persons are:

- **Charl van Jaarsveld**, chief geologist at Zondereinde mine
PO Box 441, Thabazimbi 0380, South Africa
- **Meshack Mqadi**, chief geologist at Booysendal UG2 North mine
Willie Theron, general manager at Booysendal UG2 North mine
PO Box 412694, Craighall 2024, South Africa
- **Damian Smith**, principal member of Prospect Geoservices
PO Box 37876, Faerie Glen 0043, South Africa

NATURAL CAPITAL CONTINUED

LEGISLATION AND COMPLIANCE

South Africa has a strict environmental legislative framework, governed by the following:

- Constitution of the Republic of South Africa No. 108 of 1996
- Mineral and Petroleum Resources Development Act No. 28 of 2002 (MPRDA)
- National Environmental Management Act No. 107 of 1998 (NEMA)
- National Environmental Management: Waste Act No. 59 of 2008
- National Environmental Management: Biodiversity Act No. 10 of 2004
- National Heritage Resources Act No. 25 of 1999
- National Environmental Management: Air Quality Act No. 39 of 2004
- National Water Act No. 36 of 1998

We take great care to uphold Northam's compliance with this framework. The group is committed to prudent practices and usage of natural resources, in accordance with NEMA, and this is outlined in its environmental policy, which may be found at www.northam.co.za/governance/policies-and-procedures

At both Zondereinde and Booysendal, a precautionary environmental approach has been taken – aligned with NEMA and Northam's own environmental management systems (EMSs).

Management at both operations engage regularly with regulatory authorities including the DMR and the Department of Water Affairs (DWA) and other relevant departments. New mining projects are subject to environmental impact assessments (EIAs) which involve comprehensive public participation and many studies to assess environmental aspects such as air, water, land, flora and fauna. These EIAs become part of the mines' approved environmental management plans or EMPs. EMPs provide guidance in monitoring, addressing and mitigating environmental impacts. Routine audits are undertaken to ensure compliance with the EIAs and EMPs. Northam has the requisite permits for Zondereinde and Booysendal in terms of new order mining rights and integrated water use licences.

In 2014, Zondereinde completed a revised EMP application in line with the DMR's requirement to consolidate its original document and three amendments for the UG2 stockpile, coal-fired boilers and the slag dump. Approval was received for the Amendment and Consolidated EMP in December 2015.

In compliance with the amendment to the NEMA: Air Quality Act, which came into effect in 2013, Northam submitted an application for an Air Emission Licence for the Zondereinde operations as well as a request for exemption from the

requirement to reduce sulphur dioxide (SO₂) emissions by 2020, based on affordability and the historic dispersion of SO₂ at Zondereinde which has been significantly lower than the licensed limits. The Department of Environmental Affairs and Tourism (DEAT) granted Northam an Air Emission License in February 2016. However, based on the conditions given in the licence, the mine still needs to apply for exemption on the SO₂ emissions requirement.

Northam is a member of the South African Waste Information System (SAWIS) developed by the DEAT, and both Zondereinde and Booysendal are registered with SAWIS. The company complies with the monitoring and management processes of hazardous waste in terms of recovery, recycling, treatment, disposal and exportation.

Northam did not receive any significant fines or non-monetary sanctions for non-compliance with environmental laws and regulations. No grievances regarding environmental impacts were received during the year.

ISO14001

Northam has adopted the ISO14001 standard as the basis for its EMSs. Zondereinde has been ISO14001-certified since 2011. Recertification was issued in 2014 until 2017.

At the Zondereinde metallurgical complex, the ISO standard was converted from ISO14001:2014 to ISO 14001:2015. The metallurgical plants will transition to ISO 14001: 2015 by 2017.

While the ISO14001 standard is taken into account in managing environmental issues at Booysendal, a formal ISO14001-compliant EMS is not yet in place at this operation.

OUR ENVIRONMENTAL STRUCTURES

The HSE committee is responsible for overseeing environmental matters at board level. Environmental management issues are reported to the operational general managers and the chief executive on a monthly basis, and on a quarterly basis to the board's HSE committee. The chief executive and general managers of Zondereinde and Booysendal have final accountability for environmental compliance and performance.

At Zondereinde and Booysendal, environmental issues are dealt with by a specific management team. At Zondereinde, in particular, the environmental management function and engineering services work in tandem, given the Zondereinde operation's reliance on technology, which is applied in many instances specifically to create environmentally safe working areas. The engineering department oversees this function under the guidance of the engineering manager, supported by the environmental officer. At Booysendal the safety, health and environmental manager heads this process, supported by environmental staff.

At Booyensdal, the mine management team is responsible for looking after only approximately 8% of the mine's freehold area. The balance of the land (approximately 6 200 hectares) is managed by a dedicated land manager and, of this, 960ha is under the custodianship of the Buttonshope Conservancy Trust.

FY2016 ENVIRONMENTAL PERFORMANCE

ZONDEREINDE

Water and energy consumption continue to be the most pressing environmental management concerns at Zondereinde. Efforts to reduce consumption are assessed and implemented continuously.

Zondereinde was granted a waste licence for the salvage yard. An external audit was conducted during November 2015 and a few minor non-compliances were raised which have been addressed.

Zondereinde recorded zero reportable environmental incidents in the year under review.

BOOYSENDAL

During FY2016, Booyensdal implemented a number of projects to reduce the impact of operational activities on the environment.

In order to ensure that hydraulic and motor oil is not released into the surrounding area and water system, extra pumps were installed into the storm water system to capture the oil and separate it from the system before the surface water run-off reaches the pollution control dams. To make this system more efficient, a skimmer was also installed into the pump and the oil is pumped to the oil separation plant.

Biodegradable tablets, known as ECO tablets, have been introduced into the main pollution control dam. These tablets assist in maintaining water quality of the dam within the

required limits of the water use licence. Monitoring the effects of the ECO tablets is ongoing and dosage is adjusted as and when required.

Five audits were conducted at Booyensdal during the year. These included:

- An annual performance assessment of the EMP as required by the MPRDA
- A performance assessment of the EIA as required by NEMA
- An annual audit of the water use licence.
- A compliance audit by the Department of Water and Sanitation (DWS), with no significant issues arising.
- A compliance audit by the Limpopo Department of Economic Development, Environment and Tourism. The aim of the audit was to ensure that the mine complied with the EIA. No significant issues arose from the audit.

All environmental incidents were recorded at Booyensdal during the year, one of which was reportable.

A new reporting structure for environmental incidents was implemented in July 2015 which enhances the detail and accuracy of incident reporting.

RESOURCE UTILISATION

As a mining company, Northam is reliant on natural resources – water, energy and bulk materials. The conservation and optimal use of these resources are of paramount importance to Northam as the group strives to maintain the sustainability of the business while minimising its environmental impact.

Bulk materials comprise mined and processed rock, liquid fuels, coal, grease, steel, timber, lubricating and hydraulic oils as well as diesel. Zondereinde and Booyensdal take pride in utilising resources efficiently and recycling materials like plastics, steel, timber and scrap.

Materials used at Zondereinde in FY2016

	Unit	FY2016	FY2015	FY2014	FY2013	FY2012
Rock mined	000t	2 245	2 069	1 907	2 276	2 154
Ore milled	000t	2 001	1 860	1 724	2 116	1 934
Timber use (bulk support)	m ³	1 842	2 748	2 412	1 573	827
Cartridge explosives	tonne	2 242	2 465	2 076	2 401	2 552
Oxygen	tonne	2 143	2 227	1 722	1 561	2 018
Sulphuric acid	tonne	814	876	586	520	769
Sulphur dioxide	tonne	99	89	61	56	82
Grease	tonne	40	40	34	47	47
Lubricating and hydraulics oils	litre	81 695	128 985	130 618	130 270	135 155
Diesel	litre	LA 563 752	662 319	648 709	635 739	576 079

NATURAL CAPITAL CONTINUED

Materials used at Booyensdal in FY2016

	Unit	FY2016	FY2015	FY2014	FY2013
Rock mined	000t	2 138	1 670	1 233	755
Ore milled	000t	2 166	1 786	1 517	261
Emulsion explosives	tonne	1 479	2 512	960	284
Lubricating and hydraulics oils	litre	1 399 915	1 240 100	640 192	83 314
Diesel	litre	LA 2 329 655	2 080 968	1 830 066	1 745 435

Materials recycled at Zondereinde in FY2016

	Unit	FY2016	FY2015	FY2014	FY2013	FY2012
Plastic	tonne	23	61	53	42	108
Steel	tonne	2 031	1 628	2 182	1 640	2 053
Timber	m ³	2 753	2 540	2 015	2 380	4 601
Scrap metal	m ³	–	–	–	–	1 995
Rubber	tonne	300	134	197	153	134
Industrial waste	tonne	1 381	1 343	1 246	1 419	1 955

Materials recycled at Booyensdal in FY2016

	Unit	FY2016	FY2015	FY2014	FY2013
General waste to landfill	m ³	438	491	552	–
Hazardous waste	m ³	364	198	204	–
Timber	m ³	57	62	–	–
Scrap metal	m ³	297	271	–	–

WATER USE

A large volume of water is used for the mining and processing of minerals, therefore water allocation is of critical importance to both Zondereinde and Booyensdal. Integrated water use licence requirements guide water management processes, especially in terms of water allocation. Licences are reviewed every five years from the date of issue.

Zondereinde and Booyensdal use both industrial and potable water. Zondereinde's source of potable and industrial water is from Magalies Water and Booyensdal receives its water from the Lebalale Water User Association. Northam has contracts with both companies.

Northam recognises the importance of optimising its water usage through reuse and recycling processes. The vital role water plays is highlighted in regular water awareness campaigns.

Water usage (000m³)

	Zondereinde					Booyensdal			
	FY2016	FY2015	FY2014	FY2013	FY2012	FY2016	FY2015	FY2014	FY2013
Potable water from external sources	2 803	2 488	2 335	2 633	2 540	376	569	513	429
Fissure water used	1 607	1 155	1 084	1 492	1 273	–	–	–	–
Borehole water used	–	–	–	–	–	14	87	–	–
Water recycled in process	LA 27 413	25 664	25 524	25 909	24 390	LA 2 519	1 479	–	237
% water recycled*	LA 86	91	89	91	91	LA 87	72	–	36

* The FY2016 figures reflect a more accurate methodology adopted by Northam to calculate recycled water.

ZONDEREINDE

Water is operationally critical for Zondereinde. The mine uses water as its primary source of energy for its underground mining operations through a shaft-based hydropower system. These technical innovations were pioneered at Northam and refined over time. Hydropowered equipment has the advantage of reducing temperatures in working areas. This technology, used in conjunction with the strategic application of backfill, helps to lower underground temperatures by reducing heat ingress from worked-out areas while also reducing the size of the area to be cooled by 65%.

Zondereinde endeavours to run a zero discharge operation. The mine closely monitors any potential impact of its operations on surface and groundwater sources. The water bodies that could be affected by surface water discharges are the Crocodile and Bierspruit Rivers. A comprehensive groundwater model, developed and maintained by a third party consultant, has been in place for a decade. This consultant also monitors and advises on surface and groundwater quality control.

There was no water discharge during the year. In terms of the mine's water use licence, 1 000 000m³ of water is allowed to be discharged annually.

Subsequent to the granting of Zondereinde's integrated water licence in 2012, the mine applied for a relaxation of certain standards and requirements. In 2013, the DWA conducted a compliance audit on Zondereinde's water use licence and the mine submitted an annual water management report to the DWA. Further information requested by the DWS has been submitted.

BOOYSENDAL

Water quality at Booyensdal is monitored on a continuous basis and compared with the original base line study information.

The Lebalelo pipeline is the main source of industrial and potable water at Booyensdal, while this is supplemented with on-site boreholes. The mine currently holds a 20-year licence to extract water from boreholes should additional water be required. The Groot Dwarsrivier is the only water source that could potentially be affected by the withdrawal of borehole water. However, as a limited volume of water is currently being drawn from this source, there is no risk.

In May 2015, an amended water use licence was submitted to the DWS to update the current water uses at Booyensdal and to

include the water uses for the Merensky North mine. Approval is awaited from the DWS.

Management is vigilant about the potential for any contamination risk, and closely monitors conservation processes and water reduction practices, along with checking water levels in the pollution control dams, which could result in discharges or run-off.

The Groot Dwarsrivier and Der Brochen Dam are the 'at risk' water bodies. Management has an emergency preparedness programme in place to address any run-off or spillages, which includes a stakeholder schedule along with emergency remediation measures. Three water evaporators are installed at the pollution control dams to mitigate the effects of excessive rainfall during the rainy season.

No environmental penalties or fines were incurred in FY2016. On 28 March 2016 at Booyensdal, however, an accidental spillage of tailings into an emergency dump bund overflowed into a tributary and subsequently into the Der Brochen dam.

In line with the operation's procedures, immediate remedial action was taken and the DWS advised of the incident. The DWS conducted a site visit on 11 April 2016, and a preliminary report was submitted to the department on 14 April 2016. The DWS has not issued any directive in respect of this incident.

An expert third party consultancy was appointed to conduct a spill assessment on the river to determine the required mitigation and rehabilitation measures. The rehabilitation work continues and three spill assessments have been conducted to date. The remedial work is expected to be completed by the end of October and thereafter a final report will be submitted to the DWS.

Since this incident a number of remediation procedures have been initiated to avoid similar incidents recurring, including:

- Improved supervision
- Enhanced monitoring with the installation of cameras, level probes with monitoring and control room alarms
- Installation of an overflow weir between compartments
- Construction of an emergency soil bund around the initial bund to prevent spillage into the watercourse.

Industrial water at Booyensdal North is maintained within a closed circuit and recycled on an ongoing basis. No water is allowed to be discharged into the environment.

NATURAL CAPITAL CONTINUED

ENERGY CONSUMPTION

Northam's long-term strategy is based on energy efficiency rather than energy reduction as the mines continuously strive to replace ore reserves and require more energy for production. The energy efficiency strategy is continuously reviewed in order to optimise its effectiveness.

Northam's electricity is supplied by Eskom, the national electricity supplier. Current risks connected with electricity in South Africa are those related more to cost than supply. In recent years, Eskom's tariffs have increased steadily, by 16% in 2012, 8% in 2013, 9% in 2014, 12.7% in 2015 and 13% in 2016. For FY2016, Northam's electricity spend totalled R498 786 million (83% at Zondereinde and 17% at Booyseindal).

We have a good working relationship with Eskom and have an electricity management programme in place to proactively assist the utility.

ZONDEREINDE

At current capacity at Zondereinde, Eskom's supply is sufficient. However, our power requirements will not remain static, given the deepening project, the smelting of additional material from Booyseindal and our new 20MW furnace due for completion by the end of 2017. For this reason, a number of energy efficiency initiatives have been implemented. These include:

- an underground refrigeration plant at 13 level. With the refrigeration plant being moved underground, water is not required to be pumped to surface. This immediately provides savings as one refrigeration machine equals the consumption of two 2MW pumps.
- fan clipping or turning down the fans that force refrigerated air from surface during the times they are not required
- as part of an ongoing initiative, 11 modular hostel blocks have been built with solar hot water systems. These systems comprise nine x 400 litre geysers per block. We estimate this results in a saving of some 40% or 760 838 kW on an annual basis.

The company's use of hydropower has also reduced its reliance on Eskom as the primary energy source. Less electricity is required for production when compared to other platinum mines which rely on compressed air to power underground equipment. The use of hydropowered equipment and backfill has led to annual power savings of 31 506MWh.

In FY2016, total indirect non-renewable energy consumption of electricity sourced from the national grid at Zondereinde increased by 3% to  646 785MWh (FY2015: 630 085MWh).

BOOYSEINDAL

Booyseindal currently has sufficient power to continue operating, with one incoming Eskom line and transformers capable of sustaining 80MVA. The maximum demand at the moment is 29MVA. However, given the cost of electricity, energy efficiency has and will continue to be a priority at the mine.

An energy management system which assists with the protection and annual testing of the medium voltage network, and fault analysis has been fully implemented and operational since 2014. A monthly report on the findings is presented by the engineering department. This system reflects how Booyseindal manages electricity in the mine, such as identifying off peak, peak and standard times.

A solar-aided water heating system at the mine's change house is in place to conserve energy.

In FY2016, total indirect non-renewable energy consumption from electricity sourced from the national grid increased by 15% to  132 790MWh (FY2015: 115.386MWh).

POWER FACTOR CORRECTION EQUIPMENT

Power factor correction equipment is in place at Zondereinde and Booyseindal. This equipment reflects the exact power consumption and helps reduce the overall electricity bill.

Note: Power factor is the ratio of true power (kW) to total apparent power (kVA) consumed by an electrical installation. It is a measure of how efficiently electrical power is converted into useful work output. The ideal power factor is unity, or one. A load with a power factor of 1.0 results in the most efficient loading of the supply. A comparatively small improvement in power factor can bring about a significant reduction in losses.

Electricity consumption (MWh)

	Zondereinde					Booyseindal			
	FY2016	FY2015	FY2014	FY2013	FY2012	FY2016	FY2015	FY2014	FY2013
Energy from electricity purchased by shafts	498 993	489 203	470 117	485 654	461 484	44 051	43 362	35 251	6 726
Energy from electricity purchased by plants	147 792	140 882	108 600	101 732	125 548	88 738	72 023	57 715	7 533
Total energy purchased	 646 785	630 085	578 717	587 386	593 441	 132 790	115 385	92 766	14 259

CLIMATE CHANGE AND EMISSIONS

At Northam, delivering on our strategy requires that we consider the risks and opportunities associated with climate change. Climate change has been assessed as a moderate risk which is managed primarily through the group's energy conservation – energy consumption and energy efficiency – initiatives. In addition, PGMs are used in the production of technologies to reduce emissions thus mitigating the climate change risk.

Northam has considered the risks and opportunities relating to climate change, including the financial implications, in its 7th consecutive voluntary submission to the Carbon Disclosure Project (CDP), which covers the previous financial year, and may be found at www.cdp.net/en-US/Results/Pages/Company-Responses.aspx?company=13459

Northam reports on emissions of carbon dioxide (CO₂) and sulfur dioxide (SO₂), which are the most significant of its emissions.

Booyssendal does not produce any SO₂ emissions.

In FY2016, 6 987 tonnes of SO₂ were emitted by the Zondereinde operations attributed to direct emissions from the smelter. Other emissions include CO₂ (both direct and indirect), potential discharges to water courses and dust from tailings dams. Gas cleaning equipment for SO₂ abatement will be required by 2020.

Zondereinde's energy efficiency programmes have reduced the mine's GHG emissions.

Greenhouse gas emissions (CO₂e tonnes)

	Zondereinde					Booyssendal		
	FY2016	FY2015	FY2014	FY2013	FY2012	FY2016	FY2015	FY2014
Total Scope 1 emissions (direct emissions)	LA 27 830	29 743	23 451	15 509	15 401	LA 7 098	6 337	4 912
Total Scope 2 emissions (indirect emissions)	LA 666 189	648 988	596 079	605 008	611 244	LA 136 773	118 847	95 549
Total Scope 3 emissions (indirect emissions)	799	746	580	665	815	98	–	–
Total emissions	694 818	679 477	620 110	621 183	627 460	143 969	125 184	100 565



Zondereinde's laboratory

NATURAL CAPITAL CONTINUED

DUST MANAGEMENT

Zondereinde monitors dust fall-out and has an effective stakeholder engagement programme in place to deal with any incidents and complaints logged. However, since inception, Zondereinde has had no such complaints.

The tailings dam is continuously revegetated to reduce dust entrainment, and to minimise wind and water erosion.

Previously exposed areas at Booyseindal have been paved, tarred or grassed, and the few areas where dust could be produced, are monitored and dust suppression is conducted as needed.

Continuous dust fall-out monitoring at Booyseindal is conducted at potential receptor sites around the operation. Monitoring results indicate that dust fall-out within these areas is well within residential dust fall-out limits.

The mine's location in a valley surrounded by mountains means that dust dispersion into the surrounding communities is limited. No community or stakeholder complaints were received regarding dust emissions during the year.

LAND MANAGEMENT AND BIODIVERSITY

Northam acknowledges that mining processes and operations with their potential for adverse environmental impacts require careful land management. And it is only with careful land management that biodiversity can be maintained. Careful planning of new mining projects, extensive engagement with stakeholders and the surrounding community, and compliance with legislation all contribute towards sound land management and add value to the mining process. Please refer to the rehabilitation and funding provision in the 2016 annual financial statements.

ZONDEREINDE

Northam's land ownership at Zondereinde is larger than the actual mining operations, with a surface freehold of

4 439 hectares. Land management and conservation policies and practices are well established at Zondereinde.

No animals or plants in the area are listed on the IUCN's Red List of Threatened Species nor the Red Data list. Alien vegetation is removed when and where possible.

Final rehabilitation of Zondereinde's tailings storage facility will only take place after closure. However, ongoing rehabilitation takes place for the purposes of dust management as well as aesthetic reasons.

BOOYSEINDAL

Booyseindal's host area, the Dwarsrivier Valley, is situated within the Sekhukhuneland Centre of Plant Endemism (SCPE) and the Roossenekal Subcentre of Endemism. The Booyseindal property encompasses several landscape types, which are critically important for conservation action and are prioritised by Mpumalanga's conservation authorities.

The Dwarsrivier Valley landscape includes forests, small wetlands, seepages and grasslands. Certain protected mammals and species of fish have also been recognised as endemic to this habitat. Research has also indicated that the threatened SCPE is not formally protected, and that more land needs to be incorporated within reserves to protect the province's biodiversity.

With the aim of preserving the biodiversity of the area, Northam has set aside an offset area specifically for conservation and biodiversity purposes. A creative approach was adopted to generate long-term funding to support the protection of the environment surrounding Booyseindal. A key result was the Buttonshope Conservancy Trust, which funds Booyseindal's conservation, offset management and expansion.

Alien vegetation inspections are conducted on a monthly basis, and the vegetation monitored and removed as required.

Land use (hectares)

	Zondereinde			Booyseindal North			Booyseindal South
	FY2016	FY2015	FY2014	FY2016	FY2015	FY2014	FY2016
Land disturbed by mining and related activities	137	136	137	521	521	521	250
Land leased for farming purposes	273	273	273	N/A	N/A	N/A	–
Land protected for conservation	800	800	800	960	960	960	–
Total land under management (freehold)	4 439	4 439	4 439	6 773	6 773	6 773	4 347

BOOYSENDAL EXPANSION PROJECTS

Northam is taking particular care to minimise its environmental impact from the outset in regard to its Booysendal expansion projects – the Merensky North mine establishment and the South mine establishment. Northam is actively working around the topography of the area.

An aerial ore conveyor system will link Booysendal South to Booysendal North, minimising the impact across the terrain it traverses. Only 11 tower structures supporting the conveyor will actually be on the ground over a distance of 4.9 kilometres. We are preparing for the acquisition of all the necessary environmental permitting for Booysendal South and the EIA amendment process for Merensky North is in progress.

ENVIRONMENTAL PERMITTING

- In May 2015 Booysendal submitted a Section 102 application for the Merensky project. The Section 102 included the expansion for the Merensky North mine as well as an amendment of the Booysendal EIA and EMP to accommodate the expansion of the tailing storage facility. Approval has been received from the DMR.
- In May 2015 an amended water use licence was submitted to the DWS to update the current water uses at Booysendal North and to include the water uses for the Merensky North Mine. Approval is awaited from the DWS.
- The environmental process has been started for the Booysendal South mine. An environmental consulting company has been appointed and the relevant specialist studies are in progress.



It is only with careful land management that biodiversity can be maintained