

What do you think of the comparison here of the cost of the outcrop mine and the deep level?—I have stated in my testimony that I anticipated an increased cost of 4s. per ton.

How do you arrive at that 4s.?—In the Tamarack there is about 60 per cent. difference between the cost of the deep level and outcrop—5s. 2d. and 9s.—the actual difference in cost is a direct factor of the extra depth in so far as the cost of hoisting is concerned. It does not cost any more to mine underground at a depth of 3,000 feet; the actual cost of the amount of dynamite used, the number of men employed per ton of rock broken, the number of carmen and trammers employed will be the same. Therefore, it is a fair assumption that the actual difference in cost will approximate with what it is found to be in Michigan.

Don't you think in the deep level your ventilators, timber, etc., will cost you much more than in the outcrop mine?—No.

Mr. Pierce.

In giving the comparison between the railway rates, dynamite charges, etc., do you suggest that a solution of the present difficulties would be found in the expropriation of the railways and the abolition of the dynamite monopoly?—I do.

You think if these two items were taken in hand and relief granted it would go a long way to remove all difficulties?—I think it would be a very long step in the right direction.

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Mr. Johns
evidence.

MR. JOHN HENRY JOHNS, general manager of the Ferreira company, and consulting engineer of the Worcester company, was then sworn in, and stated that he had resided in Johannesburg for a little over eight years. He had been with the Ferreira company for eight years, and previous to that he was manager of gold mines in India for seven years, and was engaged for 12 years in the tin and copper mines of Cornwall.

Witness made the following statement:—

I am general manager of the Ferreira Gold Mining Company, Limited, consulting engineer to the Worcester Gold Mining Company, Limited, and chairman of the Association of Mine Managers. I have managed the Ferreira mine over eight years, was manager of gold mines in India seven years, and prior to that was engaged 12 years in the tin and copper mines of Cornwall. I hold the highest certificates granted by the Royal School of Mines, London, in mining and metallurgy. I agree with the evidence already given before this Commission, that what is chiefly needed by the mining industry to prevent the forced closing down of mines on which an immense amount of money has already been expended, and to bring prosperity to the industry and to the State, is a reduction of the abnormally high cost of dynamite, of railway rates, and of native labour; better administration of the Pass Law and the Liquor Law, and an earnest endeavour on the part of the Government to stamp out the nefarious illicit traffic in gold. The excessive cost of dynamite on these fields is one of the heaviest burdens the mining industry has to bear, while at the same time it adds comparatively little to the revenue of the State. The Ferreira company uses blasting gelatine at a cost of £5 7s. 6d. per case, plus 2s. for transport, or £5 9s. 6d. per case delivered. Last year this item cost the company £15,919 19s. 5d., or 8.08 per cent. of the actual working expenses. If the cost of this explosive were reduced by 50s. per case, the Ferreira company would be saved the expenditure of £7,302 per annum. The greater the reduction effected in cost of dynamite and coal, the greater will be the quantity consumed, not only on account

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of cost of the additional mines that would be worked in this State, but because a reduction
 of cost of dynamite would admit of a more extended use of air drills in actual mining work, which would
 necessitate increased consumption of both dynamite and coal. In mining with air
 drills, about double the quantity of dynamite is used per ton, extra coal is required for
 compressing air, and less kaffir labour needed. The average cost of blasting gelatine
 per foot driven by hand labour in developing the reef in the Ferreira mine is 7s. 59d.

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In driving 3,746 ft. by air drills, the average cost of gelatine per foot was	1	1	34
or about three times the quantity required by hand labour.			
In stoping 717 square fathoms of reef by hand labour, the average cost of gelatine per square fathom was	0	17	18
In stoping 899 square fathoms of reef by air drills, the average cost of gelatine per square fathom was	1	9	86
or 1.63 times the quantity used by hand labour.			

The cost of blasting gelatine per ton mined by the Ferreira company in 1896
 was 1s. 9.35d., or, calculated on the tonnage milled, 2s. 7.63d. With regard to the
 high railway rates on coal and other materials, which so adversely affect the mining
 industry in this State, I will avoid, as far as possible, going over ground already
 traversed by former witnesses, and merely state some of the rates charged by the
 Madras Railway Company in India. The distance from Madras to the Colar Gold
 Fields in Mysore is about 170 miles, and the difference in elevation about 3,000 feet.
 Coal is carried to the gold fields at the rate of eight pies per long ton per mile, equal
 to 0.54d. per short ton per mile. Firewood is carried at ½d. per ton per mile, and
 machinery at 1d. per ton per mile, while for large quantities lower rates could be
 arranged. If coal were carried over the Netherlands Railway at the rate of 1d per
 ton per mile, the saving to the Ferreira and Worcester companies would be £5,706
 per annum on the basis of last year's consumption, and if provision were made for
 delivering coal in bulk without bagging, a further 2s. 6d. per ton could be saved,
 which would reduce the cost of coal delivered to those mines to 13s. 5d. per ton. I
 agree with the statements made by Mr. Goldmann and others in connection with
 native labour. A native in the employ of a mining company is well fed, and the wage
 he is paid is almost as much as that of a white labourer in Europe, who has to feed,
 clothe, and house himself and family. The great difficulty experienced in reducing
 the native wage, and keeping it down, is the frequent scarcity of native labourers and
 the high cost of bringing them to the mines. I am of opinion that the Government
 could greatly assist the mining industry in reducing the native wages to a normal
 standard, if it could find means to induce the natives in the North to work in the
 mines, and would see that the Native Commissioners should not charge mining com-
 panies, or their accredited agents, for natives procured from their "districts," by
 reducing the railway tariff for bringing natives to the mines to a minimum, and by
 doing all in their power to assist in bringing natives to the mines. A constant and
 ample supply of native labourers is necessary to fix and adhere to a low standard of
 native wages. Frequent reductions of pay tend to impair the quality of available
 native labour—a matter of no small importance to the mines. In affirming Mr. Gold-
 mann's statements in relation to the Pass Law, I would mention that I was a member
 of the deputation that waited upon the Government in connection with the draft law
 before it was submitted to the Volksraad. After explaining to the Government the
 advantage of preventing the desertion of natives from the mines, the deputation stated
 that they did not propose to ask the Government to provide funds from its revenue
 for the administration of the Concept Law, but proposed that an extra tax of 1s. p

head per month be levied on the natives for that purpose, and thought that the sum so raised would be required for its efficient administration, and had inserted a clause in the draft Concept Law, providing for the expenditure of the whole of the amount, if found necessary. To this the Government expressed their approval, but the clause referred to does not appear in the Pass Law, and I understand that at present little more than one-sixth of the revenue derived from the extra 1s. tax is expended in the administration of this law. The Pass Law, if efficiently administered, would save a large sum of money annually to the mining companies now lost through desertions, as at present it not only affords us no protection against desertion, but actually encourages it. As an instance, a native found without a pass in the Johannesburg district is usually fined 60s., while in the Boksburg district the fine for a similar offence is usually 20s., and has been as low as 3d. If I get a fresh supply of natives from the East Coast, at a cost of 60s. per head, of which each native agrees to refund 55s., they find out within a few days that by deserting to the Boksburg district, and submitting to a fine of 20s. they save 35s., consequently many desert, and my company loses the money advanced to bring them to the mine. The following returns from seven companies, sent in to the Association of Mine Managers, show the number of deserters from each company from the date of the Pass Law coming into operation to the end of March last:—

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	Deserters.	
City and Suburban G. M. Co., Ltd.	1,323	Desertio turns
Worcester Exploration and G. M. Co., Ltd.	223	
Minerva G. M. Co., Ltd.	116	
New Heriot G. M. Co., Ltd.... ..	703	
French Rand G. M. Co., Ltd.	300	
Crown Reef G. M. Co., Ltd.... ..	1,030	
Ferreira G. M. Co., Ltd.	1,480	
Total	5,175	

These desertions would probably represent a loss to the seven companies of from £5,000 to £7,000, as most of the desertions occur shortly after the natives arrive at the mines.

From the beginning of 1896 to the end of last month, the Ferreira company expended, in bringing natives to the mine, £6,648 9s., of which £3,026 17s. 6d. have been refunded, leaving a balance of £3,621 11s. 6d. not recovered, of which I estimate nearly £2,000 is lost through desertions.

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Of the 1,480 deserters from the Ferreira mine mentioned above, 19 only were recovered; 12 of these were returned by compound managers of other companies, and seven were found by our private police in another company's compound, and were recovered through the aid of the Pass Law officials. As administered, the Pass Law also bears heavily upon mining companies situated at a distance from the pass offices. Take the case of the Randfontein companies, who have to send their natives a distance of about seven miles to Krugersdorp to get district passes and badges before they can allow them to work; and frequently, I am informed, a man with a gang of natives has to return without passes or badges, owing to pressure of work in the pass office, and the journey has to be made a second time. This causes some of the natives to desert without having worked a day for the company, and the cash advanced to bring them to the mine is lost. The Association of Mine Managers, has, on several occasions, complained to the chief pass official in Johannesburg and to the Mining Commissioner, through whose office, I understand, communications from the pass officials have to pass to reach the Minister of Mines. On the 10th September last, the Association of Mine

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Managers was represented on the deputation that went to Pretoria, to lay the grievances of the industry, relative to this law, before the Minister of Mines and the Government. Not being able to meet the Government that day, and the Minister of Mines being absent, the deputation had an interview with the Assistant Minister of Mines, Mr. Liebenberg, and discussed the matter with him. About the 15th September last, the Chamber of Mines, Association of Mines and the Association of Mine Managers, sent in a joint petition to the Government, pointing out the chief defects in the administration of the Pass Law, praying for certain alterations in its administration, and for an increase in the fines imposed on natives found in the labour districts without pass or badge. So far as I am aware, nothing was granted beyond the increased fine, and that, which under good administration would have been of great assistance to the industry, now frequently operates against it, in encouraging the desertion of natives as explained above. On 11th December last, the Assistant Minister of Mines, Mr. Liebenberg, came over to Johannesburg to discuss the working of the Pass Law with a committee of the Association of Mine Managers, with the result that another petition to the Government, praying for more efficient administration of this law, was being drafted by the managers, when we heard of the appointment of this Commission, and the Association decided to wait and lay its grievances before you, in the hope that you will see fit to recommend to the Government the advisability of granting the wishes of the industry as expressed in the joint petition referred to above, and to see that the chief aim of the administration of the law shall be the prevention of desertions, as intended by those who framed it. The inefficient administration of the Liquor Law increases the cost of native labour on the mines, because we have to feed and keep a great many natives that would be unnecessary if they were unable to procure liquor, and frequently natives are rendered unfit for work through the effects of liquor shortly after they go into the mines, and are unable to do anything approaching their due amount of work.

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The alterations in the Liquor Law, prohibiting the sale of liquor to natives, came into force on the 1st of January last, and during the month of January comparatively few natives were off work, and but few cases of drunkenness were observable among them, but from the end of January the sale of liquor to natives has been on the increase. During the month of December last, the average number of the Ferreira company's native employees off work, chiefly through drunkenness, was 338. In January, when the alterations in the Liquor Law came into force, the number fell to 126. In February the number increased to 126, and in April the average number off work was 339, so that, as far as the Ferreira company is concerned, we have as much drunkenness among our natives now as prior to the amendment of the law prohibiting the sale of liquor to natives. The question of reducing the wages of white miners in these fields is one that must be approached with a great amount of caution. Our miners are not, for the most part, ordinary labourers, but men who have had many years' experience of mining work, the majority of them having gained experience in various countries. These men have mostly been trained to mining work almost from childhood, and cannot be replaced by men of little or no experience. With the mine we endeavour to keep in our mines, it is not a question of drilling a hole and blasting it, but of supervising the work done by the natives; and the miner who can direct holes so as to break the greatest quantity of reef with the least expenditure of explosives, is the least expensive man we can employ. To a layman it would have seem possible that there could be 30 per cent. difference in the amount of work done by one miner of long experience with a gang of natives, more than by another of equally long experience working as many natives under precisely similar conditions, yet this is often the case, as the Ferreira Company's books will testify.

The conditions prevailing here differ from those of many other countries; the brute force required in mining we endeavour to get from the natives, while we aim to get intelligence and energy in our white miners, and if we have to pay a little more for it, it is, nevertheless, the cheapest labour we can employ. In 1890, we paid £10 per foot for sinking one of the Ferreira shafts, then 200 ft. deep, while to-day we pay £5 5s. per foot for sinking the same shaft nearly 1,600 ft. deep, which shows the difference in the class of labour we employ to-day, and that we had available in 1890. A reduction of 47½ per cent. in the cost of shaft sinking is comparatively an unimportant item to a producing company—but a matter of vital importance to a deep level company, whose work consists chiefly of shaft-sinking, and where speed is the main object until the reefs are reached and the mine developed sufficiently to supply a stamp mill. The most skilled miners obtainable are requisite for this work, and the extra wages they may make on either the contract or the bonus system, would be more than compensated by the standing charges of the company if the exploratory work be conducted slowly. In my opinion the standard wage paid to the white miners on these fields to-day will not admit of a reduction until the cost of living, house rent, etc., be considerably reduced. The acknowledged standard wage of a white labourer all the world over is the amount a man can live upon with a wife and family, and I think but few miners can do that on these fields on £4 10s. per week. The most skilled miners can always earn more than an ordinary mine labourer if working on contract; and, after nearly sixteen years' experience in managing gold mines, I am of the opinion that the contract system for our mines is the best for securing the most efficient white labour, and keeping the mining expenses low. A more suicidal policy could not be adopted at the present juncture than that of attempting to reduce white wages, after aiming for years to secure the most efficient labour, which, although more highly paid, is the least expensive we can employ. In 1887 an attempt was made, on the Indian gold fields, to reduce working expenses by importing cheap labour, and a considerable number of Italian mine labourers were brought out at about half the pay of the English miners employed. The attempt at reduction proved a failure, because, as in this State, the miners were required to supervise native labour, and it was found that intelligence and energy were required, and proved the cheapest at double the price. Within 18 months the low wage men had practically disappeared from the gold fields. If we were to reduce white miners' wages under present conditions, we would drive the best miners away from these fields, because skilled miners are in demand in any mining country, and they know it, while we should be taking a step that would land us nearer the working costs of 1890 than of the reduction we aim at. White labour constitutes a very important item of expenditure on our mines, and if through a reduction of railway rates, duties on food stuffs, etc., cost of living becomes sufficiently reduced to enable our white employees to settle here with their families, much of the money now being sent to other countries would be spent here. Some time ago I was informed, on reliable authority, that £10,000 per month was being sent from these mines into one mining district in England, to keep the wives and families of our miners. The question naturally arises, how much of the money thus sent out of the State could be kept here by a liberal policy of the Government, and to what extent would it affect the prosperity of the State? It has been suggested that if the Government assist the mining industry by reducing railway rates, cost of dynamite, the leading members of the industry must also do something towards reducing expenses. I would point out that the labours of the Chamber of Mines, Association of Mine Managers, and the Chemical and Metallurgical Society, have all along been directed to that end. As an instance of the advance made by the mining industry during the past few years, the Ferreira Company's working expenses

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tion of per ton mined in 1893 were 15.42 per cent. less than in 1892; in 1894, 15.82 per cent. less than in 1893; in 1895, 20.62 per cent. less than in 1894; and in 1896, 4.43 per cent. less than in 1895—making a total reduction in 1896 on the expenses per ton in 1892 of 45.99 per cent. The reduction made is chiefly due to:—

- (a.) Improved quality of labour.
- (b.) Sorting the ore as it comes from the mine, by which means an average of 35 per cent. of the rock mined since March, 1893, has been picked out and discarded as valueless, thereby increasing the value of the ore milled by an average of 56.19 per cent., saving the cost of transporting, milling, concentrating, and cyaniding 160,000 tons of waste rock, and increasing the value of the output by over £600,000.
- (c.) Expenditure of large sums of money for equipping the mine, with the latest and most improved machinery.
- (d.) Improvements in the methods of treating tailings by cyanide, whereby the cost of treating has been reduced from 11s. 1.32d. (exclusive of royalty on the process) in December, 1891, to 2s. 6.15d. in December, 1896.

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These improvements in the working of our mines are due to the combined efforts of those on whom the responsibilities of the mining industry have devolved, and should lead this Commission to see that those men have not been idle, that they do not now come to you and ask that the Government should make the first move in bringing about a reduction in working expenditure to enable the majority of mines on the Rand to continue operations, but having done their best in the matter, they feel justified in asking that the Government should do something in fulfilling its obligations to the industry, which is the mainstay of the State, and on which its prosperity chiefly depends.

Chairman.

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You stated in your evidence that the Pass Law, instead of assisting the industry, assisted the kaffirs to run away?—Yes, as at present administered. As I pointed out, if we pay 60s. per head to bring boys here, and they agree to refund us 55s., they go to Boksburg and pay a fine of 20s. per head, and save 35s. per head.

But a kaffir does not get anything out of that? He only owes 55s., he does not make a direct cash profit, he only gets rid of a debt.—He gets rid of a debt, and we incur a loss. It costs us 60s. to bring the boy, and we reckon that we advance him 55s., which he agrees to repay, but by leaving this district and going to the Boksburg district he gets rid of that liability by paying 20s.; so that after paying 60s. we get no labour out of the boy.

But the fine inflicted on the kaffir is only because he has no pass. But that does not do away with the fact that the boy can be brought back to the place he deserted from.—Yes, but if the Pass Law were properly administered it would prevent desertion.

That is the intention of the Law.—Yes, we don't complain of the Law, we complain of the administration.

The question is this. Suppose your kaffir runs away and is caught at Boksburg by the police, without a pass, the officials there can only punish him for being without a pass. But who is the person to give information to the officials there whose negligence this is they have caught without a pass?—The fact that the officials do not give information shows plainly that the administration is faulty.

If they catch a nigger at Boksburg without a pass they know he is a deserter and fine him, but how are the police to know whose nigger he is?—We give no

to the pass officials in our district when our natives desert. We hand to the pass officials the district passes of the deserters, which give the general description of each native, and the number on the badge worn by him. These particulars should be sent to the pass officials of the other districts. The Pass Law, in its operation, is divided into three districts. If I manage a mine on the border of one district, and my kaffirs desert and go to the adjoining mine in the other district, the pass officials in that district will not help me to recover my boys. If the Pass Law in these fields was in the hands of one administrator he would be able to regulate matters in the three districts.

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Do I understand that there is a separate chief of the Pass Department for each district?—There is one for each of the three districts.

That is one for Johannesburg, one for Boksburg, and one for Krugersdorp?—Yes. One fault that we have to find with the administration of this law is that the fines are not in proportion in the different districts, and that tends more than anything else towards desertion. In our petition to the Government we asked for a Special Judicial Commissioner for the three districts, who would regulate the fines so that they should not be more in favour of one district than another.

The fines are all the same, from £1 to £3, and it is in the discretion of the different judicial authorities to impose what fine they think fit?—If we had one Special Judicial Commissioner for the three districts he would impose the same fine for the same offence.

One of the officials met me and pointed out that when he fined the boys heavily it often happened that they could not pay the fines and had to go to prison. The tronk became full in consequence. These boys were never fetched, so that they could return to the mines, but had to remain in the tronk until their time was served, and then when they came out they had to obtain a working pass. For that reason the official imposed lighter fines, so that they could return to the mines.—Yes, that is the fault of bad administration of the Pass Law. If there were an efficient detective staff, who did their duty and looked up deserters, there would be no necessity to put the boys in prison. There is more than enough money provided to properly carry out the Pass Law, but the money is lying idle. If it were expended the law could be carried out.

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cials.

Then, I understand from you, the law is a good one?—Yes, I think it is. I do not complain of the law. The law, in itself, is a good one.

You think that more detectives should be appointed?—Yes, and I think that if the Government appointed one able administrator to carry out the law in connection with a general committee appointed from men who understand the requirements of the mines, I think the law could be successfully carried out, and would be a blessing to the community.

Mr. de Beer.

How do you arrive at your figures, when you say that you pay £3 per boy to be delivered here?—I have not the figures by me, but I understand they have already been placed before the Commission. I have paid as much as 70s. to get boys here, the highest figure paid for bringing natives from the East Coast being 57s. 6d. The East Coast natives make the best mine boys, as they stay longer, and get to do better work, and it is the better quality of labour that pays us best.

Cost of
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You say that the Native Commissioners charge for the natives in their districts. From which direction do these natives come which cost 60s.?—From the East Coast.

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The boys the Ferreira Company have had to pay for came from the north of the Transvaal.

How much per head does the Native Commissioner charge?—Well, I will tell you what I know about it. Men were sent up to get natives, and I communicated with them. They informed me that they had to pay 10s. per head for every boy they got from the Native Commissioners. At any rate, the company had to pay that amount. I believe my agents, especially one I sent up as a test, but I cannot prove that it is the case. I only tell you that the company had to pay the money for every boy we got down.

Personally, you don't know?—No, I could not swear it is the case.

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of explos- About explosives. Is it not too much to propose a reduction of 50s. per case?—I was even then allowing the Government twice as much as they get now.

How do you bring it out you want to reduce the price of blasting gelatine by 50s.?—I said that if it were reduced by 50s. we should save that much money.

But you proposed it as a feasible thing?—Yes.

What is the cost price here?—£5 7s. 6d.

What can it be landed for here?—I cannot give you the exact figures, but it has already been put before the Commission.

But no one has even yet proposed a reduction of 50s. per case?—Well, I cannot give you the exact cost of manufacturing it; still, judging from other countries and the price they pay, I think it could be delivered to us for that price, and a good profit made.

thefts. Can you suggest any remedy against illicit gold buying?—Yes.

What percentage of amalgam is stolen, do you think?—That I could not say.

Can you suggest a remedy?—Well, I think an efficient detective department would greatly reduce the amount stolen.

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rking costs. In your statement you say that the working costs showed a reduction of 46 per cent. between 1892 and 1896. I must take it that the industry is working under far more favourable conditions. How do you account for the depression with the improvements for working under better conditions?—In 1892 there were not so many low-grade mines at work, and only the richer mines could pay at the high cost of working at that time.

ing. Is sorting in general use now?—It is becoming general.

That also improves the position 20 per cent. or 30 per cent.?—No. I think the percentage sorted out by dividend-paying companies was given by Mr. Jennings yesterday as 6 per cent., whereas we have sorted out an average of 35 per cent. since 1892. I was the first to start systematic sorting on the fields, and have probably worked at it closer than they have done in any of the other mines.

Mr. Smit.

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tives.

You have got no other proof that the native commissioners take payment for boys except the statements of agents?—No, but many agents have been sent up to the various mining companies, and have made similar statements.

They never mentioned the names of those commissioners to you?—Not that I am aware of. I don't remember their doing so. Many other managers have told me they also have had to pay.

It is stated by the companies that money is spent in that way, but don't require a receipt or some proof that the money is expended, for it is possible that money may remain hanging somewhere on the road?—It is possible, but not probable. Many managers, I understand, have sent up special agents, and these agents come back with the information that it was necessary to pay this money.