New Zealand's 1896 Mining Boom

By BRIAN R. HILL

In 1896 New Zealand experienced an unprecedented gold mining investment boom. During that year the number of British mining companies operating in New Zealand multiplied 16 times from ten at the beginning of the year to more than 160 at year's end. This influx of overseas capital caused a domestic mining boom of a magnitude that has never been experienced there since.[1] Values of gold mining properties skyrocketed for a brief period; employment in the industry lifted 50 per cent; and the output of gold eventually soared (see Appendix 1). Gold exports did dip temporarily after 1896 while treatment plants on mines acquired by the overseas companies were modernised and expanded in capacity. Ore production was also curtailed while the mines were focused on development work to increase ore reserves to the level required to allow sustainable production at substantially increased rates. The boom heralded the end of New Zealand's long depression.[2]

Overseas capital

The 1896 New Zealand mining boom was a sideshow to the 1890s gold mining investment boom on the London Stock Exchange. The early 1890s was a period of depression world-wide with substantial price deflation. This was a propitious time for gold mining, as the fixed monetary price of gold under the prevailing Gold Standard led to a decline in the general level of prices and this increased the value or real price of gold. Subsequently the gold mining industry benefited in addition to realizing a reduction of its input costs.[3] However, what spurred the share market investment boom was a combination of the technological breakthroughs which considerably enhanced prospects on the Rand and the discovery of rich gold mines in Western Australia. The successful introduction of the recently discovered cyanidation method allowed the profitable treatment of unoxidised pyritic gold ores that had previously been sub-economic,[4] and the successful establishment of the deep level mines ensured the profitable longevity of the Rand.[5] These momentous developments were followed by the spectacular Kalgoorlie gold discoveries and the development of its Golden Mile, setting the stage in London for a great gold mining share market boom.[6] From 1894 more than 700 companies were floated in London to acquire mines in Western Australia.[7]

Because of the generally poor record and lacklustre outlook of most of its gold mines, New Zealand was initially overlooked in the rush for properties in this gold mining investment boom.[8] However, London interest was sparked when the highly regarded banking firm N.M. Rothschild and Son, promoted the formation of Consolidated Gold Fields of New Zealand Ltd through their Exploration Company, with David Ziman at the helm of most mines at Reefton, on New Zealand's second biggest gold field.[9] The announcement in January 1896 of this successful flotation triggered intense interest in New Zealand gold mines, and galvanized into action other hopeful mining promoters from London and Johannesburg who rushed to New Zealand seeking promotional opportunities.

Within less than a month of the announcement of Ziman's deal with the Rothschilds, a new financial newspaper carrying coverage of New Zealand gold mining news was launched in London, with the first issue appearing in February 1896. A monthly 'journal of mining and finance' selling for 6d a copy, the *New Zealand Goldfields Gazette* was not only an effect of the investment boom but was also a cause, as it contributed to feeding the investment excitement in London, and helped accentuate the share market boom in gold companies floated with New Zealand prospects.[10]

The influx of capital seeking mining investment opportunities in New Zealand in 1896 created a local mining boom that pushed up the prices of mines and prospects, leading to a pegging frenzy during which claims with dubious prospects were feverishly pegged in all the gold fields in the expectation that they could be sold for big prices. The furore attending the boom also excited local investors to speculate in mining stocks on the share market. Commenting on the effect of the speculation, Wellington merchant Alexander Turnbull wrote, 'Auckland merchants tell me they cannot get their money in from the storekeepers owing to the latter putting their ready money into mining scrip!'[11] Warning that 'people were paying thousands of pounds for four pegs,' Ziman cautioned several Johannesburg promoters against joining the rush to New Zealand:

> The country is very poor as there is not a shilling about, and mining is looked upon as worse than horse racing, in fact a swindle … As for buying

> property you can keep on buying but the devil a bit you can resell. They have gone now from one extreme to another, asking awful prices for veldt, higher prices than for mines I bought.[12]

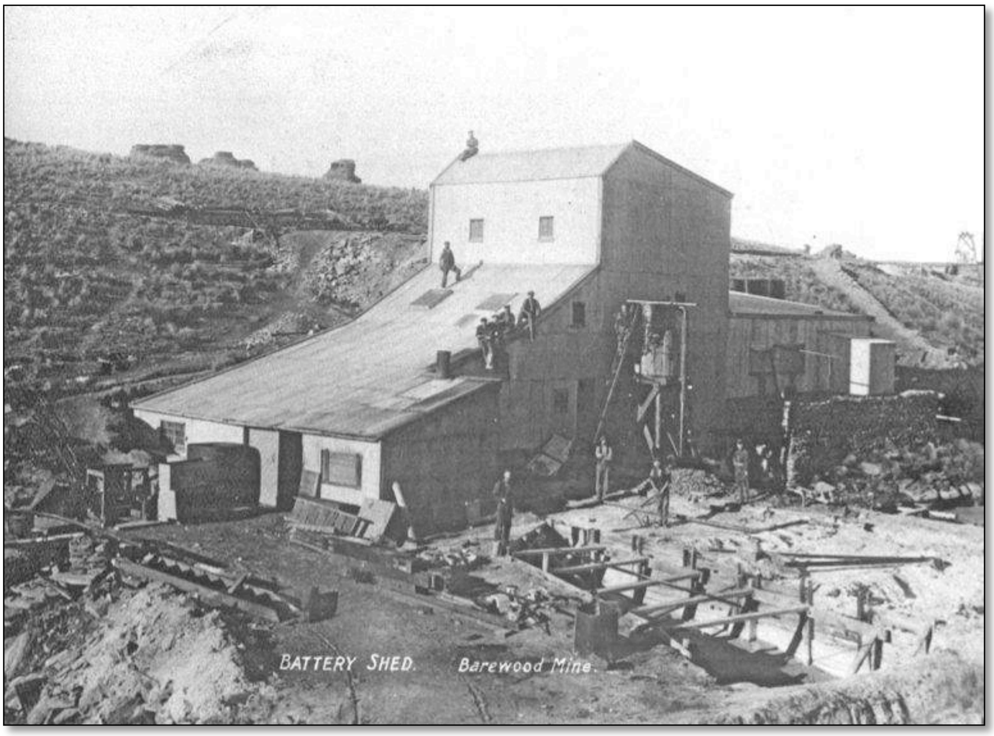
Ziman, who had acquired the profitable Globe and Progress mines in Reefton for £25,000[13] each the year before (Figure 1), was offered £100,000 for them in 1896.[14] The Mines Department commented in 1896 that at the time Ziman had acquired his Reefton properties 'the prices set upon them was considered by many as high, but they could not be purchased now for anything like the same money'.[15]

Figure 1: *The Globe mill erected at Crushington by London company Consolidated Gold Fields of New Zealand Ltd in 1896-1898 was one of the successful operations from the 1896 boom. It operated until 1920. Note the pylons of the flying fox or aerial tramway (at right) that conveyed ore to the mill from the Globe-Progress Mine.*

Source: Darrell Latham Collection

Not only mines and prospects soared in value in the boom, but the value of local mining experts also increased as the boom created a demand for technically trained people. Previously because of the dearth of opportunity for them in the local mining industry, most academically trained experts and qualified mining professionals in New Zealand had found careers in the Mines Department. Now the ranks of top people in Government service were decimated by the demand from private enterprise as the imperatives of overseas investment in the industry insisted that mining had to be undertaken on a more scientific basis than previously. The Mines Department Inspecting Engineer, H.A. Gordon, lamented that the highly regarded director of the Thames School of Mines, James Park, had accepted a position as engineer to a wealthy English syndicate, consoling himself with the thought that 'the colony will derive a greater benefit in his assisting to get foreign capital to be invested in legitimate mining enterprises for the development of our mining wealth'.[16] However Gordon himself was soon to succumb to the blandishments and generous incentives that foreign capital enterprises were prepared to offer to lure professionals from the public service: he resigned from the Mines Department to join the Anglo-Continental Gold Syndicate Ltd (Figure 2) which had been formed by Rand investors in London.[17]

Figure 2: *The treatment plant under construction at the Barewood Mine that Gordon's Anglo-Continental Gold Syndicate Ltd acquired. The mine was not a success.*



Source: Hocken Library Collection.

In addition to the demand for technical people, the boom also substantially boosted employment in the mines with the number of miners employed in New Zealand increasing by 50 per cent from less than 4,000 in 1895 to nearly 6,000 by

1898.[18] The surge of capital invested in increased milling capacity and new treatment plants also created demands in engineering services and machinery manufacture, providing a welcome increase to employment in what had been a time of depression in New Zealand. The 1896 mining boom ushered in the end of New Zealand's depression. The country's 12-year long slump was over.

Labour and Management

One side effect of the 1896 boom was the expansion of the trade union movement in mining. The recent introduction of the Industrial Conciliation and Arbitration Act (ICA Act) in New Zealand protected unions in disputes and fostered the growth of union membership[19] but real impetus to trade unionism in mining was provided by the introduction of overseas capital. For example, in January 1896 at Reefton, there was no union despite the existence of the ICA Act. However, when London company Consolidated Gold Fields of New Zealand Ltd acquired most of the Reefton mines a union was immediately formed.[20]

Before the mining boom the standard of management of the gold mines in New Zealand was generally poor, for most local mine managers lacked professional training and had worked their way up to their positions after being 'apprenticeship trained'. Although they were proficient at practical mining and often ingenious at solving day-to-day mining problems, most were suspicious of new methods and resistant to innovation and technical advances,[21] with the result that the industry generally suffered technological inertia.[22] One of the benefits of the influx of foreign capital was that management of the New Zealand gold mining industry was revolutionised as the overseas companies, demanding more professional management, brought in technical experts from America and the Rand to introduce modern methods and new technology.[23]

Not only some mine managers, but also some mining promoters were found to be inadequate. Entertainment in the scramble for promotional opportunities in the New Zealand mining boom in 1896 was provided by the activities of an elegant but impecunious French nobleman, Viscomte L. de Jouffroy d'Abbans. As the French Consul for France in Wellington,[24] his inept attempts at entrepreneurial promotion introduced something of a comical element to the boom. With ambitions of restoring the family fortune, the aristocratic Frenchman assiduously courted

Ziman seeking to learn how to emulate his success. He hoped to promote a syndicate similar to Ziman's, buying up gold mines in New Zealand and introducing them to the Paris share market,[25] but despite the attention lavished on him by the Count,[26] Ziman soon saw through him, perceiving that his desperate need of money outweighed any substance of backing. This opinion was confirmed when the Count offered £42,000 to buy the Big River gold mine near Reefton, but was unable to come up with the £500 deposit required for the four months' option he had negotiated. 'This will give you some idea of the Count's superb business ability. It is to be hoped that his Paris connection is better,' Ziman's Reefton office manager advised him.[27] The Count had talked eloquently of the substantial financial backing that he said was available to him, but he was unable to provide the deposits necessary to conclude any of the option deals that he negotiated on mines.[28] In October, 1896, Wellington merchant Alexander Turnbull told Ziman that the French Consul was more excited than ever, and the 'amount of money he is going to pour into New Zealand is now 200 millions!'[29] Despite these 'millions' Turnbull later observed Viscomte de Jonffery d'Abbans in more straitened circumstances:

> I have not seen the Count for a very long time, and I fancy he is lying low at present. His furniture *etc* has been sold by Auction, and he with his family, is going Home by April next I hear, so that you will have the chance of shaking him by the hand, and asking him where all those millions have gone.[30]

Even if '200 millions' from France did not eventuate as Count d'Abbans had airily promised, British investors did pour some millions of pounds into New Zealand gold mining in 1896. One source estimates total gross in the 1890s for private capital formation in New Zealand to be £4,763,000,[31] but this estimate seems to be too low. By 1898 the Mines department listed 161 English companies with registered offices in London which had been formed with a nominal capital of £17,476,000 to undertake mining in New Zealand.[32] The actual paid-up capital subscribed, which would be considerably less, is not listed, but McCarty gives a figure estimated from other sources, of 'perhaps £6 million'.[33] This was a dramatic increase from the ten overseas companies with a total paid-up capital of £767,360 formed in London before the 1890s to operate mines in New Zealand.[34] All the British companies floated were free-standing companies of the type described by

Wilkins, with a board of directors and head office in London, and management in New Zealand.[35]

Successes and failures

The amount of capital raised was excessive for the prospects available in New Zealand, with the result that the great majority of the gold mining companies floated in London to operate mines in New Zealand were unprofitable. Despite this, the aggregate of dividends paid by the successful companies eventually exceeded the total amount of capital subscribed to all the companies floated. However because of the time this recoupment took, the overall investment was not very lucrative when consideration is given to the time value, or opportunity cost, of money and mining risk. Dividends paid to 1918 totalled £7.4 million, on a capital of more than £6 million subscribed up to May 1899 by British investors.[36] Only about one in ten of the overseas mining companies operating in New Zealand ever paid a dividend and just 17 of these were British. McCarty says 'only three paid over 100 per cent to 1918'[37] but actually there were five.[38] Another four companies paid dividends returning between 80 and 100 per cent of their capital in their lifetime, and ten paid less than 40 per cent each (Table 1).

Table 1: *Dividends paid by London mining companies operating in New Zealand, 1896-1903*

Company	1896 %	1897 %	1898 %	1899 %	1900 %	1901 %	1902 %	1903 %
Consolidated Gold Fields of NZ				10	10	20	10	5
Golden Blocks				5	5			
Hauraki	160	60	20					
New Zealand Crown		5		5	10	5	7.5	
Progress Mines Of New Zealand				10	15	15	15	12.5
Royal Oak of New Zealand		5						
Talisman Consolidated					7.5			
Waihi	40	40	40	40	50	50	50	25
Waitekauri		10	5	20	10			

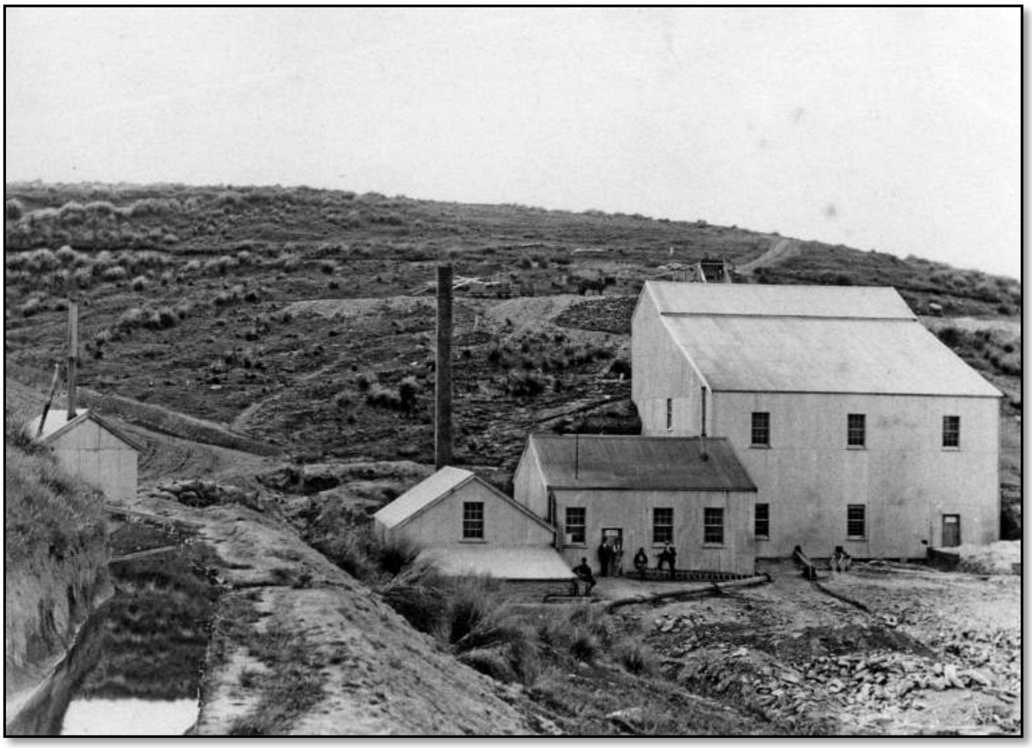
Source: Adapted from 'Tables' in 'New Zealand Gold Mines' supplements to *Mining World and Engineering Record*, London, 27 July 1901, p. 154, and 15 August 1903, p. 214.

Most of the new companies had only a short life. A contemporary expert commentator on gold mining, J.H. Curle, later noted that of the 91 English companies floated in the boom to operate in New Zealand that he had reported upon in 1898, 'most never had the smallest chance of success. I could see from my inspection of a number of these that their case was hopeless'.[39] By 1902, 48 of these 91 London companies that Curle had inspected had already been liquidated, two had been absorbed by neighbouring mines, and 25 were still at work 'but with no prospects whatever' according to Curle, and only 16 were 'good mines, or mines with some promise'.

As was also the case with many of the Rand companies,[40] and certainly with the Westralian gold mining companies floated at this time in London,[41] promoter and vendor interests in the mining companies formed to operate in New Zealand, which were issued as free shares, usually comprised some 40 to 50 per cent or more of the shares on issue.[42] For promoters and vendors and other insiders connected with the formation of these companies it was often more profitable to mine the Stock Exchange by selling their shares in London rather than trying to mine gold in New Zealand.[43] Devious stratagems were employed to boost share prices, which enabled the insiders to unload their shares in the market. One of the most common was the premature or unwarranted erection of stamp battery mills to treat ore, for the installation of a treatment plant at a company's mine not only implied the presence of sufficient payable ore to warrant such capital outlay, but also gave promise of an imminent stream of dividends. Describing this as a 'suicidal policy,' Curle observed that most of the English companies in New Zealand had 'made the usual mistake of erecting machinery before properly developing the mine'.[44] Of the 48 companies on Curle's list that were operating in New Zealand and had already been liquidated before 1902, 'few had even a patch of ore, yet nearly all had mills erected'.[45] (Figure 3).

The excitement of the 1896 mining boom in New Zealand created a fertile field for pickings by the unscrupulous and many companies with only fanciful prospects were floated to fleece unwary investors. However, London investors were not always as credulous as the promoters assumed: the attempt to float a company to bore a tunnel through the side of Mt. Aurum found few willing to invest in such a wild speculation.[46]

Figure 3: *The new treatment plant constructed at the O.P.Q. mine. Another failure of the mining investment boom.*



Source: Hocken Library Collection

In addition to these bogus promotions, confidence men also had something of a field day. By its very nature because of its associated uncertainties and the chance of bonanzas which excite gullible speculators, mining - especially in boom times - has always attracted rogues and vagabonds who seek to batten on the cupidity of the credulous.[47] The 1896 boom caught the attention of fraudsters who gathered to hover on the gold fields much as buzzards scent a meal provided by a munificent Providence. One example was a bogus 'mining expert' named Duncan, using the alias of Baker, who was arrested in Hokitika for uttering valueless cheques while fraudulently passing himself off as a representative of the Ziman syndicate, deputed to buy West Coast mining properties. For a while Duncan, alias Baker, had lived the life of Riley putting up at the best hotels and shouting champagne and cigars to all and sundry, all on credit. Relying on his claimed connection with Ziman's wealthy syndicate, he would borrow all he could from the men whose fortunes he was going to make and then disappear, to repeat his picaresque transgressions in the next mining town down the Coast. The way of the transgressor was hard, the newspaper reporting the denouement of Duncan's high-living shenanigans observed – 'nine months hard in Hokitika gaol in this case'.[48]

After the boom, the New Zealand Minister of Mines, A.J. Cadman, was concerned that the mining industry had been blamed for the misdirection and loss of capital, but he thought 'too much credence had been placed in the reports of inexperienced and unscrupulous persons' who had submitted glowing reports to the public.[49] But by 1899 he was sanguine about the outlook:

> The confidence in our mines, which has been somewhat shaken by the reckless speculation prevailing a few years ago, has been gradually restored, and the wild cat promotions have to a great extent been withdrawn.[50]

Overseas capital was definitely in retreat from its unprofitable New Zealand foray, and by 1902 London's *Mining World and Engineering Record* observed that 'the remnant of British capital invested in New Zealand, unless there is a real improvement in the position of the local industry, will decide to throw in the sponge.'[51]

Because of the losses incurred by investors with the collapse of share market prices when a mining boom ends, investors rue and curse the boom, and it is not unusual for newspaper editors and politicians to rail against the boom and see little benefit and only harm resulting from it. In the aftermath of a boom even mining people often decry a boom when it is over because of the depression of the value of their mining properties after the excesses of boom, and the subsequent difficulty or impossibility of being able to raise capital from a bruised and grieving investing public. They proclaim that they and the industry would have been better off if there had been no boom. What they tend to forget is the difficulty of selling any property before the boom, and they overlook the fact that it had then been almost impossible to raise capital for speculative mining ventures. Many in the public will only invest in mining during a boom, and of course it is usually to their loss that they are caught up in the share buying mania. But without the boom little high-risk exploration and even development would have taken place. These activities are telescoped into a short period when speculative capital is plentiful and readily available. Relatively little of this essential work was done in other times, especially in New Zealand.

Exports of gold, which had comprised some 10 per cent of New Zealand's overseas earnings for several decades before the 1896 mining boom, expanded to one eighth of total exports by 1900 because of the stimulus provided the industry by the overseas capital invested in 1896 (Appendix 1). The benefit of the increased exports of gold is somewhat masked because this was also a period of rapidly expanding exports of agricultural products, especially wool and frozen meat.

Conclusion

Before the 1896 mining boom, growth of the New Zealand mining industry had been hampered by its structure with small, inadequately financed companies which did not have the resources to properly develop the mines. Paucity of capital, together with a lack of managerial expertise, constrained the growth of gold mining in New Zealand in the late 19th century. Although there had not been sufficient capital available in New Zealand to implement what would have been required to expand the industry and make it more efficient and economically productive, the amount of capital that was injected into New Zealand in the 1896 mining boom was excessive for the potentially productive prospects offering: the result was an overall loss for the British investors who bankrolled the boom, resulting in the failure of the great majority of the 160 new overseas companies formed that year.

Despite the capital losses engendered, the boom did have the beneficial effect of boosting employment in the gold mining industry and creating demand and employment in ancillary industries equipping and servicing the mining industry, heralding the end of New Zealand's long depression. The boom also had the beneficial effect that every gold prospect of even the slightest promise was investigated and tested.

It seems something of a paradox that despite the unprecedented amount of capital invested in the industry in 1896 and the number of miners employed increasing by 50 per cent, the annual output of gold diminished for the first couple of years from 1896 (Appendix 1). The overseas companies initially curtailed gold production to concentrate on development work to expand ore reserves to be in a position to be able to sustain substantially increased rates of output, and the implementation of this prudent strategy provides the explanation for this temporary decline.[52]

The previous regime of 'hand to mouth' mining in New Zealand was superseded, and the most beneficial legacy of the boom was the improvement and restructuring of the local industry with the introduction of new methods and technology: this considerably enhanced productivity and expanded output as New Zealand caught up with the best mining practices overseas.

Endnotes

1 The benefit of foreign capital to New Zealand in this period, not only mining investment, has been questioned by W. Rosenburg, 'Capital Imports and Growth – The case of New Zealand – Foreign Investment in New Zealand, 1840-1958,' *Economic Journal*, vol. LXXI, 1961, p 107.

2 Until 1896 New Zealand endured a prolonged depression that lasted nearly 13 years after the excesses of the preceding Vogel investment and immigration boom. Prices rose sharply during the rapid expansion of the 1870s, but deflated by 30.5 per cent from 1883 to 1895.

3 Leo Katzen, *Gold and the South African Economy. The influence of the goldmining industry on business cycles and economic growth in South Africa, 1886-1961*, Cape Town, 1964, p. 2.

4 Cyanidation allowed the recovery of 90 per cent of the gold, whereas previously the Rand mines could recover only 50 per cent of the gold in pyritic ores which were encountered at depth, and which were of a lower grade than the shallower oxidized ores. See Alan Lougheed, 'The Cyanidation Process and Gold Extraction in Australia and New Zealand, 1888-1913', *Australian Economic History Review*, vol. XXVII, no. 1, March 1987, p. 48.

5 Deep drilling and mine development confirmed the persistence at depth of the gold-bearing conglomerate or banket that comprised the great Rand reef, and even more encouraging was the discovery that the orebodies descended at a flattening angle of dip.

6 David Kynaston, *The City of London. Vol. II, The Golden Years 1890-1914*, London 1995, p. 110; and Alan Lougheed, 'The London Stock Exchange boom in Kalgoorlie shares, 1895-1904,' *Australian Economic History Review,* vol. XXXV, no.1, March 1995, pp. 83-102.

7 Jeremy Mouat, ' "Just Now the 'Merican expert is the Prominent Man": American mining engineers and the Australian mining industry 1880s-1910s', *Journal of Australasian Mining History,* vol. 6, September 2008, p. 141, especially note 25. See also Alan Lougheed, 'Europe and Western Australian Gold Mining – 1885-1914,' *Journal of Australasian Mining History,* vol. I, no. 1, September 2003, p. 200. Also see J.W. McCarty, 'British Investment in Western Australian Gold mining, 1894-1914,' *University Studies in History*, vol. IV, no. 1, 1961-1962, pp. 7-23.

8 There were several exceptions, the most notable being the Waihi Company operating the Martha mine that paid prolific dividends. According to J.H.M. Salmon, *A History of Goldmining in New Zealand*, Wellington 1963, p. 280, the company distributed nearly £7 million in dividends over its life, on a capital of £100,000.

9 See Brian R. Hill, 'Exciting career of an obscure mining entrepreneur: David Ziman (1865-1920)', *Journal of Australasian Mining History,* vol. 7, 2009, pp. 155–68.

10 The *New Zealand Goldfields Gazette* of London did not survive, its demise coming not long after the boom itself fizzled out.

11 Alexander Turnbull, Wellington, to 'Dear Uncle', London, n.d. but during May 1896, in Alexander Turnbull Papers in Alexander Turnbull Library, Wellington [hereafter ATL].

12 David Ziman, Wellington, to C. van Beck, Johannesburg, South Africa, 14 April 1896, in Consolidated Gold Fields of New Zealand Collection in Alexander Turnbull Library, Wellington.

13 The New Zealand pound, the British pound and the Australian pound all had the same parity in 1895. A pound then is equivalent in value to about $AUD110 today.

14 David Ziman, Wellington, to Consolidated Gold Fields of New Zealand Ltd director, A.L. Foster, London, in Consolidated Gold Fields of New Zealand Collection, ATPL.

15 'Middle Island, Reefton District', Appendices to the Journal of the House of Representatives [hereinafter AJHR] C-3 Papers, *Mines Statements* 1896, p. 94.

16 'The Goldfields of New Zealand', AJHR, C-3 Papers, *Mines Statements* 1896, p. 5.

[17] Despite his professionalism and technical brilliance Gordon floundered in a commercial role. Although it had the benefit of Gordon's advice some of the investments made by the Anglo-Continental Syndicate were not particularly wise. Its plunge to buy the Barewood mine in Otago on Gordon's recommendation resulted in complete loss.

[18] See 'Table no. 11. Number of Persons Employed in Mining', in AJHR, C-2 Papers, *Mines Statement* for each year.

[19] See James Holt, 'Compulsory Arbitration in New Zealand, 1894-1901: The evolution of an Industrial Relations System', *New Zealand Journal of History*, vol. XIV: 2, October 1980, p. 180; and Noel S. Woods, *Industrial Conciliation and Arbitration in New Zealand,* Wellington, 1968.

[20] Trigger for the formation of the miners' union in June, 1896 (initially styled The Reefton branch of the Amalgamated Miners' Union of Australasia) was the attempt by Consolidated Gold Fields of New Zealand Ltd to cut daily wage rates from 10 shillings to 9 shillings. This because the company claimed they were 'offering full-time employment rather than the previous broken work that had been available in the Reefton mines'. See Hill, 'Exciting career of an obscure mining entrepreneur: David Ziman (1865-1920)', p. 160. According to New Zealand Labour Department file 3-2-349, The Inangahua Gold and Coal Miners' Industrial Union of Workers was registered under the ICA Act on 6 August 1896, with an initial membership of 148.

[21] Some of the management conservatism, which was manifested in their resistance to innovation and hostility to new ideas, resulted from the failure of various new treatment processes and technological 'advances', like the La Monte smelting process, which had proven to be a costly fiasco.

[22] See criticism of the backward state of the industry by Mines Inspector H.A. Gordon in 'Mines Inspecting Engineer's Report', AJHR, C-3 Papers, *Mines Statement* 1895, p. 15, and 'Middle Island. Reefton District', in *ibid.,* p. 94.

[23] 'A great revival ... a new era in the history of mining in the district', was how an impressed Reefton Mining Warden described the improvements introduced by the American management brought to Reefton by Ziman's Consolidated Gold Fields of New Zealand Ltd company in 1896. See 'Warden Stratford's Report No. 6', AJHR, C-3A Papers, *Mines Statement* 1896, p. 10.

[24] According to Imprimerie Nationale (ed.), *Annulaire Diplomatique et Consulaire*, Paris 1910, p. 219, Alexandre Louis Ferdinand de Jouffroy d'Abbans was born in 1851. He served as a volunteer in the Franco-Prussian War (1870-1871) and read Law at university before entering the diplomatic corps. He served in consulates in Berlin, Singapore, Aden, San Francisco, Wellington (as deputy consul 1885-1888), and the French Ministry in charge of Pacific Island colonies, Zurich, Falmouth and Mons, before appointed consul to Wellington from 1894-1898. After that he was consul to Singapore, Hamburg, Danzig and Liverpool, retiring in 1910. In 1908 Count d'Abbans was made a Chevalier de la Légion d'Honneur.

[25] French investors were then keen buyers of Rand shares, and a substantial proportion of the funds raised on the stock exchanges by South African companies originated on the Continent. By 1906 French investors owned around 30 per cent of the shares in 27 premier Witwatersrand gold mines with an aggregate market value of £46 million according to Jean-Jacques van Helten, 'Mining, share manias and speculation: British investment in overseas mining, 1880-1913', in J.J. van Helten and Y. Cassis (eds.), *Capitalism in a Mature Economy: Financial Institutions, Capital exports and British Industry*, Aldershot, 1990, p. 163.

[26] As Zimon stated, 'How can I express my wife's and my own pleasure upon receiving those beautiful paper knives. … The Parisian Press will no doubt be full of your account on mining in New Zealand, especially your visit to our mines'. See, David Ziman, Reefton, to Viscomte L. deJonffery [sic] d'Abbans. Wellington, 18 August 1896. In Consolidated Gold Fields of New Zealand Collection, ATL.

[27] Boyd, Reefton to David Ziman, London, 12 October 1896, in Consolidated Gold Fields of New Zealand Collection, ATL.

[28] Count d'Abbans also offered to option the Keep-It-Dark mine for £40,000 and the Lord Edwards mine for £5,000 but he was unable to come up with the deposits required, including £1,000 for the four months' option on the Keep-It-Dark mine.

[29] Alexander Turnbull, Wellington, to David Ziman, London, 28 October 1896, in Alexander Turnbull Papers, ATL.

[30] *Ibid.,* 10 February 1898.

[31] According to J. A. Dowie, 'The Course and Character of Capital Formation in New Zealand, 1871-1900,' *New Zealand Economic Papers*, vol. I, no.1, 1966, Tables 4 & 5, pp. 56, 57, the

following are the estimates (in thousands of pounds) of private gross capital formation for mining in New Zealand for 1891-1900, with the percentage that comprises total gross capital formation each year in parenthesis: 1891 £157 (7.2%); 1892 £234 (9.8%); 1893 £234 (12.4%), 1894 £336 (17.7%), 1895 £631 (25.7%), 1896 £572 (18.4%), 1897 £388 (12.2%), 1899 £694 (20.0%), 1900 £738 (20.7%).

[32] These companies along with the locality of their operations in New Zealand, individual nominal capitals, and head office addresses in London, are listed in 'Quartz Mining,' AJHR, C-3 Papers, *Mines Statements* 1899, pp. 31, 33.

[33] J.W. McCarty, 'British Investment in Overseas Mining 1880-1914,' unpub. PhD thesis, University of Cambridge, 1960, p. 155.

[34] The companies and their individual capitals are listed in 'Table 11. Companies formed to work New Zealand mines, 1890', in H.J. Hanham, 'New Zealand Promoters and British Investors, 1860-1895,' in Robert Chapman and Keith Sinclair (eds), *Studies of a Small Democracy*, Auckland, 1963, p. 65.

[35] Mira Wilkins, 'The free-standing company, 1870-1914', *Economic History Review*, vol. XLI, no. 2, 1988, pp. 259-82.

[36] A substantial proportion of these dividends were paid by the very successful Waihi Company which had been floated in London well before the boom in 1887. See Appendix II, 'Dividends paid by London companies operating in New Zealand, 1896-1903'. Also see Hill, 'Exciting career of an obscure mining entrepreneur: David Ziman (1865-1920)', pp. 155–68.

[37] McCarty, 'British Investment in Overseas Mining', p. 156.

[38] McCarty names the three companies as Waihi, Talisman Consolidated, and Hauraki Gold; but this is incorrect as it omits two Ziman companies, Consolidated Gold Fields of New Zealand Ltd and Progress Mines of New Zealand Ltd, both of which had distributed dividends totalling more than 100 per cent by 1918. See Appendix III: 'Company Results', in Brian R. Hill, ' "The Little Man" David Ziman, mining giant: The biography of an entrepreneur', unpub. PhD thesis, Flinders University, Adelaide 2000, pp. 334 -37.

[39] J.H. Curle, *The Gold Mines of the World*, London, 2nd ed., 1902, p. 198.

[40] Robert V. Kubiceck, 'Finance Capital and South African Goldmining, 1886-1914', *Journal of Imperial and Commonwealth History,* vol. III:3, May 1975, p. 388.

[41] J.W. McCarty, 'British Investment in Western Australian Gold Mining', pp. 11-12.

[42] See vendor considerations listed in the table in 'Statement of Affairs of Mining Companies,' AJHR, C-3 Papers, *Mines Statement* 1896, pp. 114-17. This is in line with the average vendor percentage in London mining companies then, as detailed in A.R. Hall, *London Capital Markets and Australia 1870-1914*, Canberra, 1963, p. 113.

[43] There was then no escrow period for promoters' and vendors' shares as there is now, and insiders and vendors could sell these shares in the market as soon as the company was listed on the Stock Exchange.

[44] Curle, *The Gold Mines of the World*, p. 198.

[45] *Ibid*., p. 200.

[46] See Salmon, *A History of Goldmining in New Zealand*, p. 219.

[47] Herbert Hoover, *Principles of Mining*, New York 1909, p. 7; Bern Dibler, *Agricola on Metals*, Norwalk, 1958, p. 31; Charles Harvey and Jon Press, 'Issues in the History of Mining and Metallurgy', *Business History*, vol. XXXII, no. 3, July 1990, p. 5; R. Burt, 'British Investment in the American Mining Frontier', *Business and Economic History*, vol. XXVI, no. 2, Winter 1997, p. 518.

[48] 'Pars About People,' *New Zealand Observer*, Saturday, 11 July 1896, p. 18.

[49] 'Minister's Statement', AJHR C-2 Papers, *Mines Statement* 1898, p 2.

[50] *Ibid*., p. 1.

[51] 'New Zealand Gold Mines', *Mining World and Engineering Record*, London, 16 August 1902, p. 265.

[52] See Appendix I: 'Annual gold exports from New Zealand'. The overseas companies also temporarily closed some stamp batteries while improvements were undertaken and new machinery installed to increase treatment capacity.

Appendix I

Annual gold exports from New Zealand 1894-1914

Year	Ouncesof gold	Value £
1894	221,615	887,839
1895	293,491	1,162,164
1896	263,694	1,041,428
1897	251,645	980,204
1898	280,175	1,080,691
1899	389,558	1,513,173
1900	373,616	1,439,602
1901	455,561	1,753,783
1902	508,045	1,051,433
1903	533,314	2,037,831
1904	520,320	1,987,501
1905	520,486	2,083,936
1906	563,843	2,270,904
1907	508,210	2,027,490
1908	506,423	2,004,925
1909	506,371	2,006.900
1910	478,288	1,896,328
1911	455,226	1,816,782
1912	343,163	1,345,131
1913	376,161	1,459,499
1914	227,954	895,367

This is a selected 20 year section of Salmon's table of gold exports which showed the statistics from 1857 to 1960 with a total 27,175,073 ounces of gold exported earning New Zealand £124,635,028 over that period.

Despite the massive influx of foreign capital invested in gold mining in New Zealand in 1896, the annual production of gold diminished from 1896 to 1898 because the overseas companies rebuilt and modernized the treatment plants disrupting production, and more importantly they initially curtailed gold production in the mines they invested in while they concentrated on development work to increase ore reserves in order to establish a sustainable higher rate of output. This substantial increase in productivity is evidenced in the statistics for 1899 onwards.

This is a 20 year section of Salmon's table of gold exports which showed the statistics from 1857 to 1960 with a total 27,175,073 ounces of gold exported earning New Zealand £125,635,028 over the period