

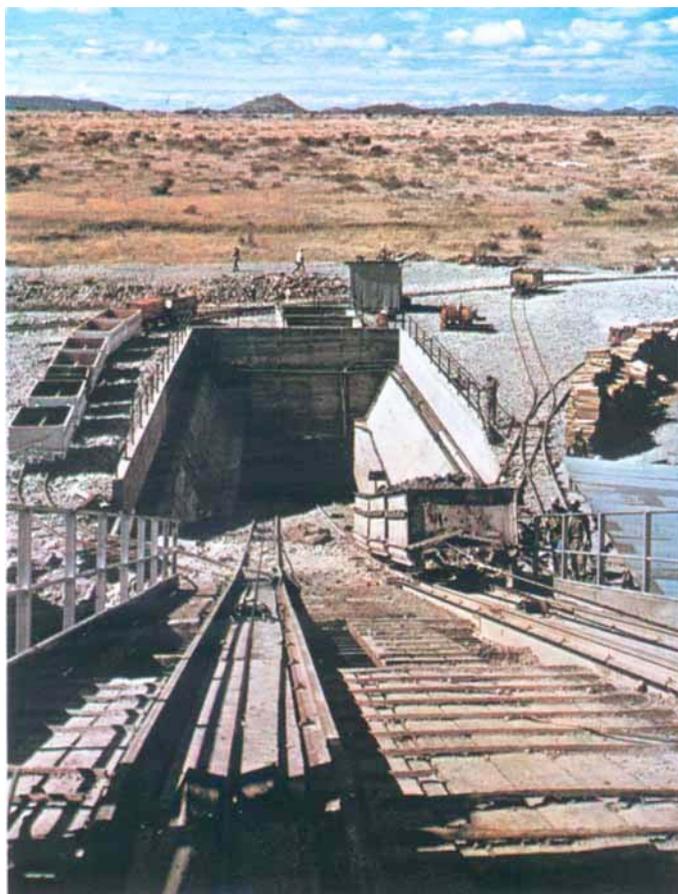
A New Mining Area for Rustenburg

PRELIMINARY STEPS TO A FURTHER EXPANSION SCHEME

For years by far the largest producer of platinum and its allied metals in the world, Rustenburg Platinum Mines recently announced a programme designed to maintain that position. The current expansion programme has already increased capacity to a level of 1,100,000 ounces of platinum per annum and, although it has been decided to defer completion of the programme to increase capacity to 1,300,000 ounces by 1973, the preparations to bring the company's two mining areas, the Rustenburg and Union sections, up to this potential maximum are complete.

But in order to ensure that the next stage of expansion in output can be achieved with a minimum of delay – and the time taken from a decision to expand until refined metal from any such expansion becomes available to industry ranges from two and a half to three years – a completely new mining area has been delineated to the north-east of the Union Section. The extensive exploration work involved has been completed, the planning of the layout of the new mine is well in hand, and arrangements for the supply of essential services have been made. All these steps have been taken to ensure that the new mining

Extending for some twenty miles along the platinum bearing Merensky Reef, Rustenburg's operations involve over thirty inclined haulages such as this from which the shallower portions of the deposit are worked. Over 35,000 miners are engaged in these and in the vertical shafts from which the deeper areas are worked





A train load of platinum ore is transported from one of the nine vertical shafts at Rustenburg to the nearby mill and smelter. Every working day some 20,000 tons of ore are brought to the surface

area can quickly be brought into production, the scale of operations to be determined in the light of future developments in the demand for platinum.

Current developments mean that the supply of platinum to industry has reached an all-time high, and that future supplies can be increased if necessary to keep ahead of

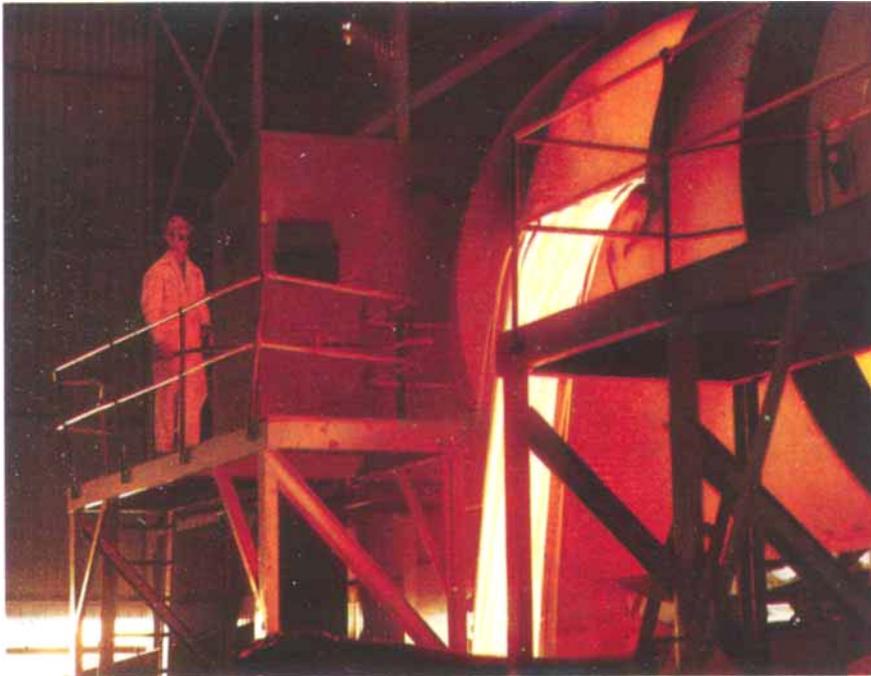
demand. The annual demand for platinum by the Western world is currently around 1,500,000 ounces, and there is some possibility that the total supplies of platinum available to users might, by 1972, exceed requirements. On the other hand there is the likelihood that platinum may play an increasingly significant part in combating atmospheric pollution from many industrial processes and from automobile exhausts. The extent to which platinum may be required for this purpose cannot, however, be predicted until both governmental policies and competing technical developments can be more clearly assessed, but having regard to the time normally required to achieve further substantial increases in platinum production, it is to ensure that a possible shortage of



Mr D. A. B. Watson

Chairman of Rustenburg Platinum Mines

"At Rustenburg we are in no doubt as to the adequacy of our reserves of platinum and as a primary producer we are able quickly to initiate expansion programmes to meet increasing demand"



After smelting in electric furnaces, a copper-nickel-iron matte containing the platinum metals is transferred to a battery of converters and blown to a higher grade. Here the converter matte is being poured into moulds. After cooling and breaking up it is passed either to Johnson Matthey or to Matte Smelters for the extraction of copper, nickel and the six platinum metals

metal does not affect decisions on the technique to be adopted that Rustenburg has taken these preliminary steps. Thus, if substantial supplies of platinum should be required for the drive against pollution, Rustenburg will be in a good position to satisfy such a demand with a minimum of delay.

The new mining area is of course also located on the Merensky Reef, where reserves of platinum have been estimated to exceed 200,000,000 ounces that could be exploited economically during the next thirty years – a clear indication that any likely future demand is capable of being met. At its present level of activity Rustenburg constitutes the world's largest underground mining operation, the workings extending for some twenty miles along the reef and involving the employment of over 35,000 miners. The shallower parts of the mines are worked from about thirty inclined haulages,

while the deeper areas are opened up from nine vertical shafts ranging in depth from 500 to 3,000 feet.

Every working day some 20,000 tons of ore are brought to the surface, loaded into trains and conveyed to the mill for a long and complex sequence of grinding, ball milling, flotation and preliminary smelting operations, the final product from here being despatched to Johnson Matthey for the extraction and refining of the six individual platinum metals.

It is Rustenburg's policy to maintain a reasonable and stable price for platinum, and by taking steps to see that all consumers' needs can be met at such stable prices, to provide users with the assurance of availability they require when deciding to use platinum. During the period of expansion from 1963 to the present, Rustenburg has invested more than £50 million in order to expand its productive capacity by more than five times.