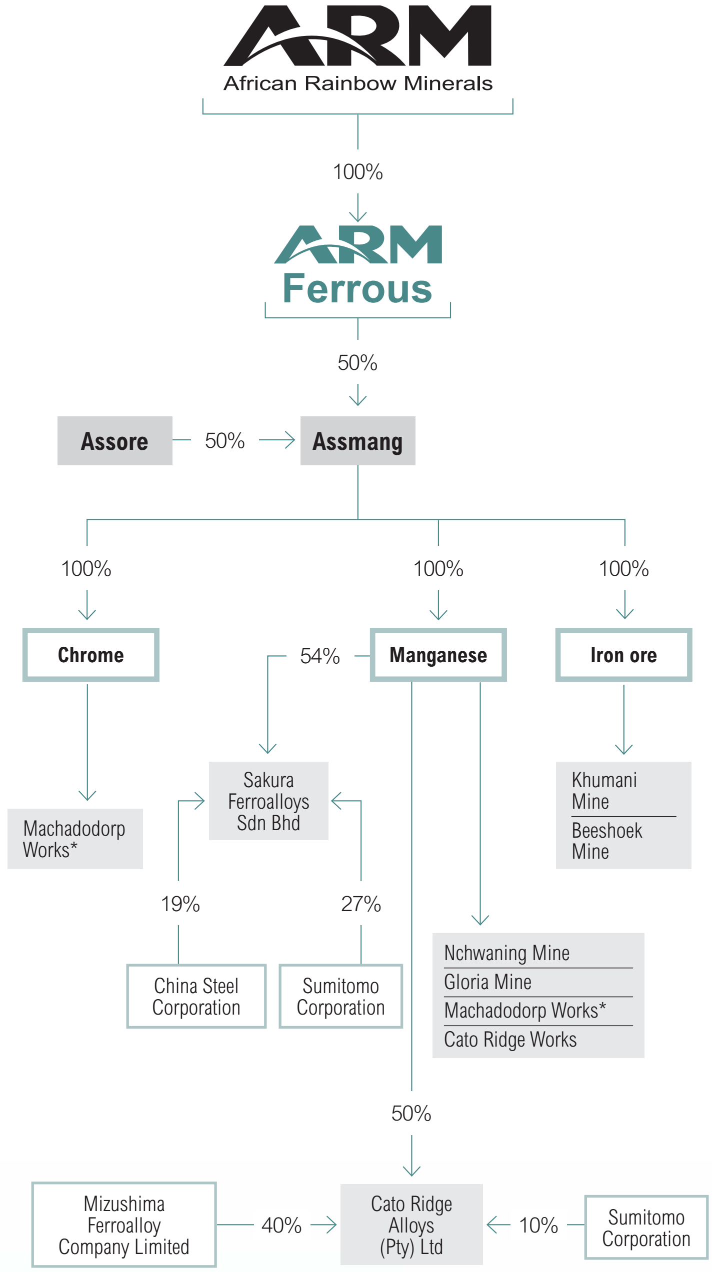
ARM FERROUS

André Joubert
Chief Executive – ARM Ferrous



* *Machadodorp Works in currently recovering ferrochrome from historical slag dumps through the metal recovery plant.*

KEY FEATURES FOR F2018

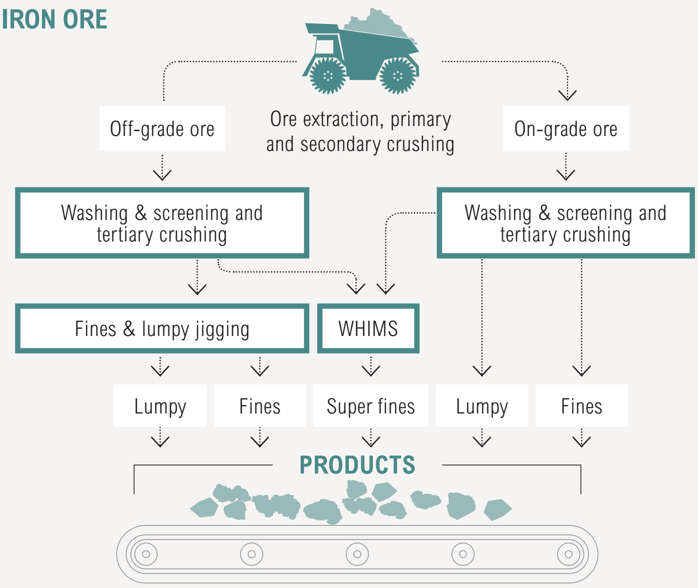
- Headline earnings from continuing operations increased by 6% to **R3.5** billion.
- The Manganese division's headline earnings increased by 64%.
- The LTIFR improved by 24% to 0.13 per 200 000 man-hours.
- Additional capital expenditure was approved for Gloria Mine.
- Assmang paid a dividend of R6 billion to its shareholders.
- Medium-term manganese export capacity allocation (MECA2) was concluded with Transnet.

MATERIAL MATTERS

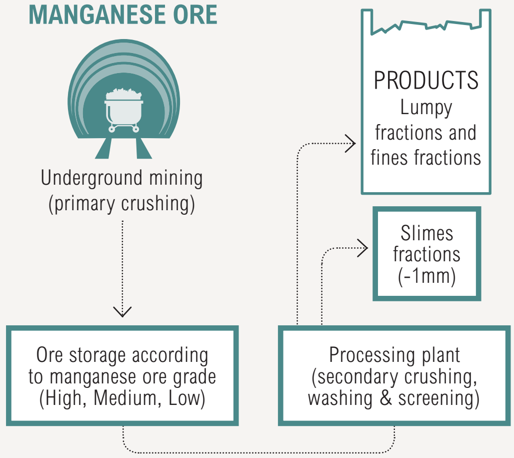
- Water supply and costs for Khumani and Black Rock mines.
- Commodity price and exchange rate volatility.
- Customer concentration risk at Beeshoek Mine with 85% of production sold locally.
- Changes in legislation.
- Increasing women representation across the various levels of management.

PRODUCTION PROCESS

IRON ORE



MANGANESE ORE



ARM FERROUS continued

IRON ORE: KHUMANI MINE

F2018 OBJECTIVES	PERFORMANCE AGAINST F2018 OBJECTIVES	F2019 OBJECTIVES
Maintain the good safety performance achieved to date.	**Achieved** The LTIFR remained at 0.01 per 200 000 man-hours.	Maintain the good safety performance achieved to date and ensure an LTIFR below the tolerance level of 0.20 per 200 000 man-hours.
Sustain production volumes at 14.3 million tonnes per annum.	**Achieved** Production volumes for F2018 were 14.7 million tonnes.	Deliver production volumes of 14 million tonnes per annum.
Increase ultra-fines production to 600 thousand tonnes per annum.	**Achieved** Ultra-fines production was 669 thousand tonnes.	Sustain the ultra-fines production at 600 thousand tonnes per annum.
Maintain export iron ore sales of 14 million tonnes per annum.	**Not achieved** Export sales volumes were 13.9 million tonnes.	Deliver sales volumes of 14 million tonnes per annum.
Evaluate when to implement technology to recover low-grade feed material.	**Achieved** Various options were evaluated during F2018. Recommendations will be made for consideration in F2019.	Recommend technology to be implemented to recover low-grade feed material.
Evaluate the equipping and extraction of water from the five boreholes.	**Achieved** Detailed geohydrological modelling work was completed and an application has been made to the Department of Water Affairs for an abstraction licence.	Roll-out the borehole extraction strategy and process implementation, once the abstraction licence is approved.
Contain unit cost escalations within inflation.	**Achieved** Unit production costs increased below inflation at 2%.	Contain unit cost escalations within inflation.
Execute a management programme for the offset area.	**Achieved** The farm Watermeyer was successfully secured and a management programme has been implemented.	Successfully introduce KM02 Pit as a tailings/paste facility for the next 15 years.

IRON ORE: BEESHOEK MINE

F2018 OBJECTIVES	PERFORMANCE AGAINST F2018 OBJECTIVES	F2019 OBJECTIVES
Maintain the good safety performance achieved to date.	**Achieved** A LTIFR of 0.07 per 200 000 man-hours was achieved, well below the tolerance level of 0.20 per 200 000 man-hours (this represents a 56% improvement from F2017).	Maintain and improve, where possible, the good safety performance achieved to date.
Increase production volumes to 3.7 million tonnes per annum.	**Achieved** Production volumes for F2018 were 3.9 million tonnes.	Deliver production volumes of 3.5 million tonnes per annum.
Target local iron ore sales of 3.5 million tonnes per annum. Target export iron ore sales of 300 thousand tonnes.	**Achieved** Local sales volumes were 3.6 million tonnes. Export sales volumes were 404 thousand tonnes.	Target iron ore sales to the local market of 3 million tonnes per annum. Target iron ore sales to the export market of 350 000 tonnes.
Complete mining activities in East Pit by December 2018.	**Achieved** Mining in East Pit continued on schedule and it is forecasted to be completed by December 2018.	Complete the mining activities in East Pit by December 2018.
Complete feasibility study for the tailings recovery project.	**Not achieved** Various studies have been initiated and costs have been estimated for different processing options. A final selection on the way forward has not yet been concluded due to options not meeting the requisite investment criteria.	Complete the feasibility investigations into the retreatment of slimes and jig discard and make a final recommendation for consideration.
Contain unit cost escalations within inflation.	**Achieved** Unit production costs decreased by 0.5%.	Contain unit cost escalations within inflation.
		Evaluate satellite ore body opportunities to increase the resource base of the mine.

ARM FERROUS continued

MANGANESE ORE: BLACK ROCK MINE

F2018 OBJECTIVES	PERFORMANCE AGAINST F2018 OBJECTIVES	F2019 OBJECTIVES
Maintain the good safety performance achieved to date.	**Achieved** An LTIFR of 0.20 per 200 000 man-hours was achieved.	Maintain the good safety performance achieved to date maintaining the LTIFR below the tolerance level of 0.30.
Ramp up production in line with the Transnet expansion schedule. Target 3.6 million tonnes of product for 2018.	**Achieved** Production volumes were 3.7 million tonnes.	Deliver production volumes of 3.3 million tonnes.
Deliver external sales volumes of 3.3 million tonnes.	**Achieved** Sales volumes for F2018 were 3.4 million tonnes.	Deliver external sales volumes of 3.5 million tonnes as the modernisation of Gloria Mine is being executed.
Contain unit cost escalations within inflation.	**Not achieved** Unit production costs increased by 16%. The mine is still in a ramp-up phase as the Black Rock Project nears completion.	Contain unit cost escalations within inflation.
Complete the following: ○ Stacker 2 commissioning. ○ Commissioning of the product stockyard, load-out station and rail balloon. ○ Rail link line. Performance testing of product load-out system. ○ Nchwaning I key underground infrastructure. ○ Nchwaning II underground sliping and support. ○ Nchwaning II underground silos at station ore handling system. ○ Nchwaning III underground sliping and support in Satellite Tip 1 Area. ○ Nchwaning III underground silos at Satellite Tip 1 Area. ○ Nchwaning III underground mining development. ○ Gloria second escape shaft commissioning and winder licensing. ○ Gloria decline design and procurement process. ○ Commence with design on Gloria.	**In progress** 95% of the planned objectives for the Black Rock Project were achieved. The following objectives will be completed during F2019: ○ Nchwaning I key underground infrastructure – 80% complete. ○ Nchwaning II underground sliping and support complete, Main Drive North still in progress. ○ Nchwaning III underground mining development – Tip 2 planned for completion in 2019.	**Complete the following:** ○ Nchwaning II station ore handling system and Graben tip. ○ Nchwaning II sliping and re-support. ○ Nchwaning III proceed with construction on Tip 1 and silo feed. ○ Nchwaning III underground silos at Satellite Tip 1 Area. ○ Nchwaning I third ore pass. ○ Gloria replacement of decline conveyor and infrastructure. ○ Gloria commence with underground mining and sliping. ○ Gloria commence with processing plant earthworks and civil construction. ○ Nchwaning III plant thickener upgrade. ○ Nchwaning tailings facility. ○ Eskom Klipkop sub-station upgrade commence.

MANGANESE ALLOY: CATO RIDGE WORKS

F2018 OBJECTIVES	PERFORMANCE AGAINST F2018 OBJECTIVE	F2019 OBJECTIVE
Maintain the good safety performance achieved to date.	**Achieved** A LTIFR of zero was achieved.	Maintain the good safety performance achieved to date.
Contain unit production cost increases.	**Achieved** Unit production costs increased by 6%.	Contain unit production cost increases.
Assess furnace performance and cost when using lower-grade N-ore from the mine.	**Achieved** The lower-grade ore was successfully introduced to the furnaces without any major adverse effects.	Evaluate the use of 'Vessel Sinter' to reduce sinter costs.
Design and build a demonstration furnace if approval is obtained.	**Not achieved** The development and design of a demonstration furnace progressed well; however, a decision was made to install this furnace at Machadodorp Works.	Complete the design and build a demonstration furnace at Machadodorp Works for ferromanganese production tests.
Optimisation of the raw material mix feed into the furnaces to reduce costs.	**Achieved** This work is progressing as planned. 20% of the traditional Nchwaning ore was replaced with Traxys agglomerates, produced on-site, from low-value raw materials.	Finalise the Traxys Project development and recommend the potential investment.
Commission the Brex Plant to full production to consume fines on site.	**Achieved** The Brex Plant was successfully commissioned and production at the plant is in balance with the furnace requirements.	Continue the evaluation of the Brex agglomerates on the furnaces to establish cost reduction recipes.
Complete slag test work to determine suitability for application in the aggregate industry.	**Achieved** The slag test work has been completed and successfully placed in the aggregate industry. Exemption has been obtained from the Department of Environmental Affairs to re-cycle slag.	Initiate and complete an Alloy Strategy for ARM Ferrous.

ARM FERROUS continued

MANGANESE ALLOY: SAKURA WORKS

F2018 OBJECTIVES	PERFORMANCE AGAINST F2018 OBJECTIVES	F2019 OBJECTIVES
Maintain the good safety performance achieved to date.	**Not achieved** Regrettably an employee was fatally injured in an accident at the Sakura Works.	Improve the safety performance ensuring an LTIFR below the tolerance level of 0.20.
Increase production volumes to 229 thousand tonnes per annum.	**Achieved** Saleable production volumes were 243 thousand tonnes.	Deliver production volumes of 240 thousand tonnes.
Deliver sales volumes of 228 thousand tonnes per annum.	**Achieved** Sales volumes for F2018 were 239 thousand tonnes.	Deliver sales volumes of 240 thousand tonnes.
Contain unit cost escalations within inflation.	**Not achieved** Unit production costs increased by 5%.	○ Contain unit cost escalations within inflation. ○ Successfully reduce alloy fines generation. ○ Complete the sinter production options and make final recommendation. ○ Complete the binder investigation on the Brex Plant. ○ Introduce alternative raw materials to reduce the ore and reductant input costs. ○ Extend the slag sales agreements and develop and implement slag re-use options.

MARKET REVIEW

Global steel demand grew by 4.7% in the 2017 calendar year (CY) compared to 2016. This is a significant increase from the 1% growth reported in 2016 CY. Both developed and developing economies contributed to the improved growth. Global crude steel production also reported healthy growth during F2018 driving the demand for the ARM Ferrous commodities. All major steel producing countries, except for Japan, reported strong growth in 2017 compared to 2016. Year-on-year growth ranged between 3% to 6% per region and overall world growth reached 5% year-on-year.

China's continued drive to a cleaner environment has assisted in keeping steel margins high and drove the demand for higher-grade raw materials, especially iron ore. Elsewhere, improved economic growth supported demand for bulk commodities.

Iron ore

Prices for iron ore (62% iron content, fines grade, delivered in China) for the financial year under review remained on average similar to that of the previous year at a price of US$69/t. Compared to previous years, however, the index price remained more stable, particularly during the second half of the financial year. This is indicative of a more stable supply/demand balance.

The premium for lumpy grade material was more volatile ranging between US$5.14/t and US$29.87/t. The average premium for lumpy material for the year under review was US$13.34/t, almost double the average premium for the previous year.

Even though China represents more than 70% of world seaborne trade, ARM Ferrous iron ore sales to China were reduced to just above 50%. Domestic sales of iron ore increased slightly from 19% to 20% for the year under review.

Manganese ore

Demand for manganese ore remained strong throughout the financial year driven by weaker than expected Chinese domestic manganese ore production and significantly higher Chinese Electrolytic Manganese Metal (EMM) production, providing strong price support for both the high-grade (44% manganese content) and medium-grade (37% manganese content) indices. The manganese ore market experienced some price volatility due to the environmental restrictions which saw manganese ore imports into China reaching historical highs; however, demand side fundamentals have re-emerged as the market drivers.

The average index price in F2018 for high-grade lumpy ore (44% manganese content) was US$6.88/mtu, delivered in China (F2017: US$5.77/mtu), while the average medium-grade (lumpy) ore price index (37% manganese content) for the F2018 was US$5.59/mtu, free on board from South Africa (F2017: US$4.56/mtu).

Manganese alloys

The start of the financial year saw the alloy market remain tight due to weaker year-on-year growth in supply from the rest of the world excluding China. These conditions, together with robust manganese ore prices, strong steel consumption and high steel prices resulted in alloy prices being maintained at higher levels than the start of the 2017 calendar year.

Oversupply in the manganese alloy market began to emerge in markets outside China in the second half of the financial year as supply caught up with increased demand. Although demand from the steel industry remained firm across geographies, the increased supply translated into price weakness. The average F2018 index price for the USA and Europe for high carbon ferromanganese was US$1 434 per metric tonne delivered duty paid (F2017: US$1 179 pmt DDP) while the average for Medium Carbon for F2018 was US$1 983 per metric tonne Delivered Duty Paid (DDP) (FY2016/2017: US$1 706 pmt DDP).

FINANCIAL REVIEW

ARM Ferrous headline earnings (including discontinued operations) of R3 528 million were 5% lower compared to R3 709 million in F2017. This decrease was mainly due the inclusion in F2017 of a non-recurring amount of R378 million relating to the sale of ARM's effective 50% stake in the Dwarsrivier Mine (which was disclosed as a discontinued operation in F2017). The F2018 ARM Ferrous headline earnings from continuing operations were 6% higher than the corresponding financial year excluding this non-recurring amount.

The manganese division's headline earnings were 64% higher. Iron ore headline earnings were down 24% mainly as a result of a 20% decrease in the average realised US Dollar fines prices and the strengthening of the Rand/US Dollar exchange rate.

ARM FERROUS HEADLINE EARNINGS/(LOSS) BY DIVISION

	12 months ended 30 June		
R million	2018	2017	% change
Iron ore division	**3 343**	4 373	(24)
Manganese division	**3 808**	2 322	64
Chrome division	**(42)**	749	(106)
Total (100% basis)	**7 109**	7 444	(5)
ARM share	**3 555**	3 723	(5)
Consolidation adjustments	**(27)**	(14)	
Headline earnings attributable to ARM	**3 528**	3 709	(5)

The mines and the smelters were able to deliver into this generally improved price environment, increasing production and sales volumes at all the operations.

ARM FERROUS continued

OPERATIONAL REVIEW

Production and sales volumes performance

Iron ore production volumes increased by 864 thousand tonnes (5%) to a production record of 18.58 million tonnes in F2018 (F2017: 17.7 million tonnes). Most of the increase was due to Beeshoek Mine which delivered 730 thousand tonnes higher production volumes as an opportunity to export 404 000 tonnes of iron ore from Beeshoek Mine was created through the newly established rail loop to the Saldanha Export Channel. Khumani Mine's production volumes increased by 134 thousand tonnes to 14.7 million tonnes by practising selective mining methods and improving the in-pit blending of the feed ore. This resulted in the on-grade ratio improving from 32% in F2017 to 35% in F2018. Khumani Mine's production lumpy to fines ratio decreased from 57:43 in F2017 to 55:45 in F2018 as a result of mining more ore from the King Pit, in alignment with the exploitation schedule for the total iron ore resource at Khumani Mine.

Commensurate to the higher production, total iron ore sales volumes increased by 600 thousand tonnes (4%) to a sales record of 17.9 million tonnes in F2018. Beeshoek Mine's sales volumes increased by 750 thousand tonnes while Khumani Mine's sales volumes decreased by 150 thousand tonnes. The decrease in the sales volumes from Khumani Mine is directly related to the derailments experienced on the export line to Saldanha Port. Of the 17.9 million tonnes sold, 14.3 million tonnes was exported and 3.6 million tonnes was sold locally.

At Black Rock Mine, manganese ore production volumes increased by 21% to 3.72 million tonnes (F2017: 3.07 million tonnes). 84% of the additional manganese ore produced was lumpy. The main reasons for the improved production volumes were:

- Benefits of the Black Rock Project – the upgrade of the Nchwaning II Shaft was completed during F2017, which enabled the full utilisation of the shaft infrastructure during F2018; and
- Successful execution of productivity improvement initiatives at the various shafts.

Black Rock Mine's sales volumes increased by 6% to 3.41 million tonnes (F2017: 3.24 million tonnes).

Cato Ridge Works' high-carbon ferromanganese production volumes decreased by 10 thousand tonnes (6%) to 151 thousand tonnes compared to 161 thousand tonnes in F2017. The decrease in production volumes relates to a decision taken to reduce the amount of furnaces operating at Cato Ridge Works from four in F2017 to three in F2018 as part of the business improvement strategy. Cato Ridge Alloys' medium-carbon ferromanganese production volumes decreased by 6% to 57 thousand tonnes in F2018 compared to 61 thousand tonnes in F2017. The sales volumes for both high-carbon and medium-carbon ferromanganese matched the production volumes achieved for F2018.

Sakura Works' high-carbon ferromanganese production volumes increased by 63 thousand tonnes (35%) to 244 thousand tonnes in F2018 compared to 181 thousand tonnes in F2017. This increase was as a result of the ramp-up of both furnaces during F2018, which are currently producing at higher than design capacity. Sales volumes at Sakura Works increased by 86% to 240 thousand tonnes (F2017: 129 thousand tonnes).

ASSMANG PRODUCTION VOLUMES (100% BASIS)

	12 months ended 30 June		
Thousand tonnes	**2018**	2017	% change
Iron ore	**18 578**	17 714	5
Manganese ore	**3 717**	3 069	21
Manganese alloys (local)	**218**	222	(2)
Manganese alloys (Sakura)	**244**	181	35
Charge chrome	**2**	11	(82)

ARM FERROUS SALES VOLUMES (100% BASIS)

	12 months ended 30 June		
Thousand tonnes	**2018**	2017	% change
Iron ore	**17 874**	17 275	3
Manganese ore*	**3 177**	2 974	7
Manganese alloys (local)	**138**	174	(21)
Manganese alloys (Sakura)	**240**	129	86
Charge chrome	**13**	18	(28)

* *Excluding intra-group sales.*

Unit cost performance

Through improved operational efficiencies and higher production volumes, Khumani and Beeshoek mines' unit production costs were managed to well below inflation and increased by only 2% and 1% respectively.

Black Rock Mine's year-on-year unit production costs increased by 16%. In F2017, the on-mine unit production costs had reduced to R453 per tonne mainly due to the exclusion of fixed costs of R208 million from on-mine production costs as the Nchwaning II Shaft was closed for 10 months of the financial year. In F2018, these associated costs were included in on-mine production costs as the shaft was fully operational for the entire of F2018. Further, there was an increase in operating costs as a result of manning the new plant and infrastructure, but not yet realising the full production volume potential, as a result of the Black Rock Project still being completed.

Both Khumani Mine and Black Rock Mine are currently in negotiations with the Sedibeng Water Board for the capital user charge related to the upgrade of the Vaal Gamagara Water pipeline which supplies water to both mines. This charge may increase unit costs at both mines going forward.

Cato Ridge Works' unit production costs increased by 6% as a result of higher input cost for sinter (due to the price improvements experienced in the index price for manganese ores) and an increase in the delivered price of coke and anthracite reductants. The unit cost of sales for Cato Ridge Works increased as the sales prices of alloys increased

ARM FERROUS continued

substantially during F2018 resulting in increased sales commissions. Sakura Works' unit production costs increased by 5% despite significant increases in raw material input costs (especially manganese ore and reductants). This was achieved through improved efficiencies and increased production volumes.

ARM FERROUS COST AND EBITDA MARGIN PERFORMANCE

Commodity group	Unit cost of sales % change	On-mine unit production cost % change	EBITDA margin %
Iron ore	2	2	39
Manganese ore	15	16	48
Manganese alloys: Cato Ridge	20	6	29
Manganese alloys: Sakura	6	5	12

Logistics

Transnet performed well and all local and export sales volumes were achieved in F2018 as planned.

ARM Ferrous has signed the MECA2 (Manganese Export Capacity Allocation) Agreement with Transnet, valid from 15 September 2015 until the later of 31 March 2023 or when the Port of Ngqura is fully operational. Rail and port capacity is secured through the ports of Port Elizabeth and Saldanha in line with the ramp up of Black Rock Mine. Engagements with Transnet with regards to synchronising the planned production ramp up of Black Rock Mine beyond 2023 and the rail and port capacity provisions in the longer-term (MECA3) are ongoing.

Transnet enabled Khumani Mine to export 14.3 million tonnes of iron ore for F2018. Although port stockpiles are low due to various Transnet Freight Rail (TFR) derailments, the Ferrous division has successfully managed to achieve planned iron ore sales volumes. A junior iron ore producer and exporter was able to export more than 1 million tonnes of product using the load-out facility of Khumani Mine during the reporting period.

In collaboration with Transnet, a link to the iron ore export line to Saldanha Port has been established, from Beeshoek Mine, to provide for additional iron ore export volume flexibility. This opportunity enabled Beeshoek Mine to export 404 thousand tonnes of iron ore, through Saldanha, in F2018.

Capital expenditure

Capital expenditure increased by 9% to R3 081 million in F2018 (F2017: R2 817 million).

Khumani Mine's capital expenditure was R1 306 million (F2017: R892 million). This increase mainly related to:

- Additional trackless mining machinery that was acquired to enable the selective mining strategy deployed during F2018;
- Waste stripping at the Bruce and King pits; and
- The replacement of mining equipment and fleet.

Beeshoek Mine's capital expenditure was R474 million compared to R277 million for F2017. The increase relates to:

- R98 million additional expenditure on waste stripping in the Village Pit in line with the development and exploitation schedule of the Village Pit; and
- R85 million additional expenditure for the replacement of trackless mining machinery and the replacement of crusher spares.

Black Rock Mine's capital expenditure decreased by 19% to R1 240 million (F2017: R1 617 million) mainly due to lower capital expenditure incurred for the Black Rock Project as most of the surface infrastructure improvements were completed and commissioned in F2017. At the end of F2018, approximately 90% of the approved R6.7 billion capital expenditure was committed or spent.

Capital of approximately R2.7 billion (on a 100% basis) has been approved for the modernisation and optimisation of Gloria Mine within Black Rock Mine. This capital, which is expected to be spent over the next few years, will enable Black Rock Mine the flexibility to produce different product specifications (from high- to medium-grade) as the ability to deliver different specification products to customers has become a key differentiator in the current dynamic manganese ore market. Gloria Mine is expected to be shut for six months of F2019 as part of this modernisation. Sales are planned to be met from inventory which has been built up in anticipation of the shutdown. Production capacity at Gloria Mine will be increased and will bring Black Rock Mine's production capacity to approximately 5 million tonnes per annum.

Cato Ridge Works' capital expenditure was R45 million compared to R30 million in F2017. The increase in capital expenditure relates mainly to sustaining capital expenditure. Sakura Works' capital expenditure reduced from R221 million to R34 million in F2018 mainly due to successful completion of the project in F2018.

ARM FERROUS CAPITAL EXPENDITURE

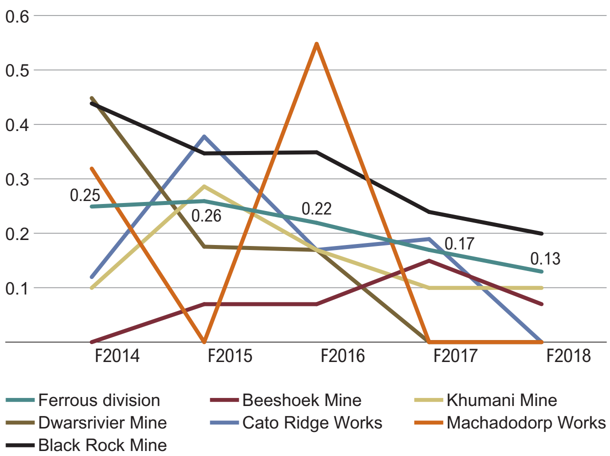
100% basis R million	12 months ended 30 June		
	2018	2017	% change
Iron ore	**1 780**	1 169	52
Manganese	**1 285**	1 648	(22)
Chrome	**16**	–	
Total	**3 081**	2 817	9

ENSURING A SAFE, HEALTHY AND SKILLED WORKFORCE

Safety

There were no fatalities at any of the ARM Ferrous managed operations in the year under review (F2017: zero). Regrettably a fatality was reported at Sakura Ferroalloys Works. The Ferrous division achieved an LTIFR of 0.13, which is a 24% improvement compared to F2017 (F2017: 0.17). A total of 11 LTIs were recorded during F2018 (F2017: 15).

LTIFR
(per 200 000 man-hours)



Achievements at the Ferrous operations included:

- On 18 October 2017, Beeshoek Mine recorded 16 000 fatality-free production shifts, an accomplishment that took 14 years and 11 months to achieve. The mine also received a certificate from the DMR for an outstanding safety achievement as the "Most Consistent Surface Mine" in the 2017 Northern Cape Mine Safety Competition;
- Machadodorp Works achieved one million fatality-free shifts on 23 December 2017;
- Black Rock Mine achieved six million fatality-free shifts on 17 January 2018, an achievement that took nine years to complete;
- On 7 March 2018, Beeshoek Mine completed 365 consecutive days without a LTI;
- Khumani Mine achieved two million fatality-free shifts on 12 April 2018;
- As at 30 June 2018, Cato Ridge Works completed 704 days without a LTI;
- As at 30 June 2018, Machadodorp Works completed 875 days without a LTI; and
- Beeshoek Mine was awarded the first prize for the most improved safety performance and the second prize for the best safety performance in its class during the 2018 Mine Safe Conference.

Operation	Total fatality-free shifts worked	Last fatality
Beeshoek Mine	3 815 189	March 2003
Black Rock Mine	6 345 852	April 2009
Khumani Mine	2 123 680	April 2015
Cato Ridge Works	2 304 371	February 2008
Machadodorp Works	1 062 649	February 2011

As part of our commitment to continued improvement and as a member of both the ICMM and the Minerals Council South Africa, ARM has committed to implement the Critical Control Management (CCM) Process. This process is acknowledged globally as a process that could significantly help to prevent disabling or fatal accidents.

There were two Section 54 Notices issued (one each at Beeshoek and Black Rock mines) in F2018 (F2017: one). No production shifts were lost at Beeshoek Mine, but at Black Rock Mine three production shifts were lost. There was no impact on production as the plant produced from the stockpile (F2017: one). One Section 55 Notice was issued in the Ferrous division (F2016: 0).

Human capital

Total employees and contractors at ARM Ferrous decreased marginally to 11 821 (F2017: 11 918), 45% of which were full-time employees and 55% were contractors. ARM Ferrous invested R156 million in training initiatives (F2017: R121 million). Four man-days were lost to a strike at Khumani Mine during the year (F2017: 0).

Health

24 326 audiometric tests were conducted on employees and contractors during F2018 and two cases were submitted for compensation for NIHL (F2017: two).

Counselling for HIV & Aids was provided to 11 199 employees and contractors in F2018 (F2017: 13 725) and 3 438 were tested (F2017: 2 250). Employees and contractors on disease management programmes decreased to 1 172 and those receiving anti-retroviral treatment (ART) decreased to the same number as the division implemented the Department of Health's test and treat policy (F2017: 2 451 received ARTs).

29 650 employees and contractors (F2017 27 213) were screened for PTB and 17 new cases were identified (F2017: 18) and 10 cases cured.

Beeshoek, Black Rock and Khumani mines partnered with the Northern Cape Department of Health to improve health services among employees and local communities by strengthening the implementation of the provincial Pulmonary Tuberculosis (PTB), HIV & Aids, STIs and chronic diseases strategies.

ARM FERROUS continued

ARM participated in the official opening of the Kuruman One Stop Health Centre in the Northern Cape in December 2017, which is one of the medical facilities across the country conducting medical examinations for the Medical Bureau for Occupational Diseases on former miners with occupational lung diseases such as silicosis.

Diversity

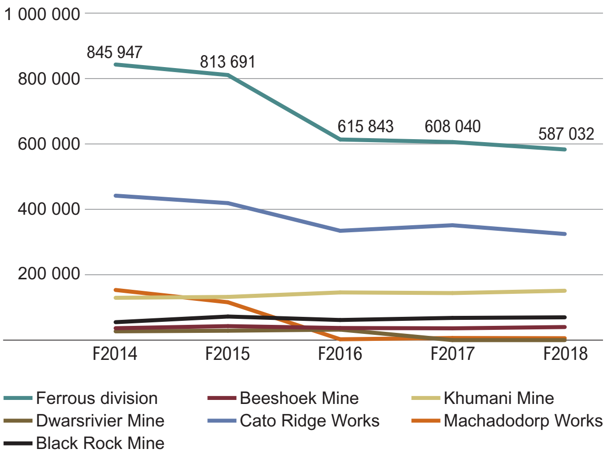
HDSA representation at management level in the Ferrous division increased to 63% (F2017: 61%) and the three mines in the division reported against the Mining Charter as required by the MPRDA.

ENSURING RESPONSIBLE STEWARDSHIP OF NATURAL RESOURCES

Emissions

ARM Ferrous's estimated Scope 1 and 2 carbon emissions decreased by 3.5% to 587 032 equivalent tonnes of CO_2 (tCO_2e) (F2017: 608 040 tCO_2e) on an attributable basis, which represented 57% of ARM's total for the year. Cato Ridge Works, which accounts for 56% of the division's emissions, decreased carbon emissions by 7.6%.

SCOPE 1 AND 2 CARBON EMISSIONS
(tCO_2e)

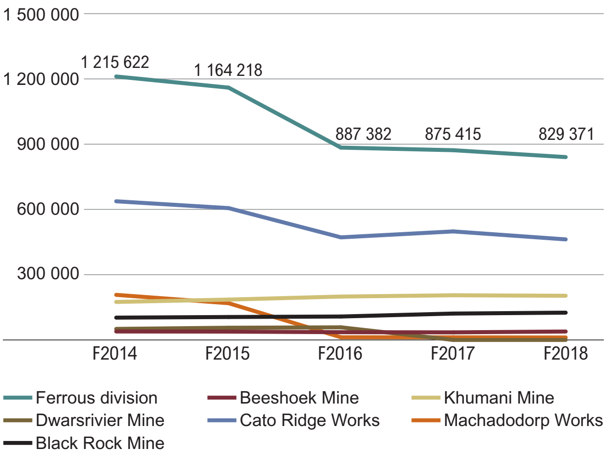


Emission reduction initiatives at the Ferrous operations included the continued roll-out of LED lights in mine plants and offices and the introduction of synthetic fuel stabilisers at Beeshoek Mine that decreased diesel use. Khumani Mine installed a solar plant and implemented a vehicle tracking system that optimised fleet usage and increased fuel monitoring. At Cato Ridge Works, a diesel-powered slag hauler was replaced by an electrical winch-driven bogey to transport the molten metal ladle from the furnace to the refined alloy bay for further processing. This resulted in a diesel saving and reduced the travel distance. Cato Ridge Works also installed two variable speed drives on the suction fans serving the furnaces which reduced electricity consumption.

Energy use

Electricity consumed by the division decreased by 5% to 829 371 MWh (F2017: 875 415 MWh). ARM Ferrous is a member of the Energy Intensive Users Association and has an Energy Efficiency Charter to map its development and implementation of energy-efficient practices.

ELECTRICITY CONSUMPTION
(MWh)

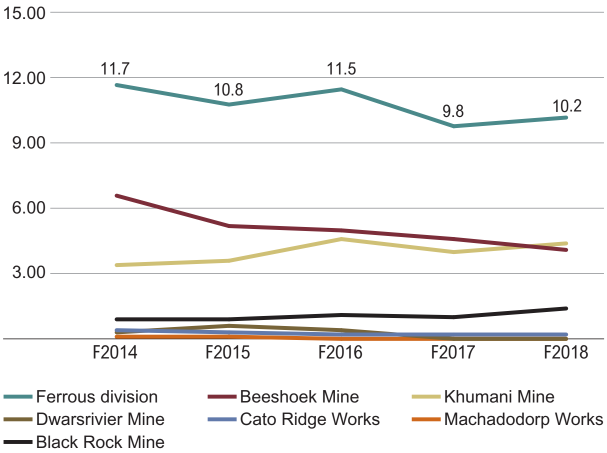


Water use

Securing a consistent water supply is a risk and a potential constraint to future growth for the ARM Ferrous operations in the water-scarce Northern Cape where Black Rock, Beeshoek and Khumani mines are located.

Total water abstracted increased by 4.0% to 10.2 million m^3 in F2018 (F2017: 9.8 million m^3). ARM Ferrous operations accounted for 56% of ARM's total water abstraction. Khumani Mine accounted for 44% of the division's total water abstraction and Beeshoek Mine 40%. At Black Rock Mine, a 39% increase in the volume of water abstracted was due to a 639 394 m^3 increase in groundwater abstracted.

WATER ABSTRACTED
(million m^3)



Khumani Mine has sunk boreholes in preparation for developing an abstraction model to supplement water supplied by Sedibeng Water. A detailed groundwater flow model has been developed and, once approved, the infrastructure will be installed.

ARM Ferrous plays a strategic role in the Vaal Gamagara Water Supply Scheme Project, which is helping to develop a collaborative response to the requirements for bulk water supply and pricing over the next 25 years.

ARM FERROUS continued

MAINTAINING OUR SOCIAL LICENCE TO OPERATE

The Ferrous division invested R95 million in LED in terms of its SLPs, an increase of 51% compared to last year (F2017: 63 million). CSI expenditure increased by 17% to R7 million (F2017: R6 million) bringing the total investment in CSR to R101 million.

ARM Ferrous is part of a working committee with the other manganese producers in the Northern Cape and the Minerals Council South Africa to collaborate and innovate to create large-scale impact on communities by creating shared value.

Significant LED projects supported by ARM Ferrous include:

- Black Rock Mine contributed R20 million towards the Kuruman Bulk Water Project. This was not part of the current year budget but was requested during the Ga-Segonyana stakeholder update meeting on ongoing projects. Over the past three years Black Rock Mine has contributed R49 million towards the Kuruman Bulk Water Project.
- Khumani Mine invested R10 million in upgrading the access road into Kathu, refurbishing the road base and constructing a new asphalt layer to improve road safety conditions and traffic control.
- Khumani Mine contributed R18 million to the provision of water and sanitation infrastructure for 325 households in Olifantshoek. 82 temporary jobs were created for local people and five local sub-contractors were appointed.
- Black Rock Mine invested R1 million in the construction of internal reticulation from water tanks and communal pre-paid stand pipes in Gamasepa Village in Joe Morolong Local Municipality. Beneficiaries include the estimated 185 households of Gamasepa community and 10 temporary local jobs were created.
- Black Rock Mine erected 85 ventilated improved pit toilets in the Magobing West community in Joe Morolong Local Municipality, creating 24 temporary local jobs.
- Khumani Mine constructed 57 SMME shops for informal traders at the Kuruman SMME Village and each will receive a training programme on business management

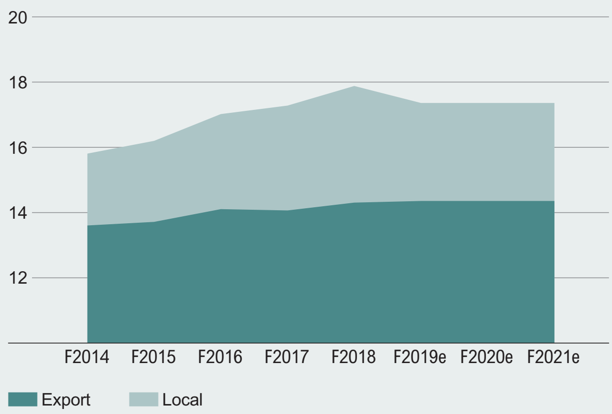
CSI projects included:

- Khumani Mine distributed supplements to beneficiaries in the John Taolo Gaetsewe District, including 695 children, 55 elderly and 23 people living with disabilities.

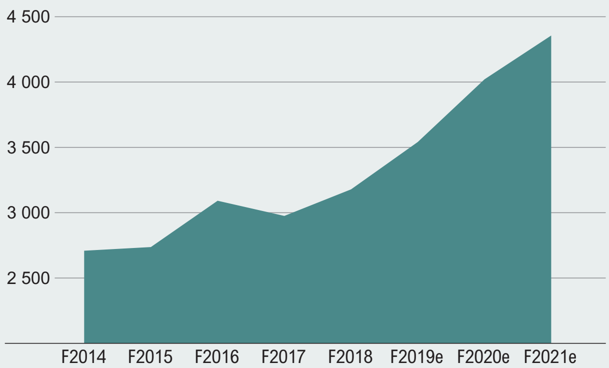
OUTLOOK

Sales volumes from F2014 to F2021 (100% basis)

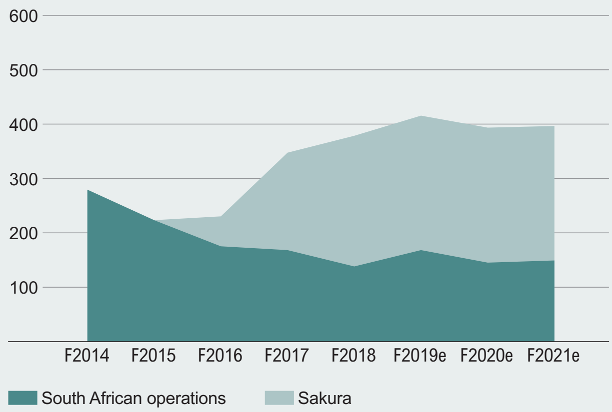
IRON ORE SALES VOLUMES
(Mt)



MANGANESE ORE SALES VOLUMES
(000t)



MANGANESE ALLOY SALES VOLUMES
(000t)



SUMMARY SUSTAINABILITY STATISTICS

	unit	F2018	F2017	F2016	F2015	F2014
Employee indicators						
Average number of permanent employees and contractors*		**10 247**	8 662	9 953	10 759	10 858
– Permanent employees		**5 017**	4 522	5 638	6 138	6 306
– Contractors		**5 230**	4 140	4 315	4 621	4 552
LTIFR per 200 000 man-hours		**0.13**	0.17	0.22	0.26	0.25
Environmental indicators						
Scope 1 and 2 carbon emissions	tCO_2e	**587 032**	608 040	615 843	813 691	845 947
Total water withdrawn**	million m^3	**10.2**	9.8	11.5	10.8	11.7
Energy usage						
– Electricity	MWh	**829 371**	875 415	887 382	1 164 218	1 215 622
– Diesel	000 litres	**59 163**	49 837	54 264	58 387	54 007
Community investment indicators						
Total CSR	R million	**102**	69	73	107	136
– CSI	R million	**7**	6	9	28	25
– LED	R million	**95**	63	64	79	111

* *The number of permanent employees and contractors are reported on an average for the year basis, consistent with the calculation of safety statistics.*

** *Includes municipal, surface and groundwater.*

ARM FERROUS continued

SUMMARY KEY PERFORMANCE INDICATORS (100% BASIS)

IRON ORE DIVISION

Operations:
Khumani and Beeshoek mines (100% basis unless otherwise stated).

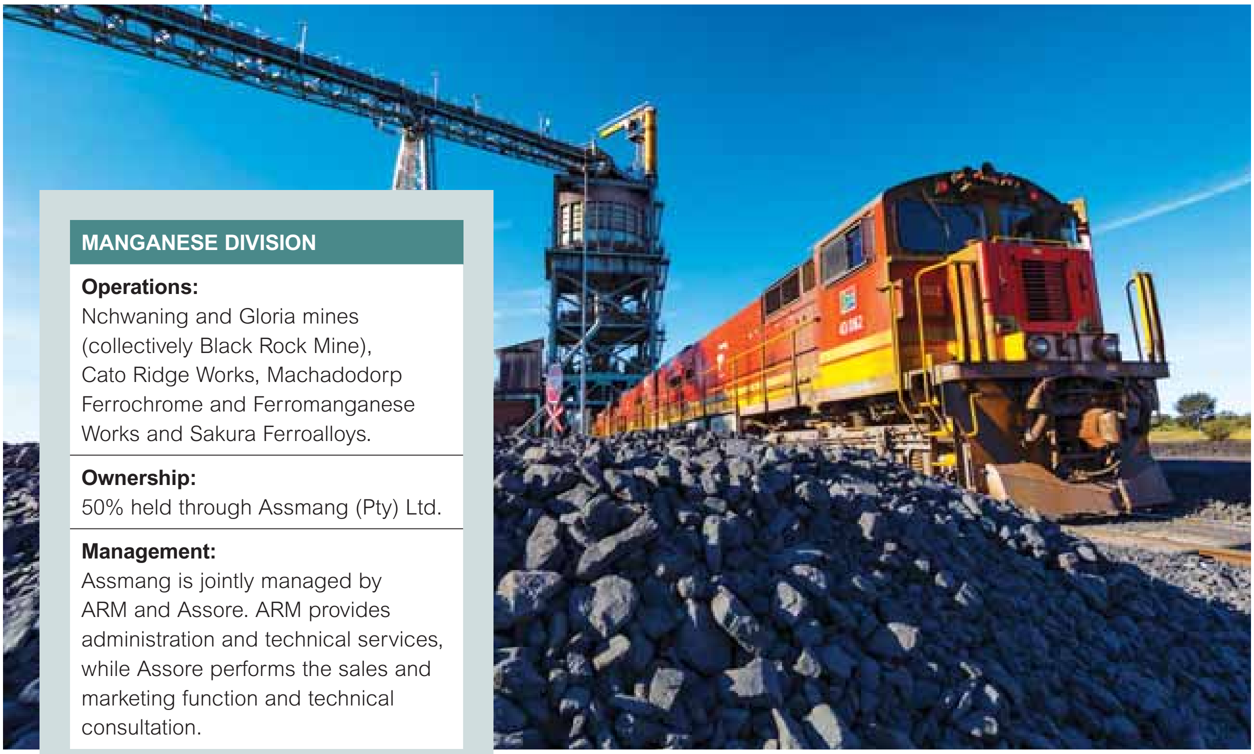
Ownership:
50% held through Assmang (Pty) Ltd.

Management:
Assmang is jointly managed by ARM and Assore. ARM provides administration and technical services, while Assore performs the sales and marketing function and technical consultation.

	unit	F2018	F2017	F2016	F2015	F2014
OPERATIONAL						
Production volumes	000t	**18 578**	17 714	16 726	16 076	16 054
Khumani Mine	000t	**14 694**	14 560	13 616	12 649	12 930
Beeshoek Mine	000t	**3 884**	3 154	3 110	3 427	3 124
Sales volumes	000t	**17 874**	17 275	17 008	16 185	15 640
Export iron ore	000t	**14 315**	14 061	14 103	13 658	13 646
Local iron ore	000t	**3 559**	3 214	2 905	2 527	1 994
Unit cost changes						
On-mine production unit costs	%	**2**	3	(8)	3	10
Unit cost of sales	%	**6**	2	(2)	(4)	11
FINANCIAL						
Sales revenue	R million	**14 534**	15 853	12 110	12 197	17 667
Total costs	R million	**(10 304)**	(10 091)	(9 149)	(9 106)	(9 334)
Operating profit	R million	**4 230**	5 762	2 961	3 091	8 333
EBITDA	R million	**5 631**	7 179	4 478	4 517	9 629
Headline earnings	R million	**3 343**	4 373	2 430	2 494	6 356
Capital expenditure	R million	**1 780**	1 169	901	1 646	2 058

AFS Refer to note 2 to the Annual Financial Statements for the iron ore segmental information.

SUMMARY KEY PERFORMANCE INDICATORS (100% BASIS)



MANGANESE DIVISION

Operations:
Nchwaning and Gloria mines (collectively Black Rock Mine), Cato Ridge Works, Machadodorp Ferrochrome and Ferromanganese Works and Sakura Ferroalloys.

Ownership:
50% held through Assmang (Pty) Ltd.

Management:
Assmang is jointly managed by ARM and Assore. ARM provides administration and technical services, while Assore performs the sales and marketing function and technical consultation.

	unit	F2018	F2017	F2016	F2015	F2014
OPERATIONAL						
Production volumes						
Manganese ore	000t	**3 717**	3 069	2 934	3 087	3 358
Ferromanganese	000t	**450**	403	204	319	342
Sales volumes						
Manganese ore	000t	**3 177**	2 974	3 090	2 736	2 708
Ferromanganese	000t	**360**	303	175	223	279
Unit cost changes – Manganese ore						
On-mine production unit costs	%	**16**	1	(6)	17	14
Unit cost of sales	%	**13**	12	(5)	2	14
FINANCIAL						
Manganese ore						
Sales revenue	R million	**10 495**	8 322	4 841	4 909	5 556
Total costs	R million	**(6 017)**	(4 971)	(4 140)	(3 843)	(3 962)
Operating profit	R million	**4 478**	3 351	701	1 066	1 594
EBITDA	R million	**5 015**	3 759	1 056	1 328	1 883
Headline earnings	R million	**3 192**	2 407	527	762	1 132
Capital expenditure	R million	**1 240**	1 617	1 939	1 889	1 269
Ferromanganese						
Sales revenue	R million	**2 338**	1 897	1 810	2 219	2 730
Total costs	R million	**(1 711)**	(1 887)	(1 930)	(2 588)	(2 849)
Operating profit	R million	**627**	10	(120)	(369)	(119)
EBITDA	R million	**684**	67	(3)	18	98
Headline earnings/(loss)	R million	**616**	(85)	(132)	(185)	(74)
Capital expenditure	R million	**45**	31	(11)	95	73

AFS Refer to note 2 to the Annual Financial Statements for the manganese segmental information.