

mismanagement or waste of material; is there not too much money spent on managers, engineers, &c., &c.? Are you so perfectly satisfied with yourselves?—Certainly not! We are never satisfied—always trying to improve, but if I knew now where a fault lay on our side, I should start in to remedy it, and not wait to report it to the Commission. We have been trying to reduce expenses. We are trying, and we will always try, and if we were satisfied, we would stop trying. I have not the slightest doubt there must be faults on our side too. I never intend to give the idea that we claim to be perfect. It is impossible and absurd. Every year we find out something fresh in the way of reducing some of our costs, and we hope to go on in that way. I can only speak in connection with the costs of those mines with which I am concerned, and I can tell you that if we knew there was anything requiring improvement, and capable of improvement at our hands, we would tackle that at once on our own account, and in our own interest.

But you not only know about the mines which you are a director, or are interested in, but have a general knowledge?—Yes.

You have a general knowledge of the whole business?—Yes, but necessarily an imperfect one of others' business.

I only ask you for an explanation of this question in order to justify yourself. There will afterwards be other evidence on this point. That would only prove that you only suggest improvements on the side of the mines on one point, and that is the black labour question. That is why this question was repeated?—No, I do not suggest that. We keep on at every directors' meeting as to costs. We divided these things up into percentages long ago, before a Commission was ever thought of, so that we could know whether we could put our finger upon extravagances, or the spot where economies could be made.

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sts You have chiefly drawn the attention of the Commission to the black labour question?—I think the fact that we have made an effort to cut down the black labour within the last fortnight shows you two things—the first, that we realise we can effect some economy ourselves—and there we may be to blame for not doing it before—and the second thing we realise is, that this is a good opportunity of doing it.

The witness was then permitted to leave, being thanked by the Chairman for his statement.

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vi- MR. W. LAURIE HAMILTON was called. He stated he was a civil and mining engineer. He had been up to now connected with the Barnato Companies. He had been in Johannesburg since the end of 1888.

Chairman.

Will you please inform the Commission on what points you can give evidence?—
I may say first Mr. Barnato had intended to offer himself to give evidence, but had to go down to the House of Assembly. He asked me to assist you with any information
I had. I propose to lay before you a statement of the stamps working in the Barnato group, and of the additional stamps which might now be started if the Commission can help us to further reduce the costs. I will also lay before you the actual costs of a paying mine and the actual costs of a non-paying mine; also an illustrative estimate supposed to have been made in 1890, showing how we estimated possible reductions and how these had been partly fulfilled and partly falsified by certain reforms we anticipated being withheld. Witness then handed in the following statements, which
the secretary read: In the Barnato Group (Rand and Klerksdorp) we have:—6
sup. companies with 400 stamps running, 400 stamps; 90 stamps hung up on these companies, 90 stamps; 7 mills idle, with 650 stamps ready to crush, 650. The total

number of stamps that might now be crushing under improved conditions of country, P. 1,140. In these 13 companies we propose to add 220 stamps, 220; 3 companies that were crushing with small mills, but are ready for heavy equipment, would run 480; so that under improved economics of the country we could have (instead of 400) 1,840 crushing in 12 months. In addition to these, out of many large properties held by this group, we have mining properties sufficiently proved to promise dividends under improved conditions that would require a further equipment of 1,350 stamps, making a total in this group, that could be crushing by the year 1900, of 3,190 stamps. It is estimated that the different groups could have 9,000 stamps crushing by 1900. Of the six companies crushing, the nominal capital is over 1½ millions, and the hard cash sunk in opening and equipping these mines amounts to over 1½ millions. Of the seven companies with idle mills the nominal capital is over 2 millions, and the opening and equipping them has cost over 2 millions. So that over and above the money spent for and on partly developed properties now waiting the promise of better conditions, and the large amounts paid to farm and estate owners for other properties, this group of financiers has more than two millions lying idle in machinery, etc., in seven mines, that under improved conditions of country might now be producing wealth to the country and dividends to the shareholders. This does not include money paid for these properties, but only the hard cash spent on them in bringing them to the producing stage. In the above statement no part of the many properties in which the Barnato group hold large interests, but which are under the control of other groups of financiers, is included.

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The comparative costs of the New Primrose Mine for 1890, 1893, and 1896, mining and milling, are as follows:—

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COST PER TON (not including Tailings Treatment).

	Six months ending June 30th, 1890.		Reduction accomplished between 1890 and 1893.	Six months ending June 30th, 1893.		Six months ending Dec. 31st, 1896.		Total cost per ton including tailings treatment 6 months ending Dec. 31st, 1896.
	s.	d.		s.	d.	s.	d.	
Labour—								
European ...	6	2	34 per cent.	4	0	4	9	5 4½
Native ...	7	10	12 „	7	0	5	9	6 5½
Total Labour...	14	0½	22 „	11	0	10	6	11 10
Stores—								
Natives' Food ...	1	6	34 „	1	0	1	5	1 7¾
Explosives ...	1	11¼	(4 % inc.)	2	0	2	6	2 6
Fuel ...	1	11¼	31 per cent.	1	4	1	8½	2 1¼
Lighting, tools, lubricants, etc. ...	2	2	41 „	1	3½	0	9¼	0 9¼
Cyanide and zinc ...	—	—	—	—	—	—	—	1 7½
Maintenance & general	2	1	24 „	1	7	1	4¼	1 9¼
Total Stores ...	9	7½	25 „	7	2½	7	9	10 5
Miscellaneous, offices, salaries, etc. ...	1	9	—	1	4½	0	7	0 9
	25	5	23 per cent.	19	7	18	10	23 0

Redemption and Depreciation not included.

Column I. gives cost of mining and milling, June 30, 1890. Column III gives cost of mining and milling, June 30, 1893. Column II. gives percentage of reduction accomplished by improvements in mining and appliances from 1890 to 1893. Column

IV. gives cost in mining and milling, December 31, 1896. Column V. gives cost in mining, milling, and cyaniding, December 31, 1896.

I would call special attention to the following points in these actual costs:—(1) The reduction obtained between 1890 and 1893, 22 per cent. in labour and 25 per cent. in stores. (2) A further reduction in the total (19s. 7d. to 18s. 10d.) from 1893 to 1896, in the face of greatly increased hardness of ore depth of mine. It is noticeable that while by the introduction of machine drills, etc., we reduced the labour by 6d., the stores were increased 6½d. by the increased consumption of coal and dynamite (amounting to 10½d. between them). The food of natives also increasing 6d., consequent on scarcity of mealies (through locusts) and the heavy railway charges from coast and Free State for imported mealies. (3) The low cost to which we have brought administration, which includes mine office, town and London offices, consulting engineer, manager, directors, etc. The reduction on this from 1s. 9d. in 1890 to 7d. in 1896, is equal to 70 per cent. (4) The heavy increase of cost per ton of dynamite in face of all our efforts at economy. These charges are worse in most other mines.

The costs of mining, milling and cyaniding at the Langlaagte Royal Gold Mining Company were as follows:—

	5 months ending Nov. 30th, 1896.		1 month May 1-31, 1896:		Estimated cost, with reasonable reductions in railway rates, price of stores, and cost of kafir labour.
	s. d.	s. d.	s. d.	s. d.	
Labour—					
European	7 6	...	6 7		
Native	6 11	...	6 7		
Total labour ... ..	...	14 5	...	13 2	9 0
Stores—					
Natives' food	1 0	...	1 7½		
Explosives	3 0	...	2 6		
Fuel	3 1½	...	2 9½		
Lighting, lubricants, timber, etc.	1 4	...	1 5½		
Cyanide and zinc	0 10	...	0 8½		
Maintenance and general	2 1	...	1 4		
Total Stores ... ..	...	11 4½	...	10 5	6 6
Water rent, etc.	0 11	0 11	...	0 8½	0 6
Miscellaneous offices, salaries, etc. ... ..	...	1 2	...	1 0	1 0
Total working costs ... ..	...	27 10½	...	25 3½	17 0
Cost of milling and mining	24 6	...	22 1	...	
Cost of cyaniding tailings	3 4½	27 10½	3 2½	25 3½	
Yield of gold per ton ... ..	...	...	...	25s. 2d.	

Column I. gives last five months before closing down. Column II. gives cost for May, 1896, when boys were more plentiful and mill worked nearer full time. During the five months of column I. boys were scarce, and there was a strike at reduction of wages, drills having to be employed, raising costs of white labour, explosives, fuel,

maintenance, and general. Column II.—cost 25s. 3½d.—is somewhat above cost of working with plenty of kaffirs under present circumstances. Column III. gives estimated cost under improved economic conditions of country. That is, with co-operation of Government; reasonable reductions being given in coal, dynamite, railway rates from coast, and assistance in reducing kaffirs' wages by:—(a) Inducing the Transvaal kaffirs to come to the Rand, and enforcing and improving the Pass and Liquor Laws; (b) Reducing cost of coal, dynamite, etc. The mining companies can then make the air drill a real live competitor with kaffir labour. These reforms, which are *not the ultimate extent we hope for*, are reasonable, and will enable the Royal and other mines (of which the Royal is a sample) to re-start crushing at once. The reduction in European labour will be brought about by getting sufficient kaffirs at low wages to supersede drills (air), in stoping and increased output. This mine, promising well in outcrop claims, has by reduction of yield in second and third rows, become classed as a low grade mine: this was not anticipated; and although expected to be average grade, its capitalisation is about the lowest on the Rand, the property account standing in books at £760 per mining claim. The Balmoral stands at £1,230, the Primrose at £2,084 per claim, and the three companies surrounding the Royal, which are considered far from being over-capitalised, stand at £3,200, £5,200, and £5,500 per mining claim respectively. The Royal is equipped in the most approved style, with 140 stamps and all accessories; the mine and equipment stand at £1,480 per stamp, which will compare favourably with other mines on the Rand.

To show what we expected to do, and what has been done, I give the following illustrative estimate, showing reductions estimated:—(1) Reduction possible to the mining companies unaided by the introduction of improved management, machinery and appliances, reducing *amount* of labour and stores necessary in producing and crushing the ton. (2) Reduction possible with the assistance of the Government in reducing *price* of labour and stores.

	Mining and Milling.		Cost per Ton.					
	Labour.		Stores.		Administration.		Total.	
	s.	d.	s.	d.	s.	d.	s.	d.
Cost of a typical mine in 1890	16	0	14	0	2	0	32	0
1. Estimated reduction in amount of labour and stores by improved management, machinery, and appliances	4	0	4	3	1	0	9	3
Reducing cost to	12	0	9	9	1	0	22	9
2. Estimated further reduction from reduced price of labour and stores to be got by economic reforms of country	3	0	4	0	0	0	7	0
Reducing cost to	9	0	5	9	1	0	15	9

Langlaagte Royal mining and milling costs reduced from 32s. in 1891 to 22s. in 1896.

The cost of cyaniding tailings is not included in this estimate, not being commenced in 1890. Since introducing treatment of tailings by cyanide, which at first cost from 8s. to 10s. per ton, the companies have reduced the cost of this process by 5s. per ton and hope to get a further 2s. by improved economic conditions. The companies have thus accomplished a reduction of 14s. 3d. per ton in mining, milling, and cyaniding, and are hoping to be helped to at least another 9s. per ton.

Chairman:

Can you give the present average wage of a white man on the mines?—I cannot give you the average actual wage; on a properly managed mine they vary from £15 to £25.

Is it not possible for you to state the average wage on the mines which you have been connected with?—I cannot from memory. I can send it to you. I may say I agree with the evidence of Mr. Jennings, Mr. Way, and Mr. Fitzpatrick.

I would be very pleased if you would hand them in.

[*Supplied afterwards, according to the Chairman's request.*—In six mines in the Barnato group, taking the New Primrose, Ginsberg, Rietfontein, Roodepoort and New Spes Bona, for the first three months of 1897, and Langlaagte Royal for the five months before it shut down, the average monthly pay was £15,737 to 640 men, equal to £24 11s. 7d. per man per month. This includes managers and staffs].

Mr. de Beer:

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You say amongst your group there are six mines crushing?—Yes.

The nominal capital of which is over a million and a half?—Yes.

For the purpose of developing these it cost another million and a half?—Yes.

The statement made by you is in connection with these six mines?—I have taken the New Primrose and the Langlaagte Royal, one being a paying mine and the other a non-paying mine. The New Primrose is the paying mine.

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The seven non-paying mines have a nominal capital of over two millions?—Yes.

And opening up and installation another two millions?—Yes. That does not include the unequipped properties.

What does opening up and installation mean?—The sinking of shafts and the equipping of them with machinery, and the erection of mill, cyanide works, and the erection of houses, etc., in connection with the mines. In other words, the hard cash we spent before we began to crush.

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Is it to be understood that the development of these mines is in such a way that all of them have a certain quantity of ore on hand?—Every one of them; the least has nine months development ahead of the mill. We have numbers of mines besides these that are not equipped, which have a large amount of development. May I suggest, in regard to over-capitalisation, you should look at these figures. We have sunk over our nominal capital in every one of these mines, the money being found by Barnato Bros. putting it up at a premium.

I see in your expenses there is a reduction since June, 1890, between 12 and 41 per cent.?—Yes, that is to 1893.

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I see in December, 1896, there is an increase again. Can you tell the Commission to what reason do you ascribe the increase?—You will notice the increase is in stores, 6½d. There is a decrease in labour, 6d. We brought labour down from 11s. to 10s. 6d. There is an increase in European labour of 9d., and a reduction in kaffir labour of 1s. 3d. During that period we put in machine drills and put in more European labour.

native

I see in your stores, native food was reduced by 34 per cent. in the three years from 1890 to 1893?—Yes; but the locusts and other plagues raised the cost of mealies. Since then, having to import them from America we have to pay so heavily for bringing them from the coast up here. We pay 8s. at the coast and 22s. here.

explos-

What is the reason of the increase of 4 per cent. in explosives?—It resulted from the same cause, introducing drills instead of kaffir labour and the ore getting much harder, and that is why I ask you to reduce these items and enable us to make the drills real live competitors with the kaffirs, and so enable us to reduce kaffir wages.

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Since we have been obliged to buy dynamite from one man—I don't care whether it is Nobel or anyone else—we could not guarantee the best quality. I myself repeatedly applied to the Government to import other qualities of dynamite. I was refused. The result is, I go and buy 100 cases, I take it home, and kill 100 kaffirs perhaps. I go

back to the man I bought it from, and I say: "Your dynamite is bad. I am obliged to buy it from you even if I kill another 100 kaffirs. I have been taken before the magistrates for manslaughter. I escaped scot free because witnesses for the prosecution proved that I had done all I could, and it was the fault of the dynamite." I had done all I could according to the regulations—the fault lay with the dynamite. A boy was suffocated through the bad fumes. I may say this, I have put a shot in and fired it. A boy has put a drill in it and found a part of it left unexploded, which injured him, and afterwards a third portion was unexploded in the bottom of the same hole. I don't say Transvaal dynamite is worse than any other, but if you are obliged to buy from one man, whether sugar, dynamite, or anything else, he charges his own price and supplies his own quality.

Can you tell me what was the price of the dynamite per case?—It was pretty much what it is now. We were using such a small quantity that we could not buy to advantage, and I believe there was a "ring" then.

But we understood from other witnesses that dynamite No. 1 standard was good?—I think the witnesses that said so only use gelatine. We did away with dynamite as much as possible, and the dynamite factory very readily made special cartridges for us so that we might use gelignite instead of dynamite.

Do you know No. 1 standard of dynamite?—Yes.

Do you know the percentage of nitro-glycerine in it?—No.

You have never analysed it?—No.

Have you used it? And is it the dynamite you complained about being in different qualities?—I do not need to tell you how much there is in it. They take this earth and they impregnate it with as much nitro-glycerine as it can carry.

With regard to the bad dynamite which exploded—from whom did you buy it?—We were obliged to buy it from the concessionaires.

And which was it?—No. 1.

Do you know any other company that is dissatisfied with the dynamite?—Yes. When I was prosecuted I had evidence from nearly all the managers on the Rand. I got workmen and had their opinion, and it was the almost unanimous opinion that it was inferior and irregular—just the biggest danger—in quality. The quality, as far as I hear to-day, is better than it was. But I say we are in continual danger so long as you compel us to buy from one man. We cannot complain of it; we must buy it.

With regard to fuel?—We reduced fuel 31 per cent. from 1890 to 1893, but ^{Fr} during the last three years it has increased on us, not because of increased price, but because of the introduction of labour-saving appliances which needed the consumption of coal, causing the consumption to increase, so that we were between two difficulties. Either we had to continue the expensive kaffir labour or we had to supersede them by machinery, which would use expensive stores. We now say we have reduced as far as we can the *amount* of labour, and the *amount* of stores by the introduction of the best of engineers, workmen, and machinery, and we cannot touch the *price* of these articles. Therefore we ask relief upon the prices.

How are your mines situated?—They are very much separated. They are from St Rietfontein to the Balmoral and Kimberley Roodepoort. ^r

What mines have you got between here and Krugersdorp?—The Royal, Croesus, ⁱ Unified, Aurora, and Kimberley Roodepoort.

Did the Croesus exist in 1890?—It existed as a 20 stamp mill.

What was the price per ton of coal delivered at the Croesus in 1890?—I cannot say, it was not in our hands then.

Or from the Aurora?—I can tell you from the Royal. At the Royal the cost in ^{Co} 1890 was about 23s. or 24s. per ton. ¹
^B

After May, 1896?—We paid up to the time we stopped about 22s. 9d.; in fact, in the summer we could bring it as cheaply by ox-wagon as by rail.

With regard to lighting, tools, etc.?—We have reduced that very largely, as you see given in the case of lighting. Candles, paraffin, etc., we have superseded in a great proportion by electricity, transferring some of that cost to fuel. Then the price of candles and lubricants and other things has been reduced slightly, not because of the reduced rates so much, because we can import it ourselves without fear of the traffic being stopped. I mean merchants used to import large stocks in the summer, and they could charge us any price they liked. Take candles, for instance. The carriage from Durban amounted to about 6s. coming from the border by ox-wagon. The present charge is 6s. 9d. But I gladly say that the convenience of the rail is in being able to buy anywhere we like, and we thus get these supplies at a much lower rate than we did before. They are, of course, a very small proportion of the costs—under 3 per cent.

With regard to cyanide and zinc, you have got nothing to say about that?—No; but we are very thankful for the help the Government has given us in the matter of cyanide. I did not show any reduction in the statement because we were not using it in 1890.

You have heard the evidence of some of the other witnesses?—Yes.

Then you have noticed there is a great difference in the cost of your mines compared with other mines?—I think the costs given previously were average costs. I may say I made up the average cost quite apart from those gentlemen, and came out about the same.

We have never had such a satisfactory statement before us like this. Was the total cost of working 22s.?—In the other estimates?

When the average was taken?—29s. 6d. was given by Mr. Eckstein, and that is the basis of most. I made it 29s.

At present your mine works at 23s.?—I would say yes, but you have to make that 25s. to compare with the 29s. average.

You are still 4s. below the others. How much per cent. would that be?—That would be about 15 per cent. It would not be fair for me to allow you to infer that we manage better than the other mines.

The others can speak for themselves?—This table which is before you is compiled on the Primrose, which has a large thick reef. It would not apply to all the others. Take, for instance, the Ginsberg, which is a much higher grade mine and has a much smaller equipment. We cannot work there at the same cost as at the Primrose.

You have made a note that you gave the average for the six mines?—No, that is for the New Primrose and Langlaagte Royal.

You say the Primrose works under very favourable circumstances?—Yes, it does. Go to columns 4 and 5 of this table. Might I suggest one favourable circumstance in the Primrose—that freight and coal is a good bit less than the mines on the other side. It is not a large item, but it is a real one.

The total cost is about 4s. more when you include cyanide. That 1s 7½d. is for cyanide, or cyanide and zinc?—That is so.

So in order to work and treat, the cyanide will cost you 4s. per ton, What are the returns?—Well, I may say our profit is all in the cyanide. In most of our mills we are making a loss, so far as our milling is concerned. So that had we not at a great cost introduced this cyanide process, or some other process, some of the rich mines would have been shut down.

Is the process a patent?—No, not now.

Has it been a patent?—It had a patent in this country. I may say I for one refused to pay the royalty for years before the matter was settled. I told them, "We are quite willing to pay you a reasonable royalty, because you have done something, but we will not and cannot pay you what you ask." For instance, they came to me when I was on the Primrose. They wanted to take 15,000 tons to treat then, and to give us a proportion of the gold. Then we were to take the works over at cost price. We said no, and we paid them their highest royalty, and out of this 15,000 tons we made a profit of £8,500. They would have given us £2,500.

In the six mines are there any water-rights, or so?—They are not kept separate.

Was water and material increased in cost?—It may be in bringing water from a distance, as we have to do on the Royal, it increases. Would you permit me to call attention to the last line on this page before you turn over. The item is miscellaneous—offices and salaries. You will notice we brought that down for mining and milling, leaving the cyanide out, from 1s. 9d. to 7d., a reduction of 70 per cent. That includes directors' fees, managers' fees, consulting engineers, office expenses in London and Johannesburg, and at the mine, and I don't think you can call it high.

Is this a true extract from the books of the Primrose Gold Mining Company?—Yes. I can give you the actual certified figures, but I may say I have condensed them so as to compare them.

Mr. Schmitz-Dumont :

In the beginning you say you have 400 stamps at work ; is that right?—Yes.

Do you know how many stamps are working in the whole of the mining industry?—About 2,600 I think. I speak from memory.

Is it not 5,500?—Working this month?

No, last year.—I am talking about to-day.

Are there 4,400 working to-day?—No. I think in the Rand and Klerksdorp there are about 3,000 working now.

Last December there were 5,500. Is it not 10 per cent. less to-day?—I think you will find it is under 3,000 stamps to-day.

There were 5,500 last December, according to the statistics?—Last March I think you will find there were 2,850 in Heidelberg, Klerksdorp, and Johannesburg.

[Supplied afterwards.—The number of stamps crushing in March last on the Rand and Heidelberg districts were :—Chamber of Mines, 2,440 ; Association of Mines, 835. Total, 3,275.]

I only want to make a comparison. In the year 1900 you will have about 3,200 stamps?—We expect that.

So you multiply your present number by eight?—We do not multiply our present stamp power by eight. Our present stamp power is 1,140. If you go back to 1896 you will find we were working most of those stamps.

How many stamps had you at work in December, 1896?—I cannot tell you unless you can give me a list.

According to your statement you have 400 at work, and in the other companies 4,000, and in the year 1900 you expect eight times as many stamps working, but for the other companies you only allow two-fold or double?—I can only speak of our own companies, where I know the facts. As to the 9,000, it was an estimate made up by men who can get at the books of most of the companies. I am careful to say it is an estimate.

With regard to the working of the 9,000 stamps, which would signify a great increase in the development of the Goldfields, how are you going to get water to work them?—It would take at least two years to bring the water from the Vaal River to

here. I think you are rather premature in saying that in 1900 there will be that many stamps on the fields. I do not think you will be able to provide water on the Rand for such a quantity of stamps?—Take the Rand Mines dam, for instance, that will supply an enormous number of stamps. It is already made and full, and there are other large dams being made, and we are not going to run our heads into dry years without providing for all contingencies.

r. In place of 70,000 natives, 140,000 would be required if 9,000 stamps were working, would there not. Do you think it will be possible to provide that number of natives?—I see no difficulty in doing so if the Government give us real solid assistance in compelling or inducing the great native population of the Transvaal to work. I will give you figures, and you can certify them yourselves. I believe you will find, in the 3-mile radius, that out of about 30,000 kaffirs there are about 750 from the Transvaal. I say if we cannot make our 400,000 kaffirs work better than that, then I think we ought to be ashamed of ourselves.

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roup About the dividends. You have six companies working. Which of them have paid dividends?—I have not gone into that at all, but I believe all of them have.

I have a compilation of all dividend-paying mines. In the year 1896 none of your companies appear?—I do not know as to that. But I may say the Primrose has just paid up its 20 per cent. dividend, part, in fact all, of which belongs to 1896.

Yes, but it wasn't paid in 1896. What dividends have your companies paid in 1896?—I cannot tell. I am an engineer and only take figures that I can prove. I can go into that.

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c and I will ask two technical questions. About the dynamite—which is the worse, the dynamite or the blasting gelatine?—We find there are few complaints as to blasting gelatine.

Was the accident at the Langlaagte Royal caused by blasting gelatine or dynamite?—It was dynamite.

About the fuel—you said that you made great reduction in it. Did you ever make a careful investigation of the matter with respect to the different machines?—Yes.

What is your opinion? I have made special enquiries of a boiler inspector, and would you be surprised to hear that, with the same machinery, in one mine the cost was £50 per annum, while in another it was £200?—I should not be surprised. But they must be very poor and badly managed mines.

And you say you have made great reductions. Formerly there must have been a considerable waste in your companies?—Undoubtedly. We had not the means we have now. We had, as you know, the old locomotive boilers.

At present great saving could be effected in most mines in regard to fuel?—I daresay, and if you tell me where, in any of our mines, we burn too much, it will help us very much.

Mr. Brakhan:

What tonnage did you crush in the last six months of 1896, and what was the average per ton?—We crushed 133,000 tons at the Primrose.

That is about 22,000 a month?—A little over.

What was the quantity in the six months ending June, 1893?—66,400. That is 11,000 a month—half the quantity.

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nines. You mentioned that between 1893 and 1896 you introduced a good many labour-saving machines. Would you not consider, taking the tonnage crushed during the period under consideration, that the reduction in cost, as stated here, is a very small one?—It would be if the circumstances were the same. Put us, in 1893, into the

same ore that we are now working, and you would have probably to add 6s. per ton to the cost of 1893. In other words, we have reduced the cost in the face of greatly increased hardness of quartz and deeper mines. When I left the Primrose one blacksmith sharpened drills for five times more tonnage than was done at the Royal when I went there. In other words, after sinking a three-foot hole, we used five drills to one at the Primrose. The one was in the soft ground, the other was in the blue.

What difference do you estimate there has been between the mining of the free milling ore and the mining of the present blue ore?—I said I thought about 6s.; but I may say this, that a kaffir used to drill two, and sometimes three holes, where he now drills one.

And to that, and the dynamite, and other causes, you ascribe a difference of about 6s. per ton?—It's a rough estimate.

You also said that the cost of officers' salaries was in 1893 1s. 4½d., and now 7d., making a saving of about 60 per cent.?—Seventy per cent.

Bearing in mind the tonnage crushed, the percentage gained, or rather saved, would not appear to be so high, because these charges do not increase in proportion to the tonnage?—No. May I say, in connection with that, much has been said about the salaries paid to officials. When one official—a consulting engineer for instance—looks after, say, 12 large companies, you cannot expect him to take the same salary as if he was sitting down in one. So that, supposing you double his salary, you will reduce the cost per ton very largely. I want this point brought up. There are some of us here because we are obliged to be here for our health. I could get as big a salary at Home to-day as I do here, and there living is a third of what it is here; so I think that managers and engineers are not paid, nor the officials of the Government either, as much as they ought to be.

You said that mealies at the coast cost 8s., while here they cost 22s. Isn't that a slight mistake—14s. for railage and duty?—We imported ourselves. There was one shipment that cost us 23s., and which cost 10s. in Durban. We can now buy it for 8s. in Durban, and the price is pretty much about 22s. here.

Would it surprise you to hear that our figures give the price at 9s. 7d. in Durban and 20s. here?—That is my reckoning. It would not surprise me at all if you did.

With regard to the charges of the New Primrose for 1893 and 1896, does that include any charge for mine development and redemption?—No. During the last period named we put on about 2s. for redemption, so that our cost for the six months ending 1896, including redemption, was 25s. roughly.

Mine development is of course part of the working cost?—This 2s. has nothing to do with mine development.

Let us be clear. The cost is 23s., including any work for drives, winzes, etc.?—It includes all the work. In the Primrose for instance, where I increased the development from 40,000 to 200,000 tons in sight, it was all charged against mine cost during the period of the first three years mining here.

And is it still so?—No, it is done in this way. If they develop 30,000 tons and work 20,000 tons they give the cost credit for something, or if they reverse that, develop 20,000 tons and work 30,000 tons, they charge 10,000 tons against the costs; of course that is included in the 23s.

Mr. Smit.

What do you mean by improved state of economy?—I mean the economics of the country.

Which way?—The last table explains that. We have reduced the costs you see in No. 1 by 9s. 3d. by economising the *amount* of labour and stores. We now hope

that you will help us to reduce a further 7s. in mining and milling by reducing the *price* of labour and stores. In other words, we see that you must reduce your charges so that our coal and other stores may be reduced in price. Taking the coal, for instance, if the Raad will permit the railway company to lay the south railway they ask for, they will be able to give us all sidings. That will save us 1s. 3d. for bags, 8d. for bagging and handling, and 3s. for transport, making a very substantial saving, without a penny being taken out of the railway company's pocket. In addition to that, instead of starting at 3d. per ton for the first ten miles, I will be reasonable in saying they will start at 2d., which will give us a further reduction of 3s., so, roughly speaking, it will give us a saving from 6s. to 7s. per ton in coal. I say the economics of the country are not right if the railway can charge so much above the actual costs. In the Old Country when we have been in the same position we could lay down a railway ourselves. I remember, in the case of a railway company charging us their maximum rates, we surveyed a connection to another line necessitating a two mile tunnel, and then went to the railway company and said "we will make this and send our traffic past your line," and they had to reduce their rates. We cannot do that here.

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is- What do you mean by the "improved conditions of the country"?—I mean the heavy rates for everything imported—coal, dynamite, etc. I do not go into high politics at all, it is simply a question of hard cash with me—a question of political economy.

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t of You say there are certain things on which you want the Government to meet you, and we want you to point out these things.—All I would say is that, speaking from experience, I can promise the railway and the Government greatly increased revenue if you grant these abatements.

Co-operation means that something is to be done from both sides—can the Government expect that co-operation from your side?—Gladly; we have already done a good bit on our side; we have reduced our costs 14s. 3d., and we are asking you to help us to reduce them another 9s.

na- Are the accidents from dynamite of recent date?—Accidents are quite frequent even now. I am anxious to say I have no objection to Transvaal dynamite. I, as a resident of the Transvaal, have made the Transvaal my home. I should buy Transvaal dynamite in preference to any other, all things being equal. If you turned around, and said "you have got to buy from England" I would kick against it just the same, because England would sell just as bad stuff as the Transvaal.

Was dynamite cheaper formerly than now?—I think practically it is about the same.

l. Is the price of coal higher now, or lower?—It is lower, and we are thankful to the Government for it. The reduction in the coal rates helped them very little. If they got the coal for 2d. for first ten miles, they would get a large supply from Middelburg.

s rail- Are the railway tariffs of such a nature, that, notwithstanding you buy cheaper at the Ports, still articles are dearer here than formerly?—No; they are cheaper because of competition. May I suggest a figure to you, and which will help you to see how we are placed? We imported two crushers from Chicago; the rate from Chicago to New York, which is considered very high in America, is £37 5s. 10d. for a distance of 1,000 miles, and from Vereeniging here it was £39 6s.—more for 50 miles than it cost for 1,000. I don't ask you to run it at the same cost, but it shows you what America is doing for the stranger in her State—not her own children—and we ask you to do for your children to-day as well as they do for strangers.

You say you can get the same salary there and live at a third of what it costs you in the Transvaal; does not that show that our railway rates should be somewhat higher?—I acknowledge that your rates ought to be higher, but when you charge more for 50 miles than they do for a 1,000 then you come to this: That we pay you 10d. per ton per mile, while we pay the Cape and Natal 2½d. The difference is too great, although I think you have a right to more than they get.

You know that Vereeniging is exceptionally high for certain reasons?—I say you have a right to more. But the point is that if you reduced the rate you would make the Cape reduce it also. They are charging us too much. For instance they charged us £152 on the shipment I have referred to for 650 miles, while in America the charge was £37 for 1,000 miles. Both the Cape and Natal are sinners. You have got the key, and you can go and tell them that they must reduce the rate.

Supposing they say they won't?—You say they have got to do it, and we will back you up.

We must get the goods along their railway?—You simply tell us which Government won't do it, and we will simply say to them that we won't order a single ton of goods into their docks, whether it be Delagoa Bay, Capetown, or Durban. You can rely on co-operation from us.

What do you mean by a possible reduction by improved management—which management do you mean?—Mine management.

Are there any faults you can lay your hands on which can be improved?—This estimate is made of 1890. It is what I call an ideal or illustrative estimate. We have accomplished that saving of 9s. 3d. by the means shown. The second estimate of reduction is what we want you to help us to do, to make it 20s. per ton, including salaries. The estimate I have always had fixed before me of 20s. is what we must bring our costs down to. We have done what we can to the extent of 14s. towards that, and we ask you to help us towards getting a further 9s.

In what way would you suggest that we can ensure a good supply of kaffir labour?—That is rather a difficult question for an engineer to answer. We have great difficulties in getting Transvaal kaffirs. As an instance, I sent one man up to get a large number of boys, and he wired, saying he had got them ready, but that the official would not allow them to come out without payment of 10s. per head. My man wired: "Shall I pay it?" I replied: "No." And then he wired to say that a proclamation was at once put out, saying that owing to smallpox the boys would not be allowed to leave the district. That is a negative way in which you can help us. The positive way is to put on hut tax. The Dutch, who are more accustomed to working the kaffirs than anyone else, are well able to devise means to make them work.

Where there is no complaint how can the Government interfere. It is just as difficult for the Government as it is for you?—I quite see that.

Chairman.

Have you been obliged lately to discharge white miners?—I am not now manager. We have been for the last six months on some of our mines reducing our staff. In fact, in every possible way we are reducing costs. I myself am to-day without a salary from the company, and I may say, further, you think our expenses are charged to the companies. My salary has never been charged to the companies as consulting engineer. Messrs. Barnato Brothers have paid that. We are now touching our own pockets, giving valuable time without remuneration. The directors are drawing hardly any fees. I am on about seven or eight companies, and I have got a small fee from one company this year—about £8—for directors' fees. I give that as a sample.