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MANUFACTURED AND INTELLECTUAL CAPITAL

Our manufactured capital inputs include the specialised plant, machinery, equipment and infrastructure necessary for us to conduct our business.

Operating our mines requires a range of particular skills and technologies, and this intellectual capital input is only made possible by the skills and competencies inherent in our human capital. (See Human capital on page 54 for details of how we develop our employees.) Both our manufactured and intellectual capital inputs have as a focus the drive to make mining safer and to improve efficiencies.

RELEVANT MATERIAL ISSUE/S

- Managing production and performance to ensure successful execution of our business strategy
- Effective project execution

RELEVANT IDENTIFIED RISKS

- Execution of growth projects and the development of new operations
- Liquidity risk (cash and cost management and the efficient use of capital)
- Industrial action (labour-related stoppages)
- Not meeting production targets (operational underperformance)
- Fraud and corruption

OPERATIONAL BUSINESS UNITS

Our established, producing operations, their infrastructure, equipment and associated activities are considered to be the major components of the group's manufactured capital stock. In line with the group's growth strategy, record capital expenditure of R3.8 billion was allocated to the expansion of this capital stock. This investment contributes to growing sustainable output and ultimately the value it creates.

Core activities are conducted at the following of the group's long-life, low cost business units:

The established, mature, deep-level Zondereinde mine

The processing and smelting facilities at the Zondereinde mine

The shallower, long-life, modern and mechanised Booysendal North mine

Group operational statistics

		F2018	F2017	% change
Total tonnage milled	t	4 601 876	4 450 111	3.4
Equivalent refined metal – own production	6E oz	571 843	546 984	4.5
Equivalent refined metal – purchased	6E oz	105 562	35 936	193.8
Total refined metal production	6E oz	549 500	522 129	5.2
Total refined Pt produced	oz	289 962	273 432	6.0
Chrome concentrate produced	t	650 091	581 385	11.8
PGMs sold	6E oz	549 508	523 170	5.0
Total revenue per Pt oz sold	R/oz	26 103	25 050	4.2
Cash costs per equivalent refined Pt oz	R/oz	21 270	19 736	(7.8)
Cash profit per equivalent refined Pt oz	R/oz	4 833	5 314	(9.1)
Cash margin per equivalent refined Pt oz	%	18.5	21.2	(12.7)

Northam's equivalent refined metal production from its own operations rose by 4.5% to 571 843oz 6E (F2017: 546 984oz) for the year. The 7.0% growth in production volumes at Zondereinde more than compensated for a decline in Booysendal output, occasioned by a work stoppage in May 2018.

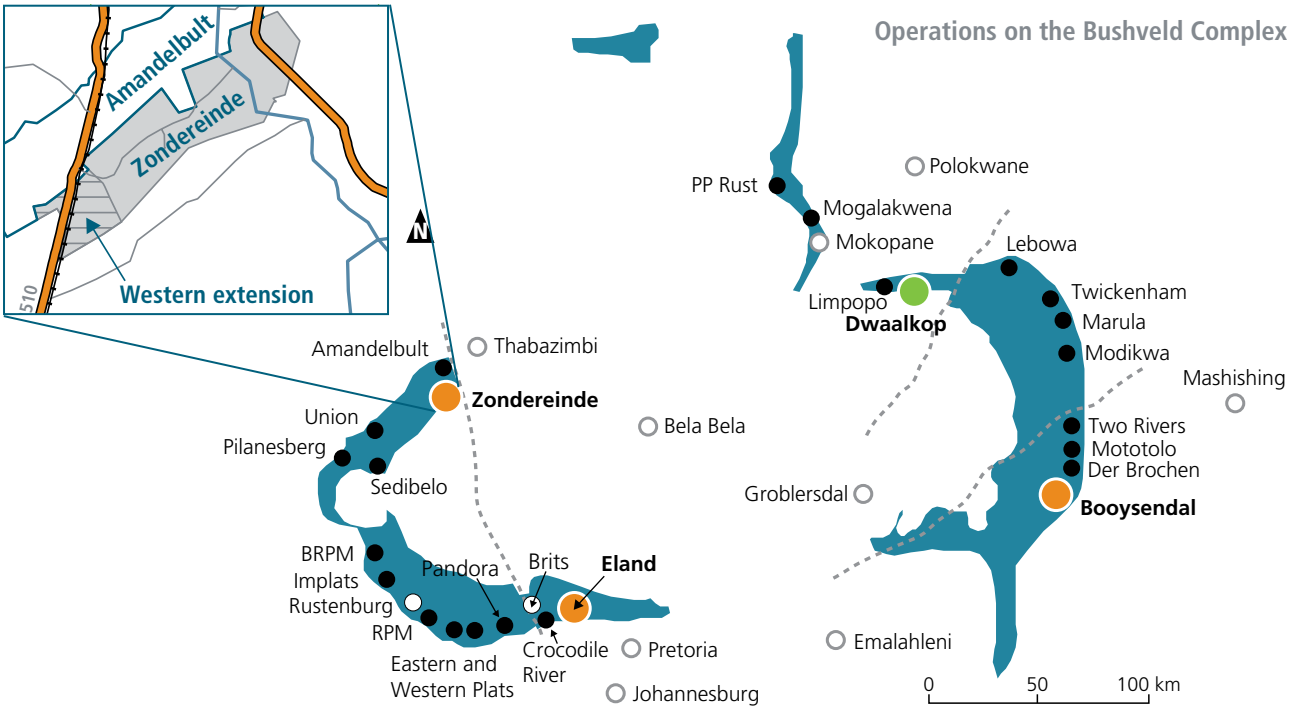
Despite higher sales revenues, the increase in total revenue per platinum ounce was limited to 4.2%. Unit costs rose 7.8%, resulting in the group's cash margin declining by 9.1% to R4 833 per platinum ounce.

During the year, the group paid R1.0 billion for the Western extension (formerly the Tumela block) and R175.0 million for Eland Platinum mine. The assets of a PGM recycling business were acquired in Pennsylvania, United States of America for USD10.8 million and the non-core 7.5% share in the Pandora joint venture was disposed of for R45.6 million.

Brownfields expansion into the Booysendal South property continued during the year. On-reef development is already contributing to an ore stockpile which will be processed when the Booysendal South concentrator is commissioned in April 2019. Steady-state production is expected in 2022. In line with the growth in mining output, the group's processing capacity was significantly supplemented during the year with the commissioning of a second furnace in the smelter at the Zondereinde mine's metallurgical complex.

MANUFACTURED AND INTELLECTUAL CAPITAL CONTINUED

ZONDEREINDE SNAPSHOT



First production 1992

Total resource	Total reserve	Life of mine
105.2Moz	**13.9Moz**	**30 years**

Mining method and features:

Established conventional mine; traditional drill and blast narrow tabular reef mining on a standard breast layout. All mining performed by full suite of hydropowered equipment.

Major infrastructure:

Underground workings are accessed from a twin vertical shaft system. The shafts are 90m apart and are interconnected at an intermediate pump chamber on another six levels.

Ore is transported to the main shaft ore-passes using battery-powered locomotives pulling hoppers. Broken ore is transported to a conventional shaft ore-pass system, with separate rock-handling facilities for Merensky reef, UG2 reef and waste.

Surface infrastructure comprises two concentrator plants for Merensky and UG2 ore, a recently expanded smelter which houses two furnaces and a base metals removal plant.

Total employees in service	Key safety statistics	Equivalent refined production (6E)	Capital expenditure	Cash costs per equivalent refined Pt oz
9 107	FIIR 0.02, LTIIR 1.29, RIIR 0.87	348 888	R1.5 billion	R22 101/oz

2018 PERFORMANCE

There were two fatal accidents at Zondereinde during the year. Mr Sebastio Massingue was fatally injured in an underground rail accident and Mr Daniel du Plessis lost his life in an engineering-related accident. Despite this safety setback, Zondereinde's lost time injury incident rate (LTIIR) improved 21.8% to LA 1.29 injuries per 200 000 hours worked (F2017: 1.65). Continuing to improve the safety performance and the health and wellness of our workforce is a material issue for the business.

The 6E production of equivalent refined metal increased by 7.0% to 348 888oz (F2017: 325 981oz). The higher output was achieved in spite of a marginal drop in tonnages milled. The lower tonnages milled reflect a marginally weaker Merensky mining performance owing to depletion of Merensky reef on the upper levels of the mine. Higher UG2 production more than made up for the lower Merensky tonnages but not all the additional UG2 reef was able to be milled as the production exceeded the concentrator capacity. Consequently the UG2 stockpile increased significantly to 210 379 tonnes by year end.

Purchases of concentrate from third parties reached 97 974oz 6E (F2017: 35 936oz 6E).

Good progress has been made with the deepening project, which will open up additional Merensky reserves. The conveyor decline has progressed beyond the 17 level elevation on the way to 18 level and lateral development has started on 17 level. The service decline for material transport and chairlift for personnel transport have both been commissioned to 16 level. Stoping operations have started in the first reef raises to be completed on 16 level.

During the year, additional permanent employees were signed on in order to access the Western extension area. Development into the extension area has progressed on levels 3 to 12. Each footwall drive has reached the first reef crosscut position. By the end of the first half of the 2019 financial year, the majority of levels should have intersected reef, and stoping is expected to start in mid-2019. Production from this expansion project will add some 50 000oz 4E to Zondereinde's profile in the next two years.

The new 20MW furnace at the Zondereinde metallurgical complex was commissioned in December 2017, constituting a major milestone in Northam's strategic growth initiatives, and underpinning the renewal of the company's long-term strategic partnership with Heraeus. First matte was tapped in January 2018. In terms of an agreement, Heraeus contributed an amount of €20 million to the Northam smelter expansion programme, and the parties committed to the following:

- an extension of the existing 30-year partnership between the companies;
- Heraeus to continue to refine Northam's PGM concentrates at competitive terms; and
- Northam to make up to 40% of its refined precious metals available for sale to Heraeus.

The furnace will provide the additional capacity required to treat the growing volumes from Zondereinde, Booysendal and those of Eland when it starts producing. It has been designed to be used as a pure UG2 furnace to accommodate higher group UG2 production or as a combined Merensky/UG2 furnace. The new furnace incorporates a number of advances in the area of PGM smelting. These include extended refractory lining life expectancy, metal containment and cooling, along with best practice in terms of monitoring, tapping and furnace control functions.

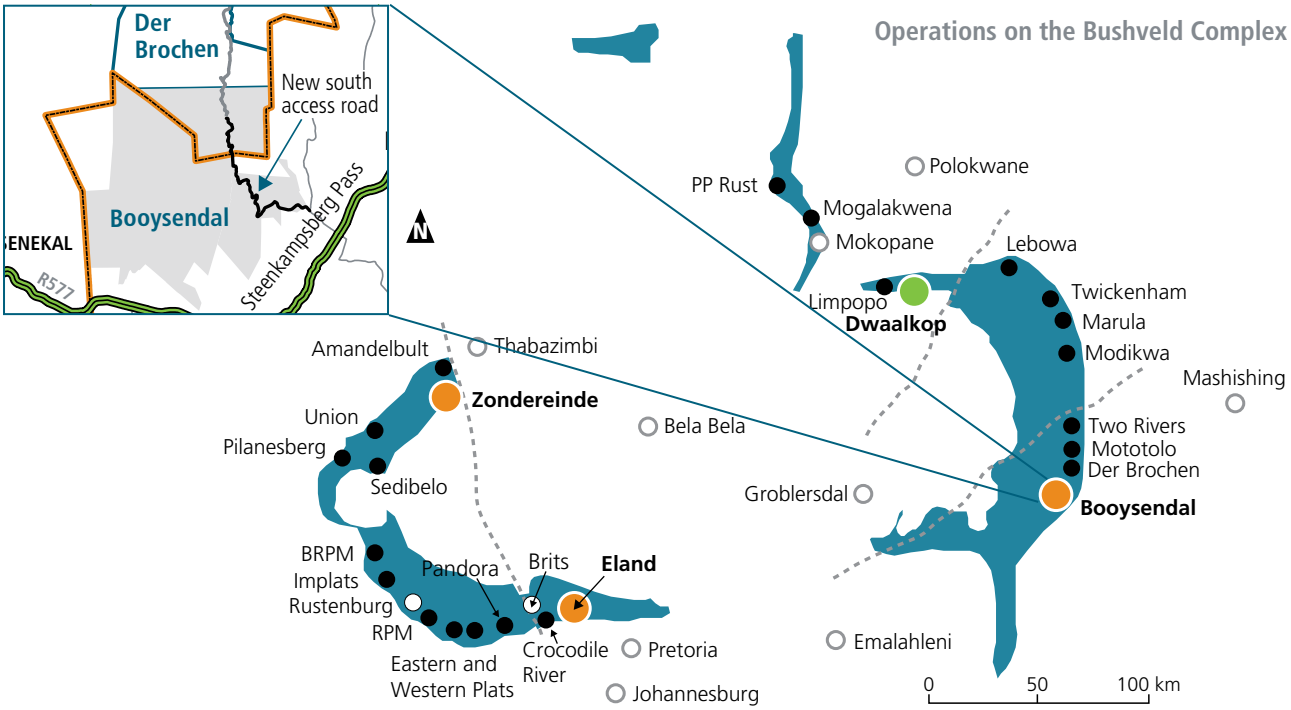
Capital expenditure during the current period reached R1.5 billion (F2017: R806.4 million). Expansionary project expenditure accounted for R1.3 billion while sustaining expenditure was R249.5 million. The project expenditure pertained primarily to the acquisition of the Western extension resource and the completion of the new furnace at Zondereinde's smelter complex. Expansion and sustaining capital expenditure for F2019 is estimated at R453.5 million and R96.5 million, respectively.

Total operating costs at Zondereinde for the period were R4.2 billion (F2017: R3.7 billion), a 14.1% increase. Labour costs represent a significant portion of this increase, partly owing to the hiring of new employees required to exploit the Western extension. The combination of higher costs and higher production translated into a 5.8% increase in unit cash costs per equivalent refined platinum ounce to R22 101/oz (F2017: R20 890/oz).

Zondereinde's current total resource estimate increased to 105.2 million oz (Moz) (F2017: 84.0Moz), due to the inclusion of the Western extension.

MANUFACTURED AND INTELLECTUAL CAPITAL CONTINUED

BOOYSENDAL SNAPSHOT



First production 2013

Total resource	Total reserve	Life of mine
105.1Moz	**14.1Moz**	**30 years**

Mining method and features:

Shallow, mechanised mining using bord and pillar mining methodology.

Major infrastructure:

Unique reverse decline at Booysendal North mine connects the concentrator plant and other mine infrastructure situated on a plateau with the on-reef declines that access the underground mine and outcrop on the side of the valley. This design has helped to minimise the mine footprint.

There is one 210 000tpm PGM concentrator plant on surface at the North mine, along with a dense media separation plant and chrome spirals plants. The South mine has a 250 000tpm PGM concentrator, with a chrome spiral plant and associated tailings facilities, as well as normal mining infrastructure such as offices, workshops, stores and access to the Booysendal South underground workings. An aerial rope conveyor system is being constructed to transport ore over challenging topography with minimal environmental impact.

Total employees in service	Key safety statistics	Concentrate produced and ore stockpile (6E)	Capital expenditure	Cash cost per Pt oz in concentrate produced
4 151	FIIR 0.00, LTIIR 0.31, RIIR 0.18	229 275	R2.0 billion	R17 090/oz

2018 PERFORMANCE

The good safety performance at Booysendal continues. At the beginning of the financial year, in July 2017, a total of 3 million fatality-free shifts was recorded. The LTIIR marginally deteriorated to LA 0.31 for the year (F2017: 0.30) with an improvement in the reportable injury incident rate (RIIR) to LA 0.18 (F2017: 0.20).

Production from the Booysendal North UG2 mine declined by 9.0% year-on-year to 2 182 592 tonnes (F2017: 2 399 204 tonnes) primarily owing to a seven-day work stoppage at the end of March 2018 relating to the change over from a contract mining model to owner mining as well as the introduction of a narrower mining cut in the lower levels of the mine. Production from the Merensky North mine increased by 24.1% to 326 670 tonnes (F2017: 263 152 tonnes).

Total tonnage milled increased by 7.3% to 2 669 072 tonnes. The Merensky throughput increased significantly to 458 027 tonnes (F2017: 161 134 tonnes) displacing some of the UG2 throughput which was 5.0% lower at 2 211 045 tonnes (F2017: 2 326 460). The additional tonnage milled came from stockpiled ore. The operation of the dense media separation plant has stabilised following difficulties experienced during commissioning in the first half of the year and is operating within design parameters.

The North mine capital expenditure of R462.3 million for the year (F2017: R448.2 million), included R326.1 million being spent on projects and R136.1 million spent on sustaining capital. The North mine capital projects comprise the Merensky North project, the UG2 North deepening project as well as capital spent on housing and township development.

The F2019 capital expenditure for the North mine is estimated at R364.8 million, R169.0 million in sustaining capital expenditure and R195.8 million on expansion capital.

Total operating costs at Booysendal were R2.1 billion (F2017: R2.0 billion), an increase of 5.8%. The increase in the unit cash cost per platinum oz was contained to 8.5% from R15 747/oz to R17 090/oz for the current period, in the face of lower production volumes. Post the transition to an owner operating model, good mining results are anticipated.

PROJECT PIPELINE

Booysendal North UG2 deepening project

This project was initiated in June 2015 and has absorbed a total of R207.7 million to date. It extends the down-dip limit of the North UG2 mine to 2.8km. Two additional levels have been established, one of which is equipped. At steady state, this project will add 30 000oz (4E) per annum to the North mine.

Project capex for the year was R78.6 million. Forecast capex to completion in F2019 is R106.6 million.

South mine

Development of the South mine, the group's largest mining project, was started in June 2016 after the acquisition of the contiguous Everest mine from Aquarius, at a cost of R450.0 million. Establishment of infrastructure has been progressing apace, with the completion of a 12km access road, a bridge over the Dwarsrivier and equipment installation both on surface and underground. The central boxcut and earthworks are complete and work on the shaft head infrastructure is on track. All seven adits have intersected reef. The development for Phase 1 has been completed, and by year-end, a surface stockpile of 71 000 UG2 tonnes had been accumulated. This stockpile needs to reach the critical mass level of 150 000 tonnes ahead of the rope conveyor commissioning.

The PGM circuit at the South mine concentrator is currently being commissioned, the chrome spiral circuit is operational and the pollution controls are in place for separating clean and dirty water while the upgrade of the dirty water system is complete.

The installation of the South aerial rope conveyor system, linking the central UG2 complex with the South concentrator, is progressing well. By the end of 2017, all the towers had been erected and all ropes installed and tensioned. Commissioning is expected in December 2018, ahead of schedule.

MANUFACTURED AND INTELLECTUAL CAPITAL CONTINUED

During the financial year under review, the design of two additional Merensky declines was finalised and it is envisaged that development of these two declines will start in F2019 and F2020, respectively. The ore from these two declines will be transported via the South aerial rope conveyor system to the South mine concentrator for processing.

The South mine is likely to reach steady-state production of 215 000 ounces (4E) per year by the 2022 financial year. Ore will be milled at the South mine concentrator once the PGM circuit has been commissioned, currently scheduled for April 2019. The plan is to stockpile ore at the South mine concentrator from December 2019 after commissioning of the rope conveyor.

In a further development, a new aerial rope conveyor system has been approved to transport excess production at the North mine to the South concentrator. The construction of the North aerial rope conveyor system is expected to start early in F2019, after environmental approval is obtained. This item will absorb capital expenditure of R80.4 million, currently accounted for as a prepayment.

Total capital expenditure for the South mine to date has absorbed R1.9 billion, with R1.5 billion spent in the 2018 financial year. Capex for F2019 is likely to reach R935.2 million. The total capital forecast for the South mine is R5.6 billion.

Booysendal South tailings retreatment plant

This project was initiated in the first half of the financial year. It entails the hydro-mining and reprocessing of the Booysendal South tailings storage facility (TSF), which contains 8.7Mt of chrome and low-grade PGM-bearing tailings. By the end of the financial year, 824 000 tonnes had been processed and 61 500 tonnes of chrome concentrate had been produced.

The entire plant commissioning, along with the processing for PGMs is planned for the end of the first quarter of the year. Construction has started on the backfill plant, while the process design is being finalised ahead of commissioning in September 2018. Tailings arising from the reprocessing will be placed underground as backfill in order to reduce the environmental impact. Total capex for the project is expected to be R163.5 million.

Eland Platinum

The Eland transaction was finalised in January 2018. The total cost to Northam was R175.0 million in cash. The transaction includes Eland's two mining rights, a resource of 19.3Moz (4E), surface and underground assets and equipment, concentrator with capacity of 250 000tpm, and a mining fleet of more than 100 vehicles. Three initiatives are currently in progress at Eland:

- Recommissioning the Kukama shaft, with trial mining on One Level West
- Recommissioning the metallurgical plant to reprocess tailings for PGMs and chrome; commissioning is expected in February 2019
- Processing PGM-bearing metal from Jubilee Metals Group

Eland capex forecast for F2019 is R200.0 million.

RECYCLING BUSINESS

The US recycling business was acquired in September 2017. The assets remain on care and maintenance for the time being. Northam is in receipt of recycling material from various parties for testing purposes, which includes metallurgical test work as well as the logistics chain.

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8.7Mt

Booysendal South tailings storage facility contains 8.7Mt of chrome and PGM-bearing tailings