

FACT SHEET

IMPALA



Impala, Implats's 96% owned primary operational unit has operations situated on the western limb of the world-renowned Bushveld Complex near Rustenburg in South Africa. This operation comprises a 13-shaft mining complex and concentrating and smelting plants. The base and precious metals refineries are situated in Springs, east of Johannesburg. In FY2016 Impala produced 626 900 ounces of refined platinum.



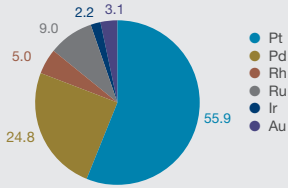
GEOLOGY

Both the Merensky and UG2 Reefs, which are contained in the Rustenburg Layered Suite, a well-layered ultramafic to mafic igneous succession on the 2 billion year-old Bushveld Complex, are present throughout the lease area. Both reefs sub-outcrop on the mining area and dip approximately 10 to 12 degrees towards the centre of the Complex, although locally dips may increase to 15 degrees. The vertical separation between the Merensky and UG2 reefs varies from about 125 meters in the south to some 45 meters in the north.

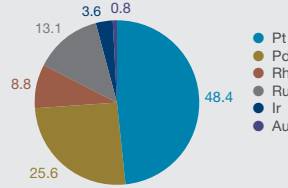
MINERAL RESOURCES AND RESERVES *

Mineral Resources as at 30 June 2016						
Impala	Category	Tonnes (Mt)	Width (cm)	4E Grade (g/t)	6E Grade (g/t)	Platinum (Moz)
Merensky	measured	141.0	123	6.31	7.10	18.0
	indicated	69.1	108	6.29	7.08	8.8
	inferred	23.3	110	6.36	7.15	3.0
UG2	measured	122.8	63	7.32	8.78	16.7
	indicated	49.6	62	7.35	8.83	6.8
	inferred	14.7	63	7.17	8.60	2.0
	Total	420.5		6.76	7.85	55.3
Mineral Resources (tailings) as at 30 June 2016						
	Category	Tonnes (Mt)		Grade (Pt g/t)		Platinum (Moz)
1 & 2 tailings complex	indicated	48.1		0.42		0.6
Mineral Resources as at 30 June 2016 – Impala/RBR JV						
Impala RBR JV	Category	Tonnes (Mt)	Width (cm)	4E Grade (g/t)	6E Grade (g/t)	Platinum (Moz)
Merensky	measured	5.2	151	6.72	7.56	0.7
	indicated	5.4	151	7.17	8.06	0.8
	inferred	5.1	142	6.75	7.60	0.7
UG2	measured	1.5	53	7.34	8.81	0.2
	indicated	2.3	57	7.77	9.32	0.3
	inferred	1.6	51	7.09	8.51	0.2
	Total	21.2		7.03	8.05	2.9
Mineral Reserves as at 30 June 2016						
	Category	Mill Tonnes (Mt)	Width (cm)	4E Grade (g/t)	6E Grade (g/t)	Platinum (Moz)
Merensky	proved	10.3	127	4.03	4.53	0.8
	probable	71.3	132	4.19	4.71	6.0
UG2	proved	17.8	108	3.73	4.48	1.2
	probable	84.4	106	3.76	4.52	5.9
	Total	183.8		3.94	4.59	14.0

Impala Merensky 6E metal ratio (%)



Impala UG2 6E metal ratio (%)



MINING

Impala, together with the joint venture with Royal Bafokeng Resources, holds contiguous mining and prospecting rights over a total area of 33 562 hectares. The shafts across the property can be divided into three groupings – the old shafts (the ‘Old Men’ comprising 4, 6, 7, 7A, 9 and E/F), the mature shafts (the ‘Big 5’ include 1, 10, 11, 12 and 14) and the ‘Build-up shafts’ (16 and 20). The bulk of reserves (40%) are located in the Build-up shafts.

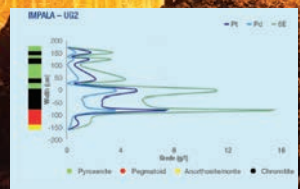
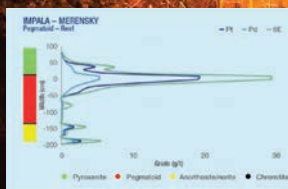
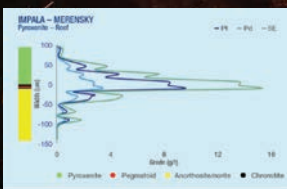
Impala Mineral Reserve distribution

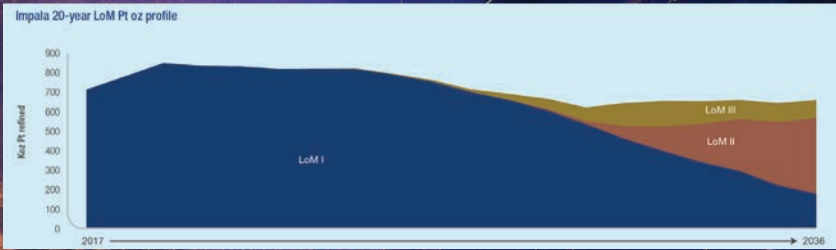


The Merensky and UG2 reefs are mined concurrently and the mining method is predominantly conventional breast mining. Mechanised bord and pillar mining occurs in selected Merensky Reef areas on two of the shafts (12 and 14 Shafts).

Mining currently extends to a depth of around 1 000 meters, with most operations occurring at an average depth of 800 meters. The mining width, including dilution, for Merensky Reef is typically about 1 meter, whilst that for UG2 is about 0.9 meters. Each shaft develops and mines about 8 square kilometres.

Mineable face length for conventional mining crews, which provides the best measure for ore reserve flexibility, improved from 17.8 kilometres in 2012 to some 21.9 kilometres in 2016. This has been a key focus area at the operation over a number of years.





CAPITAL PROJECTS

The two new major shafts, namely 16 and 20, are designed as replacement shafts for the older infrastructure with declining resource availability. The intention is to create a more concentrated mining operation with access to new, modern shaft complexes making better use of the invested fixed cost base, with higher mining efficiencies and lower unit costs.

Implats continues to prioritise key capital projects that are value enhancing in the current price environment and that are also important to long-term value creation. The priority is to complete the development of 16 and 20 shafts in line with the strategy for the Impala lease Area. To date, some R14 billion has been invested into these capital projects. A further R2.6 billion in capital and off-reef capitalisation is required to complete these shaft complexes with planned output of 310 000 platinum ounces expected in 2020. Project development work at 17 Shaft has been placed on a low cost care-and-maintenance programme given persistently low metal prices.

To maintain the production profile of the lease area (830 000 platinum ounces) once 16 and 20 Shafts are at steady-state, dewatering of 17 Shaft needs to commence in 2020.

METALLURGY

Mineral Processes houses the concentrator and smelter operations and is located on the mine property in Rustenburg. Current smelting capacity is 2.6 million ounces of platinum.

The refineries located in Springs comprises a Base Metal Refinery (BMR) and a Precious Metal Refinery (PMR). Current refining capacity is 2.3 million ounces of platinum.

SUSTAINABLE DEVELOPMENT

Impala focuses on addressing social, economic and environmental issues that are seen as having a material impact on the long-term success of the business, the sustainability of the economy, the environment and the communities in which we operate or that are important to key stakeholders. The pursuit of sustainable development and zero harm are seen as competitive imperatives.

BLACK ECONOMIC EMPOWERMENT

Impala meets the ownership requirements of the Mining Charter for 2015. In terms of an agreement finalised in March 2007, Royal Bafokeng Nation (RBN) converted all royalties due to it for the period from 1 July 2007 onwards into an equity stake of 11.3% in Implats. In FY2016 Royal Bafokeng Holdings reduced their holding in Implats to 6.29%. An employee share ownership programme (ESOP), known as the Morokotso Trust, was initiated in 2006, giving employees ownership of 2.7% in the holding company. In addition, during FY2015 4% of Impala shares were issued to employees leaving Implats with a 96% attributable interest in Impala.

HISTORY

Hans Merensky first discovered platinum in the Bushveld Igneous Complex in 1924. Impala was created in the mid 1960s to house Union Corporation's platinum interests. At that time a prospecting permit was acquired and initial production commenced in 1969. Initially Impala mined the Merensky Reef and mining on the UG2 chromitite layer only began in the early 1980's as the technology to smelt higher chrome ore was developed.

By the early 1990's Impala was producing in the region of 1 million platinum ounces per annum. A mining lease over land predominantly owned by the Bafokeng Tribe (now the Royal Bafokeng Nation (RBN)) was originally granted in 1968.

A landmark agreement securing Impala's access to these mineral rights for a period of 40 years was signed with the RBN in February 1999. In terms of this agreement, the RBN not only enjoyed royalties from metals mined in areas over which they hold mineral rights, but they also became a major shareholder in the holding company, Implats, with board representation. A new agreement finalised in early March 2007 resulted in the royalty being converted into equity.

IMPALA – KEY STATISTICS

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Production						
Tonnes milled ex mine*	('000t)	10 316	9 199	6 183	10 897	10 654
% Merensky milled*	(%)	41.2	46.6	43.8	43.9	43.4
Headgrade (6E)*	(g/t)	4.16	4.19	4.34	4.32	4.38
Platinum refined production	('000oz)	626.9	575.2	411.0	709.2	750.1
PGM refined production	('000oz)	1 219.6	1 137.3	765.9	1 377.9	1 487.8
Labour efficiency						
Centares per employee costed** (m ² /man/annum)		46	37	26	47	48
Tonnes milled per employee costed** (t/man/annum)		252	219	144	255	265
Cost						
Mining cost of sales	(Rm)	(16 506)	(14 824)	(12 229)	(12 491)	(10 120)
Mining operations	(Rm)	(10 600)	(10 354)	(6 616)	(8 993)	(7 436)
Processing operations	(Rm)	(2 534)	(2 235)	(1 606)	(2 295)	(2 079)
Refining operations/marketing	(Rm)	(571)	(794)	(615)	(735)	(720)
Other	(Rm)	(2 801)	(1 341)	(3 392)	(468)	115
Total cost	(Rm)	13 879	13 738	9 057	12 227	10 436
Unit costs	(US\$m)	962	1 204	873	1 387	1 348
per tonne milled*	(R/t)	1 345	1 493	1 465	1 122	980
	(US\$/t)	93	131	141	127	127
per platinum ounce refined*	(R/oz)	22 139	23 884	22 036	17 241	13 913
	(US\$/oz)	1 535	2 092	2 125	1 955	1 797
Financial ratios						
Gross margin ex mine	(%)	(13.4)	(10.9)	(18.4)	14.4	22.2
Capital expenditure						
	(Rm)	2 490	3 047	2 823	4 390	5 269
	(US\$m)	173	267	272	498	680
Safety						
LTIFR	(pmmhw ⁺)	7.57	5.08	5.04	4.91	5.74
FIFR	(pmmhw ⁺)	0.102	0.067	0.048	0.087	0.110
Labour complement						
Own employees	(no)	30 946	32 536	32 900	33 356	33 062
Contractors	(no)	9 531	11 708	11 708	13 315	15 245
* The ex mine tonnage and grade statistics excludes the low grade material from surface sources						
** Total employees excluding capital project employees						
+ Per million man hours worked						



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