

SPOTLIGHT

on Randfontein Estates Gold Mining Company (Witwatersrand) Limited, 1889-1989

Introduction

From its early beginnings, shortly after the Witwatersrand gold rush of 1886, Randfontein Estates was planned as a heavyweight operation. The venture was capitalized by J.B. Robinson to the tune of £2 million at a time when syndicates were loath to invest £50 000 in ventures in and around the new metropolis, Johannesburg, which had sprung up midway along the Witwatersrand.

But by then Robinson was a colossus among his contemporaries. Operating as a loner as he had done on the Kimberley diamond fields, where he created his own individual fortune and commanded the sort of respect which, early in his career, led to his election as Mayor of Kimberley.

When news of a third gold discovery in the Transvaal (the first two had been in the Pilgrim's Rest and Barberton areas) reached Kimberley, Robinson's pioneering spirit was further stirred and he hastened to the new goldfield to stake his claims before his business adversaries—Rhodes, John X. Merriman, Hans Sauer, and Caldecott—could entrench themselves. Once the new Witwatersrand goldfields had been proclaimed, claim-pegging started in earnest. But the question was: where to start? Diamond men all, not one of the financiers had any knowledge of the geology of the gold-bearing formations.

Aided by Lady Fortune, Robinson sought out claims at what later became known as Langlaagte and Crown Mines. Using his characteristic white pith helmet for 'panning' a few samples, he made up his mind to start digging on Langlaagte—a decision that brought £8 million into his pocket. It was a coup for the Robinson Syndicate—Robinson, Alfred Beit, and Maurice Marcus—which had been set up with a capital of £20 000.

Fired by his success on Langlaagte, Robinson secured farms in the area around Randfontein—an area designated for many years thereafter as 'the Robinson farms'. His stamp batteries at Langlaagte were working overtime, and values of 10 ounces per ton were recorded from early crushings, later settling down to a steady five ounces per ton.

Other entrepreneurs, including Rhodes and Sauer, who were advised by a Dutch prospector, Gericke, had turned down the Randfontein farms due the absence of the 'red bar' in the sandstone formations, which was thought to be indicative of the Main Reef. Little did they then know that there were other reefs, such as the Black Reef and Conglomerate Reef at greater depth, of which little or no trace was visible on surface.

Robinson's success in acquiring farmlands was to be found in his habit, when travelling, of carrying as much as £5000 in gold coinage. The sight of so much hard cash, he contended, was far more likely to sway a farmer in a sale than a promissory note. The Randfontein farms thus acquired in less than a week in November 1886 consisted of a quarter of Uitvalfontein, sold by Jan Jonker for £500; a sixth of the farm Randfontein, sold by Hendrik Alberts for £2250; and sections of Middelvlei Gembokfontein, Panvlakte, Droogeheuvel, and Rietfontein. Robinson later acquired the remainder of the first two farms, before buying Waterval. These purchases constituted some 12 000 ha of land on which was located about 11 km of reef outcrops. The Robinson Syndicate—originally formed in Kimberley, but joined by Hermann Eckstein, the permanent representative of the Porges Organisation on the Reef—enjoyed the benefit of additional capital supplied from Kimberley by Alfred Beit, together with operating capital from the Porges Organisation. This provided the necessary finance to launch the first mine, named after Robinson, with a capital of £50 000. It was, together with Robinson's original Langlaagte Estates, the most modern on the new goldfields. Both the mines were managed by Hermann Eckstein.

Early in 1889 the Randfontein Gold Farms Company—the forerunner of today's Randfontein Estates Gold Mining Company—was floated, with a capital of £2 million in £1 shares.

The new Randfontein company was not officially registered until March 7th, 1889, when the name was listed as Randfontein Estates Gold Mining Company, Witwatersrand Limited. The chairman of the company was Hermann Eckstein (as Robinson had intimated that he would like to spend most of his time in Europe), with Maurice Marcus as managing director.

The following are salient features from the company's reports since March 1889.

Early Mining Years

1889

James Brooks was appointed as managing director in place of Maurice Marcus.

A mine manager and engineer were transferred from the Robinson Mine to reopen the little Rietpan winze on Uitvalfontein, and to sink incline shafts along the line of outcrops. Brooks planned a shaft to intersect the reef at 25 metres.

The company started issuing 'vergunnings' allowing independent prospectors to peg and work claims on their own account, on condition that 50 per cent of the profits were paid to Randfontein Estates. Gold rushes ensued,

* Provided by the Public Affairs Department, Randfontein Estates Gold Mining Company (Witwatersrand) Limited, P.O. Box 2, Randfontein 1760.

with 478 individual claims being pegged by outsiders. Randfontein's entire White staff participated in the 'rush', thus securing a large additional mining area.

1890

The discovery of the cyanide process for gold recovery, later known as the MacArthur-Forrest process, opened the way for mining the deeper reefs of pyritic ore.

With the 'Corner House' men led by Eckstein favouring the acquisition of additional land in the belief that the deeper reefs dipped to the south, Robinson and Marcus, who opposed this theory, were persuaded to sell their shareholding in the Robinson mine.

1891

James Brooks opened up the Leader Reef, which proved so rich that Robinson returned from London to examine it for himself. This reef became known as the Randfontein Leader.

1892

Randfontein's battery, which had arrived at Vryburg, which was then the railhead, was transported by ox-wagon to the mine and erected. The 40 steam-powered stamp batteries could mill 5000 tons of ore per month.

Water was drawn from the Swartvlei behind the mine, while coal was at first hauled by ox-wagon from a colliery near Vereeniging, and later was transported by rail from the east Rand.

1893

The cyanide plant started operations. The extraction was at first around 82,1 per cent, but was expected to improve. The mine was now producing gold.

Robinson invoked his powers as a major shareholder and director, and discharged the company's entire management. On the pretext that Eckstein was in poor health, he took over as chairman, also injecting a further £200 000 of his private funds into the company to avert liquidation and to pay off the overdraft.

Eckstein and Kahn resigned from the board, as did several alternate directors from the Corner House. Desperate, Robinson appointed a Cape Afrikaner, Jan Langerman, who was experienced in business and banking, and whom he had known in Kimberley. Other posts were filled from the ranks.

Langerman was appointed deputy chairman, with authority to act for Robinson in his absence.

When Randfontein again found itself in difficulties, Robinson blamed the other board members, exonerating himself of all blame. He was widely attacked by the press of the day, which advised share investors to steer well clear of Robinson-controlled properties until Robinson had resigned.

1894

Langerman presided at the company's annual general meeting. Lionel Phillips, who had stepped into Eckstein's shoes at Corner House and attended the meeting on behalf of Alfred Beit, who was now also staying in London, persuaded the board to conduct further prospecting at deeper levels at Rietpan.

A subsidiary company, North Randfontein Gold

Mining Company, was established in September to work a block of some 80 claims on Uitvalfontein. The area was later extended to 173 claims.

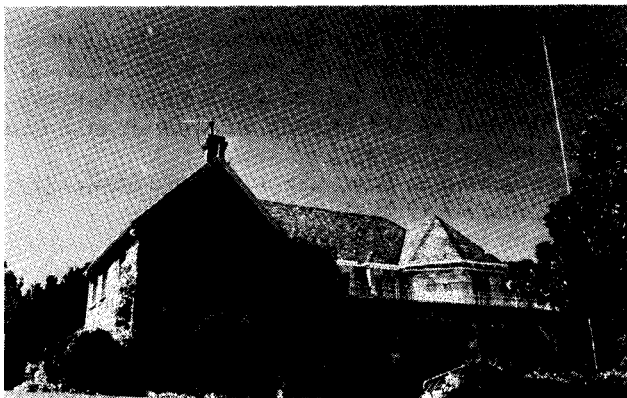
Lars Pederson, manager of Randfontein Estates for just over a year, became manager at North Randfontein, and his job was taken over by James Ferguson, the previous manager at Langlaagte. A month later, Robinson Randfontein Gold Mining Company Limited was registered with a capital of £387 000.

More Subsidiaries Formed

1895

The Robinson interest acquired the remaining Werner-Beit shares in Randfontein Estates and North Randfontein. Lionel Phillips lost his seat on the board of the company.

Two more subsidiaries—Block A Robinson Randfontein and Mynpacht Randfontein (which took over Mynpacht 206 on Uitvalfontein)—were formed at Randfontein. In the five subsidiaries formed to date, the majority shareholding in each was vested in Randfontein Estates, with a considerable parcel being registered to J.B. Robinson.



No. 3 Homestead was originally built in the 19th century and altered in the 20th century. It will eventually be declared a National Monument

Operations on Porges Randfontein were stepped up, while new shafts were being sunk on North Randfontein, with a 60-stamp battery and a cyanide plant being erected.

Rhodes, now Premier of the Cape Colony, Alfred Beit, and an associate, Dr Leander Starr Jameson, all with a common dream of uniting Southern Africa under the British flag, set up a clandestine movement to remove President Paul Kruger. Jameson, with some 300 men, set off from Pitsani for the Transvaal. They were ambushed by Boer forces on the farm Doornkop on the present property of Randfontein Estates.

Shortly before the Raid, a new Stock Exchange was organized in Johannesburg by Barney Barnato, and Randfontein Estates shares, which had stood at £1 each at the beginning of the year, rose to £5.

Randfontein's directors announced a maiden dividend, not from Randfontein but from Porges Randfontein.

1896

Suddenly, the Porges mill closed, with the directors announcing a shortage of labour and political disturb-

ances. Development and stoping had not kept abreast of the 60-stamp mill.

After four months the mill was reopened, and it was announced that a 100-stamp mill would be built. This sudden announcement led to the resignation of James Ferguson, and a young manager, James Stubbs, was brought in from Eastleight near Klerksdorp.

1897

Early in 1897 a sixth subsidiary, South Randfontein Gold Mining Company, was floated, taking over the northern half of the Porges property and sharing the mill and surface plant. However, this move coincided with a major mining slump brought about, so it was said, by rising production costs and white miners' wages, claimed to be the highest in the world. As many mines closed down, J.B. Robinson suggested a novel solution. At the end of April the white miners were retrenched, but also given an option of renewing their contracts with a wage reduction of 10 to 20 per cent.

After nine days, the miners returned to work, accepting the wage reductions, but the ratio of White to Black had changed considerably.

1898

When a second reef was discovered to the west of the reef being mined on Randfontein, shareholders were merely informed that it assayed well. This reef had been traced through all the existing subsidiaries and into ground not yet taken up.

It was decided to float and register six further subsidiaries, making 12 in all.

Robinson appointed John Hayes Hammond, former adviser to Rhodes, as his consulting engineer. A fellow American, Pope Yeatman, was appointed as overall general manager.

At a shareholders meeting in Johannesburg, despite severe criticism of Robinson's autocratic actions, Randfontein's capital was increased to £2,5 million.

Anglo-Boer War and Further Growth

1899-1902

By October the South African War (Anglo-Boer War) had started. Many mines were closed, and the staff headed for Britain. Robinson's Johannesburg staff were among those who left.

Randfontein's operating subsidiaries were allowed to flood, but in November 1901, under the guidance of Pope Yeatman, who had returned to resume duties as general manager, dewatering started at Porges and West Randfontein. Within a month, work could go ahead with the installation of the new machinery which had started arriving from Europe and the United States.

Robinson authorized a further share issue, increasing the total capital to £3 million, early in 1902.

1902

Each subsidiary was given 40 additional stamp batteries to bring its complement to 100, while Block A and Mynpacht were equipped with 100 from the start. However, labour remained in short supply. In London, Robinson made arrangements for a private company to recruit labour for him in various parts of Africa, but this led

to little improvement. Consideration was given to the importation of Chinese labour, but the warning was sounded that in no circumstances would these people be allowed to remain in the country on expiry of their labour contracts.

1903

Much to Krugersdorp's chagrin, Robinson announced that he intended establishing a township at Randfontein South. Randfontein had 2133 workers, and Robinson 1295. A new threat to Randfontein, however, came with mining development near Randfontein Estates eastern boundary in the form of Randfontein Deep—controlled by Solly Joel's Johannesburg Consolidated Investment Co. (JCI or 'Johnnies', as it was known). The mine had taken over nine blocks of claims, which included portions of Randfontein and West Reefs along reefs dipping eastwards of the Randfontein Estates subsidiaries.

1904

Yeatman, whose contract had expired, decided to return to the US. Hammond had returned to the US earlier, and James Stubbs took over complete management.

Both South Randfontein and Robinson Randfontein were approaching full production and, with the help of 1900 unskilled Chinese labourers, North Randfontein was reopened.

Another feature of Randfontein Estates life was the large number of Cornishmen—'Cousins Jacks'—who were experienced in tin and copper mining.

The first steam-driven traction engine was used to draw heavy loads.

1905

The first wood-and-iron school was erected at Randfontein by the Transvaal Administration. Martin Johnson and the Anglican community built the Church of St John the Divine, while the Methodists began erecting a larger chapel.

Consolidation and Acquisition of New Equipment

1906

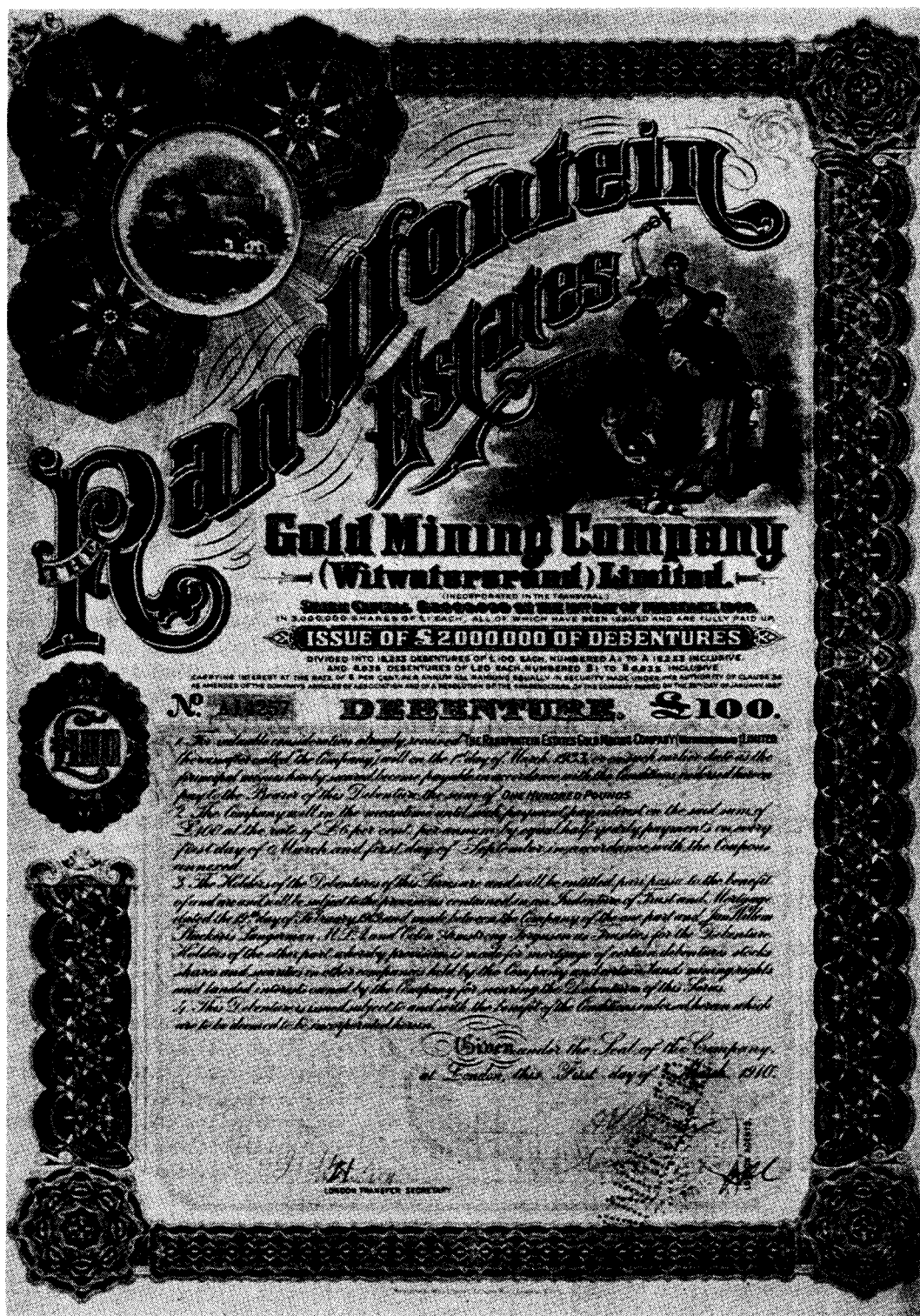
In opposition to the Witwatersrand Native Labour Association's (WNLA) recruitment efforts, Robinson acquired permission to recruit labour in Portuguese East Africa, Pondoland, Basutoland, and elsewhere.

He started supporting a new political party, Het Volk, which was pledged to clip the wings of the mining industry.

To show his sympathy with Jan Langerman, who was standing as the Het Volk candidate for the new constituency of Randfontein, Robinson made a liberal financial contribution to Het Volk. His appeal was to the English-speaking voters on the Rand, while Botha and Smuts appealed to the Afrikaners. The result was a landslide victory for Het Volk.

Botha became the first Premier of the Transvaal, and Robinson was made a baronet for 'services to the State'. Forthwith he would be recognised as Sir Joseph Robinson.

Consistent with his beliefs, Robinson decided to terminate the contracts of the Chinese labourers as each expired.



A Randfontein Estates Debenture Certificate Issued in 1910

James Stubbs introduced six lightweight mechanical rock-drills, designed on the Rand by W.D. Gordon, to Porges Randfontein. He was promoted to managing director of Randfontein Estates, replacing James Ferguson, who had retired.

In addition to crushing batteries, Stubbs also introduced tube mills to the property. The tube mills were to prove so efficient that they were soon introduced to all the

Randfontein subsidiaries. Jan Langerman wasted no time in reporting this success to the shareholders.

1907

Randfontein Central Gold Mining Company was registered with a capital of £1 105 000 in March.

All three subsidiaries, which had been dormant since before the Anglo-Boer War (although they had conducted

prospecting operations), were consolidated into a single entity with a 300-stamp battery. As the crews were digging the foundations for the battery, they struck a new reef overlying the Randfontein Leader. Dubbed the East Reef, it was soon found to traverse much of Randfontein's mining property.

At the same time, prospecting crews found another reef on the property of the northern subsidiaries, which they called the Johnstone Reef.

A large electricity-generating plant was in the process of being built on Block A to supply the entire project with power.

There were plans to open up Stubbs Randfontein, East Randfontein, Ferguson, Van Hulsteyn, and Johnstone Randfontein, possibly as a second large company—operations which kept Robinson in South Africa after the AGM of 1907. However, rumblings had started among shareholders in Britain. They pressed for an early shareholders meeting in London, but Robinson, anticipating their opposition to the plans, called a shareholders meeting in Johannesburg.

1908

Stubbs was transferred to the Robinson Group's head office in Johannesburg, and he was replaced as general manager by a Cornishman, James Hebbard.

1909

Instead of launching the four new subsidiaries as a separate company, Jan Langerman informed shareholders at the AGM that they would be amalgamated with Randfontein Central.

The 300-stamp battery was to be doubled in size to make it the largest milling plant in the world. Two more shafts were envisaged, which would bring the total number of shafts along Randfontein Central's 5,6 km of reefs to five.

The amalgamation gave Randfontein Central 1124 claims. Randfontein Estates held over 80 per cent of the shares. Soon after, however, the four crushing subsidiaries, together with Stubbs Randfontein, were formed into a second super-subsidiary, Randfontein South Gold Mining Company. This occurred in July 1909, bringing the new company 1026 claims.

Reorganisation of Properties and Labour Unrest

1910

In May 1910, the Union of South Africa Act was passed in Britain.

In the mining field, Crown Mines absorbed a further 17 properties, thus becoming as large as Randfontein Estates, while on the East Rand (ERPM) had taken over some 20 rivals, thus becoming even bigger.

By the end of 1910, most of the problems with delays in the delivery of machinery and faulty plant from overseas had been solved, and the two Randfontein mining companies were merged to form one giant company, Randfontein Central, which became the largest operating mine on the Rand. The enlarged company had a crushing and treatment capacity of 3,1 million tons per year.

From Stubbs to Johnstone, the company's claims spanned a distance of over 11 km along the Randfontein

Leader and West Reefs—the latter actually an extension of today's Main Reef.

1911

Steps were taken to organise the property into 10 sections centred around the haulage shafts—Stubbs (No. 1), Porges (No. 2), South (No. 3), North (No. 4), Robinson (No. 5), Block A (No. 6), Mynpacht (No. 7), West (No. 8), Ferguson (No. 9), and Johnstone (No. 10).

The original East Rand property was divided between West and Ferguson, and Van Hulsteyn between Ferguson and Johnstone. With the four 100-stamp batteries fully operational in the south section, together with the tube mills, another 300-stamp batteries were installed at a new battery to serve the northern section and Stubbs.

1912

In all, Randfontein now had 1000-stamp batteries fully commissioned. Colin Ferguson took over as general manager.

In April 1912, Randfontein utilized 75 000 reserve shares to acquire the neighbouring South Randfontein Deep, which adjoined Stubbs, and had 120 claims in its own right with conditional rights over a further 96.

Randfontein Central paid a dividend of five per cent, and enabled Randfontein Estates to do the same. This was the first general dividend declared.

Jan Langerman, now Sir Jan following a knighthood granted after Union, retired. He was succeeded by his erstwhile clerk and later company secretary, Jim Crosby.

1913

A minor dispute over Saturday overtime pay on an East Rand mine developed into an organised general miners strike. At Randfontein the stoppage lasted seven days. General Louis Botha and General Jan Smuts ended the strike by agreeing to several of the demands by the workers.

In January, militant trade unionists called a strike to back a protest by railwaymen; Botha and Smuts called up burgher commandos, several of which were encamped around Krugersdorp and Randfontein.

At Randfontein a head count showed that 611 out of 918 White underground workers had reported for work, and 481 surface workers out of 622. Many of the absentees were workers from Krugersdorp, whose rail transport had been disrupted.

Both Randfontein Central and Randfontein Estates paid increased dividends, bringing the total dividend for the year to 10 per cent.

Mining Operations during the First World War

1914

The interim dividend for the first six months was passed up to strengthen the companies finances.

On the outbreak of war, South Africa started mobilizing and, in September, an expeditionary force was organized to invade German West Africa.

Many mines started replacing hammer boys with mechanical rock drills, but on Randfontein such drills were ineffective due to the steep reefs.

1915

Randfontein, formerly part of the Krugersdorp constituency, became a separate constituency.

Sir J.B. Robinson nominated J.B. Robinson junior to stand as an independent candidate for Randfontein. He won by a large majority.

1916

Robinson and Crosby had a major row over the Randfontein accounts, resulting in Crosby's resignation. J.C.K. Pollock, another Robinson man, was appointed vice-chairman and moved to the mine.

Robinson decided to shut down three of the four 100-stamp batteries on the South section, necessitating the railing of mined ore from the South, North, and Robinson sections to the 600-stamp battery at Millsite.

In the south, only the Porges mill was still operating.

Towards the end of the year, Solly Joel announced that Johnnies was taking control of the Robinson Group.

Robinson resigned as chairman of Randfontein and

Accidents at Randfontein were rife, with 69 men being killed in 1915 in accidents.

Ventilation became the watchword, particularly at the South Vertical and North Vertical shafts which had been started in 1917, and which were to be sunk to a depth of 1700 m.

1919

In September, the North Vertical shaft intersected the Randfontein Leader Reef at 978 m. The reef had a dip of 60 degrees, and assayed at 42,6 grams over 122 cm. By the end of the year the South Vertical shaft had reached a depth of 1072 metres, and North Vertical 1113 metres.

Founding of the Rand Refinery and a Labour Strike 1920

By the end of March, portions of Block A shaft caved in, stripping timbering from the 10th to the 19th levels. Repair work started immediately, and within three

Shift up for another millionaire safety achievement for Randfontein Estates



was succeeded by Solly Joel, with John Munro of Johnnies as vice-chairman.

1917

In April 1917, the Randfontein head-office staff was asked to move into the Johannesburg offices of Johnnies.

It was decided to phase out the 'badly laid out and designed' South, North, and Robinson main and sub-incline shafts, and that two new deep-level shafts would be sunk.

Porges shaft was abandoned, and its stamp battery closed down. Ore from the sub-incline at Porges was transferred to the main shaft at Stubbs.

1918

Hostilities ceased in November. Some 700 men from Randfontein had seen active service in South West Africa, East Africa, France, and elsewhere. Fifty-two had been killed, 69 wounded, and 20 taken prisoner.

months the shaft was once again serviceable but, almost immediately, a cave-in rendered the Robinson sub-incline shaft useless. Sinking was stopped at the North Vertical shaft earlier than planned, so that this shaft would be commissioned for hoisting.

1921

Sinking at South Vertical shaft was stopped in January 1921 at 1436 metres.

Randfontein Central took over Randfontein Deep, which had been dormant since 1912, in exchange for 250 459 new shares. Within a short time, two incline shafts, each with five compartments, were sunk along the Battery Reef line.

Randfontein Central joined other mines to found the Chamber of Mines new Rand Refinery at Germiston, thereby ensuring that refined gold was sent to banks, instead of unrefined gold.

Bitter litigation started between the board, now under

Johnnies aegis, and Sir Joseph Robinson. Over £215 000 was said to have been made within one month on the sale of the farm Waterval, which he had purchased from Randfontein Estates, in 1907. The case dragged on for four years, with Robinson finally paying £462 000.

1922

Robinson returned to South Africa at the age of 82. He died in 1929.

The South African Industrial Federation called a ballot of 22 000 White miners, power-station hands, and engineering-shop workers. A full-scale strike ensued. When Marxist strike leaders in Johannesburg called for a revolution on March 8th, West Rand miners went on the rampage, held up businesses, and ordered staff out into the street.

1923

Randfontein received its first award for bravery from the Chamber of Mines in July 1923, when mine overseer B.E. Pollard risked his life to rescue underground workers. The old Block A also experienced a serious accident in this year, when an abandoned incline shaft still used as a short-cut collapsed, killing 23 men.

In June, George Beatty was transferred to the Johnnies head office in Johannesburg as consulting engineer for the group, and his place was taken by Hugh Mitchell.

1924

Sir Willem van Hulsteyn, who succeeded Nicholas Scholtz on the JCI board, and James Lawn, an engineer who had been the first principal of the School of Mines in Kimberley (the forerunner of the University of the Witwatersrand), found the key to the amalgamation of Randfontein Estates and Randfontein Central.

As if to celebrate the amalgamation, two dividends were declared for 1924, with a further interim dividend in June 1925.

1925

So that underground ventilation would be improved, Hugh Mitchell secured the approval of the board for the sinking of a new deep-level shaft roughly midway between the North and South vertical sections, with a circular cross-section seven metres in diameter and a powerful fan on top.

Wall Street Crash has no Significant Effect

1926

By mid-1926, the new shaft reached the 19th level. New pumps were installed at North Vertical, and it was estimated that nearly 700 000 tons of water was pumped from Randfontein each month, four times the tonnage of ore crushed at Millsite.

1927

Jimmy Richardson took over as general manager of Randfontein Estates.

1928

John Munro retired as vice-chairman, to be succeeded by Jim Crosby. Munro died shortly afterwards, and his place on the board was taken by another Johnnies execu-

tive, Sir Reginald Blankenberg.

Black Reef outcrops were discovered in payable quantities on the old Stubbs Section, and were exploited by cutting and winzes.

1929

On New Year's Day, 1929, Randfontein officially became an independent authority. Seven council members were appointed, of whom four were officials of Randfontein Estates.

The Government Miners Training School was formally established. The mine's total staff complement had by now reached 20 000, but profitability had declined to a very low level.

The Wall Street crash, which triggered a worldwide economic depression failed to have any significant effect on Randfontein's shares which, although £61 million had been knocked off Rand gold mining shares, started an upward move on rumours that the mine's reefs, which had always been generally accepted as dipping steeply eastwards, were flattening out at depth, and would therefore be less costly to work.

The company bought 428 claims on Uitvalfontein beyond the eastern boundary, and also prepared to reopen one of the vertical shafts sunk by the old Randfontein Deep Company before World War 1.

1930

Work began on deepening the shaft that was to become known as the No. 2 North shaft. A 42-metre headgear, the tallest on the Rand, with hoisting gear was installed. However, disaster struck at 110 metres, when water rushed into the shaft and cementation had to be used, increasing costs immensely.

In time, however, the main reefs were intersected at around 1440 metres, where the dip was only 15 degrees, and had an assay value of 10,5 g/t over 165 cm.

1931

In May the chairman, Solly Joel, who had changed Randfontein's image from a 'lone hand' mine to a well-run company, died, and was succeeded by his brother Jack.

At the end of the year, the company declared a modest dividend of 6 pence per a share—the eighth in 42 years. Randfontein was now processing eight per cent of all the gold ore mined on the Rand.

1932

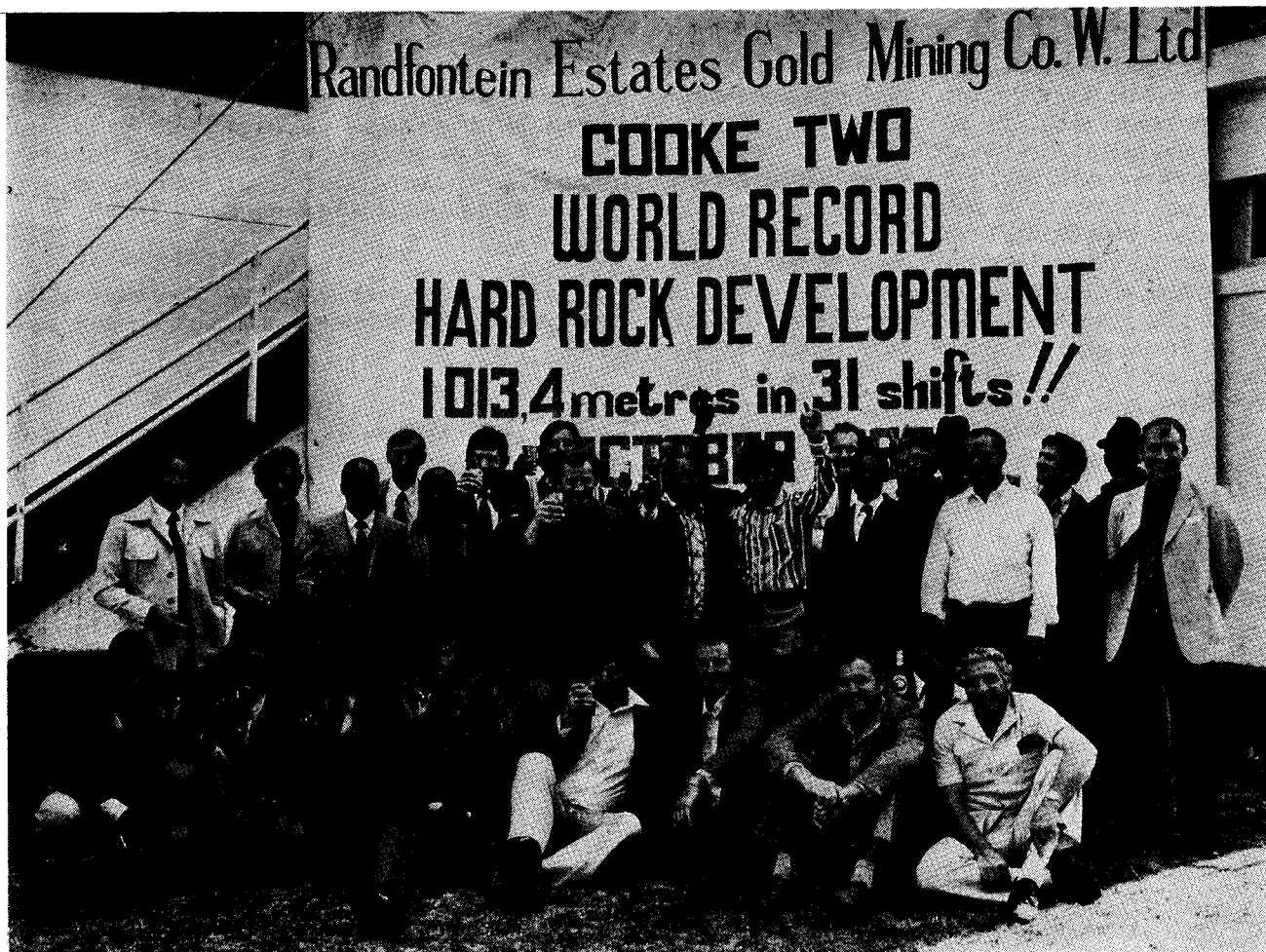
Progress was fully maintained, with total dividends of one shilling and nine pence being declared for the year, and the share price reaching 28 shillings, which was 600 per cent above the 1929 low.

Randfontein was one of only eight mines whose shares had rallied during the Great Depression, while those of 42 other mines had slumped.

Abolition of the Gold Standard

1933

Pressure on the Government, which had been building up during the entire preceding year, led to the abolition of the gold standard, with gold being left to find its own level. Johnnies shareholders were told that this 'was the



A world record for Randfontein Estates

most important event in the history of the gold industry in South Africa'. The Johannesburg Stock Exchange experienced an unprecedented boom.

Randfontein engineers developed a piston-engine driven by compressed air, while the underground rail network was being rapidly expanded, with the use of more boxholes and ore-passes.

Carbide lamps were fast replacing open-flame candles. The electric lighting system was also being extended fast.

Most of the innovations were promulgated by the new general manager, Jimmy Richardson.

1934

Richardson resigned and left for Britain. He was succeeded by Tom Paull.

1935

Paull took up residence at the mine in June. The workforce was now 27 000 men, the largest on the Rand, and gold was being extracted from 13 different reefs.

1936

Black labour underground was supplemented from men recruited outside the Union's borders in Nyasaland (now Malawi) and Northern Rhodesia (now Zambia).

During 1936, after the addition of two more tube mills the previous year, Randfontein crushed 4 183 979 tons of

ore, which yielded 25 778 kg of gold—a record which was to stand for 50 years.

1937

Sir Willem van Hulsteyn resigned from the board in 1937, and Sir Reginald Blankenberg a year later. Kenneth Richardson, brother of Jimmy Richardson, was appointed to the board.

1938

Steve Davies succeeded Tom Paull as general manager.

Second World War and Gold at \$35 per ounce

1939

In the 50th year after Randfontein's foundation, 25 000 men were now working on the mine, which had assessed ore reserves that were sufficient to carry mining operations on for a further 20 years.

In September, General Jan Smuts won a motion in Parliament to sever relations with Germany.

1940

Smuts decided to send an expeditionary force to East Africa. This force consisted entirely of volunteers. The first men to leave were part of a brigade mobilized, from regiments such as the Transvaal Scottish, which had many Randfontein men in its ranks.

1941

By the middle of 1941, many Randfontein men had been designated 'key men'. This designation ensured that their specialized skills were not lost by the mine.

The mine had by then already contributed 450 men to active service contingents, and a further 200 served in a reserve unit known as the Mines Engineering Brigade.

To supplement the work-force in the offices and elsewhere on the mine, about 100 women were recruited.

Jack Joel, the chairman, had died the previous year and his son, Jim Joel, was now chairman of Johnnies. On his board, until the end of the War, were George Beatty (vice-chairman), James Lawn, Geoffrey Joel, Kenneth Richardson, R.L. Innes, and F.H.P. Roome.

With more and more men enlisting, Millsite's tonnage dropped gradually, with gold production declining from 24 979 ounces in 1936 to 15 810 in 1944.

1942

The dividend had shrunk to three shillings and sixpence.

1945

America was determined to keep the gold price fixed at \$35 per ounce, which made many areas of operation on the mine unpayable and restricted development.

By-products such as silver and the platinum-group metals helped to cover costs.

During an effort to locate new ore-bodies, Johnnies geologists struck upon the East, or Livingstone, Reef.

Changes in Top Management

1946

George Beatty retired, and was succeeded as vice-chairman by Kenneth Richardson. A few months later, James Lawn was appointed. He had made some valuable contributions at Randfontein, but had also cost the company dearly. Tommy Roberts, Randfontein's chief surveyor, was convinced that the major reefs of the Witwatersrand stretched further towards Klerksdorp, where a number of smaller mines had been opened over the years, and prevailed on Johnnies to take up options in this area. However, Lawn had advised against such a step.

1949

It was Randfontein Estates 50th anniversary, but gloom over the mine's future persisted.

Richardson, however, spelled out the Board's reasons for further development.

Britain devalued the pound against the American dollar, and soon after South Africa followed suit. Overnight, the price of gold jumped from 172 shillings and six pence per ounce to 284 shillings and three pence, and Randfontein's large low-grade orebodies suddenly became payable.

1950

On New Year's Day, the town of Randfontein came of age. Dr Nico Diederichs, later to become State President, was elected as the town's representative in Parliament.

Optimism was once again running high. The mine was paying dividends, and there was talk of new expansion.

But a well-kept secret came to light with the announcement at the end of that year that South Africa's Atomic Energy Board had signed agreements with the UK and the US to supply uranium on a large scale to those two countries. Secret tests carried out at Randfontein showed that the Bird Reef contained uranium.

1951

Kenneth Richardson obtained Board approval to make application for Randfontein to become a uranium producer.

1952

In September 1952 the Atomic Energy Board approved Randfontein's application, thus bringing the number of approved uranium producers to seven.

1953

In July 1953, Davies was killed when his car collided with a train on a level crossing on the Randfontein property. Davies was succeeded by Dick Cooke, former manager of another JCI mine, Freddie's, in the OFS.

However, he had barely taken office on the mine when another level-crossing accident took the life of Billy Mitchell, chief engineer for 25 years.

Production of Uranium

1954

Under Cooke, trial production started in February at the newly completed uranium plant and the acid plant. By September, the production and shipping of uranium was fully underway, and mining of the Bird Reef was in full swing.

Constant efforts were made to improve the mine's safety record, and in August 1954 Randfontein received the Chamber of Mines 'Millionaire Shield'.

1955

In October, Richardson retired as general manager of Johnnies and vice-chairman of Randfontein, and was succeeded by the group's consulting engineer, D.A.B. Watson.

Dick Cooke became the new consulting engineer, and was in turn replaced by George Holl.

1956

Holl instituted new methods and controls, which soon started paying dividends. He also introduced job training in the first training centre of its kind in South African industry.

In April the mine again won the 'Millionaire Shield' for safety.

1957

More than 1 500 000 tons of uranium ore were mined along the Bird Reef sections, while the production of gold ore was only about half this quantity.

1958

The tonnage gap widened even further, with uranium production reaching record levels. The gold division produced 3339 kg of gold, at a recovery of 5,5 g/t.

The uranium division produced only slightly less gold (3297 kg) as a by-product, at a recovery rate of 2,4 g/t. At the Millsite plant, the division produced 755 698 kg of uranium oxide for delivery to the Atomic Energy Board. With the inclusion of the 819 tons of uranium oxide produced from East Champ d'Or's slimes this was equivalent to a fifth of the total production of uranium oxide in South Africa.

Jim Joel retired as chairman of Randfontein at the beginning of the year, to be succeeded by D.A.B. Watson. Geoffrey Joel died only a month after Jim Joel's retirement from the board.

Watson also became vice-chairman of Johnnies and, at the first shareholders' meeting reported that a new mine was to be opened in an area some 20 km to the south of Randfontein, provisionally named the Western Areas Prospect.

1959

Randfontein had 28 working shafts and winzes, many

as honorary life president—a title he still holds today at the age of 92.

D.A.B. Watson took over as chairman, resigning the chairmanship of Randfontein Estates, which was taken over by Arthur Thomas. George Holl was appointed Johnnies consulting engineer, and was succeeded on the mine by Kewpie Slatem.

Randfontein was awarded the 'Millionaire Shield' for safety for the third time.

1963

The mine's work-force decreased further to 8800, with many men leaving to go to the new mine at Western Areas.

Fourth Safety Award

1964

The end of the uranium contract came at the close of 1964. Randfontein won the 'Millionaire Shield' for the fourth time.



In 1983 Randfontein Estates purchased five Garratt steam locomotives from the South African Railways and have become the largest privately owned rail network in the world

still using steam hoists, and the work-force topped 21 000.

Many saw the future lying in Johnnies new Western Areas mine, which was launched in September 1959, and at which two shafts were to be sunk.

1960

The work at Western Areas started in 1960, and shaft sinking continued until April 1961.

Ore from Western Areas was transported by road to Randfontein for processing at Millsite.

1962

Johnnies transferred its residence from the UK to South Africa in 1962.

Jim Joel resigned as Johnnies' chairman, but remained

1965

Following Dick Cooke's advice, Johnnies geologists took a fresh look at Randfontein's Panvlakte and Gembokfontein areas. Cooke had succeeded Arthur Thomas as chairman of Randfontein.

Although small-scale mining was still being conducted at the No. 8 and No. 9 shafts and at Stubbs, so that the Government subsidy on marginal mines could be taken advantage of, the directors decided to 'call it a day', and gave notice that Randfontein would cease production at the end of that year.

1966

Millsite closed down, as did the central power station.

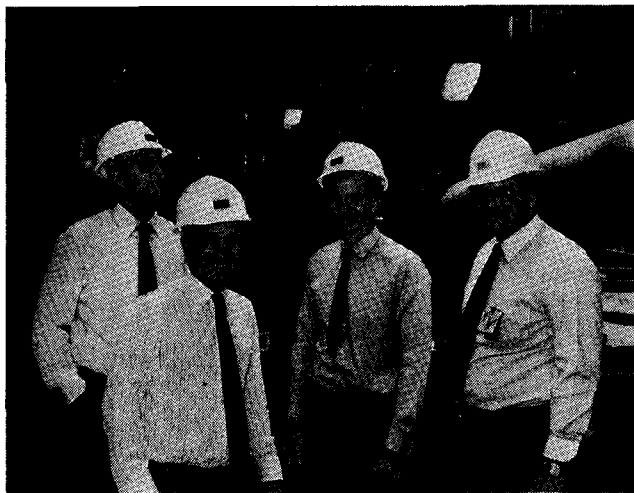
1967

The Randfontein work-force had fallen by the middle of the year to less than 1200 men.

The headgear kept turning at only one shaft, Circular Ventilation, where West Rand Consolidated had leased the pumping equipment to keep water levels down in the old workings, which ran through into its own mine.

1968

Exploration work continued on the farms Gemsbokfontein, Panvlakte, and Luipaardsvlei. A total of 500 reef intersections were obtained in 90 boreholes sunk in a block measuring some 12 km from north to south and less than a kilometre across.



A visit to the new Doornkop metallurgical plant. From left to right: Mr Wally van der Meulen, general manager; Dr Dave Henderson, metallurgical consultant; Mr Ken Maxwell, Randfontein Estates chairman; Mr Grahame Graham-Parker, metallurgical manager

The reefs contained both gold and uranium, with the richest gold values in the shallowest gold reefs in the north, and uranium in the south in reefs as deep as 1200 m.

Dick Cooke, who had closely monitored the progress in the 'Pangemlui area', as it had become known, was confident that all the indications for a viable mine were present, provided that Randfontein would finance the venture.

D.A.B. Watson was sympathetic, but once again pointed out the setback Johnnies had suffered in the Free State. He made it clear that Cooke could negotiate an outside loan to float a mine, but that Johnnies would not be the underwriter. Cooke started preparing the case, ably assisted by consulting engineer Bernard Smith.

1969

Again the Government was approached. Cooke went to see Dr Diederichs, emphasising to him the amount of foreign exchange that the new mine would earn.

The Guinness Book of Records was still listing the dormant Randfontein Estates as the world's largest gold mine.

1970

The Government publicly announced that it had agreed to advance R8 million to Randfontein by way of a loan,

and the new mining project on Pangemlui was given the green light.

Bernard Smith was appointed managing director, with George Holl reappointed as Randfontein's consulting engineer.

Two modest shafts—a hoisting shaft of 5,5-metre diameter and a ventilation shaft of 4 metres—were to be sunk on Luipaardsvlei in the north of the Pangemlui block, where the gold values were highest and the reefs at their shallowest.

Two months later, Cooke retired, and Bernard Smith was elected chairman of Randfontein.

Cooke 1 and 2 Shafts

1971

Just a year after the first sod was turned at Pangemlui, there was another ceremony to mark the first blast. Kewpie Slatem was honoured by being asked to conduct the ceremony. It was his last appearance at Randfontein, as he had been transferred to another Johnnies mine. His replacement was Bill Blair.

1972

By June 1972, the new shafts had reached 760 metres, and were nearing the Middle Elsburg Formation, with assay values reaching 32 g/t.

The Cooke Section, as it was known, became an extremely attractive proposition and, although the previous policy had been to contain costs in development, the emphasis was now focussed on bringing the mine into production as soon as possible.

1973

February 1973 was the month in which the 'unofficial' gold price topped the psychological resistance barrier of \$100 per ounce. A mechanical raiseborer—a novelty in South African mining—was employed to cut the ore passes. Randfontein's mammoth raiseborer was capable of reaming out perfectly round holes 243 cm in diameter.

The Millsite metallurgical plant was being remodelled in preparation for trial stoping. By June, the first section, with a capacity of 35 000 tons per month, was commissioned. A second section followed three months later.

A 16 km rail line from Cooke 1 shaft to Millsite was planned for the conveyance of ore to the reduction works. The line straddled the watershed dividing the Indian and Atlantic Oceans.

Even before the Cooke 1 operations were in full swing, it was decided to go ahead with a Cooke 2 shaft complex, consisting of a 6,1-metre main shaft and a 4-metre ventilation shaft on the farm Gemsbokfontein.

The gold price had topped \$120, and old workings were once again under investigation.

1974

In January 1974, the first blast to start operations at the new Cooke 2 shaft system was set off by Philip von Wielligh. It was one of Bill Blair's last functions before retirement. Cooke 1 reached full production in March 1974, with gold touching \$150 per ounce.

Ray Wolff became the new general manager.

The mine purchased four locomotives from the SA

Railways to complete its surface rail network (now the longest private rail network in the world).

1975

The gold price reached \$175 per ounce by the end of January 1975, and mines were stepping up gold production.

Multiple reefs were intersected between 579 and 462 metres below the collar in 'very disturbed and broken ground'. Gold values were lower than at Cooke 1, but uranium assays were higher.

In June 1976 a dividend of 100 cents per share—the first substantial dividend since 1965 and the most generous in the company's history—was paid.

1976

The world uranium price, which in 1972 had only been \$6 per pound shot up to \$30 per pound early in 1976 in sympathy with rocketing oil prices.

Smith applied for readmission to Nufcor (the Nuclear Fuels Corporation) and Randfontein was accepted.

Construction began on a new plant to handle the extraction of uranium by a faster and more efficient method.

1977

In July, Ray Wolff retired as general manager, to be replaced by H.A.G. Slater.

Millsite was commissioned in August 1977, and the first deliveries from the plant started late in 1977. Randfontein and Johnnies entered into a joint agreement to prospect for uranium in the Great Karoo.

Fluctuating Gold Price

1978

Randfontein now employed 13 000 men, including 12 000 Blacks. Scores of new houses, hostels, and flats were built.

Plans were set in motion for the establishment of a joint technical and training complex for Johnnies on the Randfontein property at James Park.

At Cooke Section, Cooke 1 was working at full capacity with an output of 80 000 tons of ore per month. At Cooke 2 stoping was progressing fast and, early in 1978, the shaft was approaching its target of 100 000 tons per month.

The shaft was linked to the new Cooke metallurgical plant by an overland conveyor system.

In August 1978, Randfontein once again won the 'Millionaire Shield' for safety for the sixth time in the mine's history.

1979

During 1978 the gold price had fluctuated between \$165 and \$243, but by the middle of 1978 it was touching the \$400 mark.

Randfontein was awarded a four-star rating in terms of a new long-term safety audit system instituted by the Chamber of Mines.

1980

For the seventh time, Randfontein won the 'Millionaire Shield', this time for two million accident-free shifts in-

stead of the required one million.

At the end of July, Bernard Smith left the mine. He was succeeded as chairman of Randfontein by Philip von Wielligh.

Only days later Randfontein narrowly succeeded in winning the 'Millionaire Shield' for three million accident-free shifts worked.

Early in 1980 the gold price briefly touched \$850, and then levelled out before entering a decline phase.

In that year, Randfontein's three operating shafts hoisted more than four million tons of ore, yielding 20 817 kg of gold and 646 452 kg of uranium oxide. Record profits were recorded, with a concomitant record dividend payment to shareholders.

Shaft Sinkers (Pty) Ltd were entrusted with the sinking of no. 2 shaft, as well as a new ventilation shaft near Cooke 2.

A team led by a Hungarian, Les Halasz, consisting of some 280 men, was in charge of the entire project.

They were also to sink the twin haulage system, which Halasz had studied carefully, basing his model on the system at Loraine in the Free State.

For weeks, Halasz' team achieved a record daily advance of 35,5 metres, totalling 847 metres in 27 days (978 metres in 31 days). This achievement was rated as a new world record, and the celebrations had double significance when it was also announced that Randfontein had been awarded five stars in the new safety rating scheme.

'Millionaire Shield' for the Eighth Time

1981

Keeping up the pressure on his team, Halasz broke his own record in January 1981 with an advance of 1104 metres in 31 days.



Mr Bill Nairn, consulting engineer, making a safety presentation to Mr Fanle Kempen, mine overseer

Gordon Waddell succeeded Sir Albert Robinson as chairman of Johnnies.

In July 1981, Randfontein earned the 'Millionaire Shield' for the eighth time, with honours being shared between Cooke 1, Cooke 2, and Randfontein Section.

The company took a new look at the old rock and tailings dumps at Randfontein Section.

1982

Phillip von Wielligh retired as chairman of Randfontein, and was replaced by George Nisbet, an engineer who



Another Randfontein Estates safety award

had joined Johnnies from Anglo American in 1980.

Together with Randfontein, New Wits, South Roodepoort, and Anglovaal, Johnnies decided to establish the Doornkop Mine.

1983

Randfontein purchased five Garratt steam locomotives from the SA Railways to supplement its own fleet of steam locomotives operating on the extensive 180 km surface network, which stretched all the way from Millsite to Cooke 3.

In the early part of the year a new general manager, Wally van der Meulen, took office at Randfontein.

In August 1983 the Cooke plant processed 304 000 tons and Millsite 215 000 tons—a total of 519 000 tons for the month, the highest tonnage in Randfontein's history.

Trackless mining, the new method in the mining industry, was implemented at Randfontein's Cooke 3 Section at an early stage.

1984

In January 1984 the first blast was triggered, and shaft sinking got underway immediately at the Doornkop no. 1 and no. 2 main and ventilation shafts.

1985

The Doornkop metallurgical plant was completed before the end of 1985 and, almost immediately, it was decided to double its capacity.

Randfontein, behaving like an independent mining group in its own right, partnered Johnnies in exploration in the Free State on land adjoining the Beatrix Mine.

Hopes of finding gold had almost been abandoned when, at a depth of 800 m, a borehole intersected payable reef, which was followed up, and an extensive reef was plotted. This discovery resulted in the establishment of what became known as the H.J. Joel Mine in honour of Jim Joel.

Higher Profits and Dividends

1986

George Nisbet retired as chairman and managing director, and was replaced by Ken Maxwell, a Rhodes scholar and mechanical engineer.

Revenue from gold and silver rose to R640,8 million, compared with R555,9 million the previous year, despite a fall in grade of the 5 783 000 tons of ore treated from 5,158 to 4,6 g/t.

Dividends were increased by R4 per share to R17 for the 1986 financial year.

Capital expenditure for the forthcoming year was estimated at R235 million.

G.H.S. Bamford retired as consulting engineer, and was succeeded by R.C. Bertram.

1987

Operating profit was substantially higher than the previous year at R393,5 million.

The introduction of trackless mining continued and, during June, about 50 per cent of the underground tonnage was produced by this method.

1988

Despite serious setbacks, 7,9 million tons of ore were milled against the 7,1 million the previous year. Of this amount, 2,4 million tons was from surface dumps.

The grade was still falling, with the year's average at 3,17 g/t compared with the previous year's figure of 3,73.

Profit after tax amounted to R266,5 million, which was 20,9 per cent lower than that for the previous year.

A further decline in grade was attributed to the mining of a greater proportion of wider reefs by mechanized mining methods.

The mine was awarded the C.S. McLean Shield for safety in the gold division of the mining industry, after achieving the lowest casualty rate over the previous three years.

Trackless mining and participative management were singled out as having contributed to the great improvement in safety, and Maxwell forecast that the special roofbolting machines would further reduce falls of ground.

Plans were also announced for the development of a shaft system known as Doornkop 2, which would enable Randfontein to exploit the South Reef some 1000 metres below the Kimberley Reef now being mined at Doornkop no. 1 shaft.

The new shaft system should be completed by the end of this century, and will enable overall production from Randfontein to be maintained at 650 000 tons per month as production from the Cooke shaft system starts to decline.

1989

On January 24th, Murray Hofmeyr, the chairman of JCI, turned the first sod for a new shaft at Doornkop, the beginning of the no. 2 shaft system.