



Notice of Meeting

The Annual General Meeting of Bougainville Copper Limited will be held at 10.00 a.m. on Wednesday, 11th April, 1979 in the Panguna Cinema, North Solomons Province, PNG.

A separate Notice of Meeting is enclosed. All shareholders are cordially invited to attend.

Directors

Sir Frank Espie, O.B.E.
(Chairman)
N. R. Agonia
J. L. Auna
Sir Roderick Carnegie
B. E. Fairfax-Ross, C.B.E.
P. W. Quodling
J. T. Ralph
D. C. Vernon

Alternate Directors

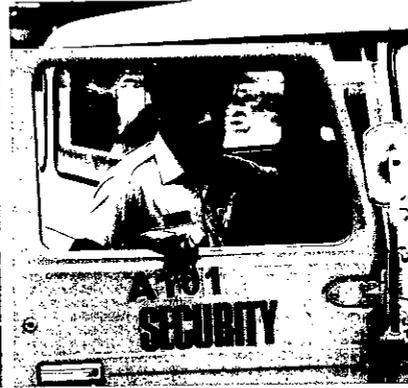
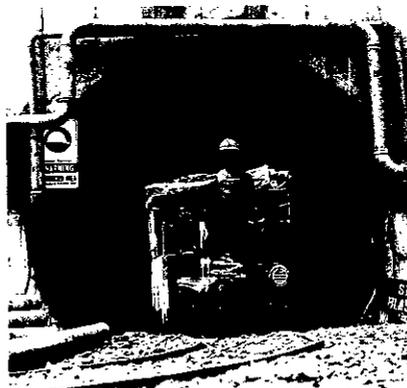
R. H. Harding
J. Kekedo
M. Togolo

Officers

P. W. Quodling
(General Manager)
J. R. Trezise
(Assistant General Manager)
G. Billard
(Executive Manager — Commercial)
L. A. Davis
(Executive Manager — Concentrator)
W. J. N. Davis
(Executive Manager — Technical Services)
R. L. Kay
(Executive Manager — Mine)
M. Rangai
(Secretary)

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The Year in Brief

		1978	1977
Production:			
Concentrates	(tonnes)	658 587	615 605
Contained copper	(tonnes)	198 603	182 291
Contained gold	(kilogrammes)	23 367	22 374
Net sales revenue	(K'000)	223 282	200 578
Net earnings after tax	(K'000)	48 015	28 531
Earnings per share	(toea)	18.0	10.7
Return on shareholders' funds	(per cent)	15.1	9.2
Dividends declared			
gross dividends	(K'000)	40 106	21 390
per share	(toea)	15	8
times covered by earnings		1.2	1.3
Depreciation	(K'000)	40 425	36 203
Government royalties	(K'000)	2 790	2 490
Taxation	(K'000)	22 000	13 724
Shareholders' funds	(K'000)	317 565	309 656
Number of employees		4 098	3 916

January:

Kina unilaterally revalued by 4% against Australian dollar

February:

Copper price at year's low of US\$3.5 cents/lb.

3 year sales contract signed with People's Republic of China.

Computerised haul truck allocation system introduced in mine.

March:

Final repayment of US\$67.4 million Commonwealth Trading Bank of Australia loan

April:

Annual general meeting held in Panguna

May:

Final dividend of 5 toea per share paid from 1977 earnings.

June:

Replacement of Euclid R105 truck fleet with Euclid R170 haul trucks completed.

Additional secondary crusher and first of 14 replacement tertiary crushers commissioned.

Half yearly earning of K24 million.

PNG adopts currency basket approach for setting kina exchange rates; breaks parity with SAust

July:

K10 million loan from PNG Banking Corporation

August:

Hundredth voyage of "Bougainville Maru", which was built to carry concentrates to Japanese buyers

September:

Completion of programme to speed up ball mills

October:

Sales of copper concentrates since start up passed 4 million tonne mark.

Kina reached its highest value for the year of US\$1.515.

Gold price reached record high of US\$243/oz.

November:

Heavy rain caused flood damage to Mine Training College, service facilities and Panguna township.

PNG Budget increased company income tax rate from 33½% to 36½%

December:

Net earning for 1978 of K48 million
Year's production reached 198 603 tonnes of contained copper.

Copper price reached year's high of US\$1.4 cents/lb.

Left

Aerial view of mine concentrator, administrative offices and township of Panguna.

Chairman's Statement



Sir Frank Espie, Chairman

The 1978 net earnings for the Company of K48.0 million substantially exceeded the previous year's K28.5 million. The improved result included net exchange gains from foreign currency transactions of K10.3 million, the remaining K37.7 million being earned from operations. While this represents a satisfactory result when the copper industry is operating at depressed levels, the return on funds employed is still inadequate when account is taken of the current value of the investment in the mine.

Growth continued in the major western economies in 1978, at a slow and uneven rate. Towards the end of the year, the rate of growth accelerated when expansion in Europe coincided with a strong U.S. performance. The outlook for 1979 is for slow growth to continue, with the Japanese and European economies taking over the role of pacemaker from the U.S. The series of OPEC oil price rises announced for 1979 will add to concern about inflation, especially in the U.S.

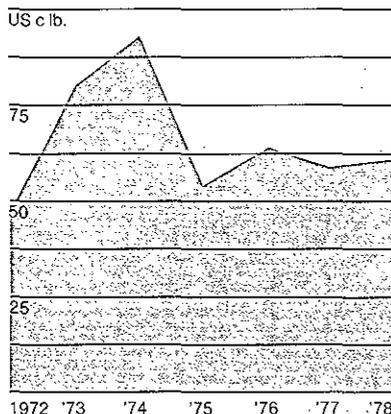
The last year has seen some small measure of recovery in the copper industry. Low metal prices in recent years closed a number of higher cost copper producers throughout the world, while industrial and political unrest in Africa and South America reduced output in these countries. These factors resulted in demand in the Western world slightly exceeding supply, so that stocks of refined copper have begun to fall to more normal levels. This trend is expected to continue into 1979. While the copper price has improved during 1978, it is still far from satisfactory, particularly

when translated into kina and the currencies of the Company's major buyers. For example, while the average copper price on the London Metal Exchange rose from US59.3 cents/lb in 1977 to US61.9 cents/lb in 1978, its equivalent in Papua New Guinea currency fell from 47 toea/lb in 1977 to 44 toea/lb in 1978. At the same time, the price of copper to many consumers in terms of their domestic currencies is lower at present than it has been for many years. The domestic price of copper in Japan in 1978, in money terms, was the same as in 1964. This illustrates how the copper market is benefiting consumers in highly developed and industrialised countries, to the disadvantage of producers, the majority of whom are in relatively under-developed countries.

The volatility of copper prices has been a continuing spur to the development of various schemes aimed at achieving a long term stabilisation of the industry. These schemes have been proposed by members of international bodies such as UNCTAD and CIPEC, as well as by individual companies involved. However, the diversity of interests and aims of the countries involved in the copper industry has prevented any real progress towards a widely acceptable scheme.

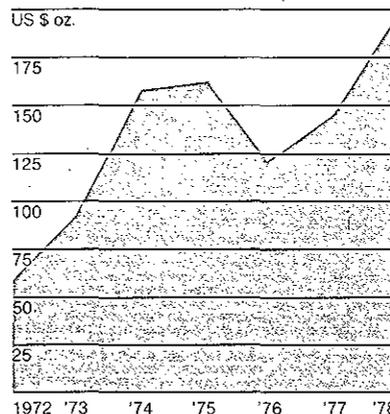
The gold price has risen to historically high levels during 1978. Again, however, currency fluctuations were a large element of this price increase; thus the 1978 average gold price expressed in PNG currency rose by 17% to

Average copper prices 1972-1978



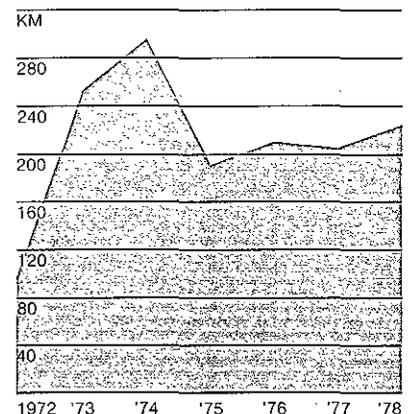
Prices have been depressed for 4 years after record levels of 1973-74.

Average gold prices 1972-1978



Prices have increased nearly fourfold since 1972.

Net sales revenue & other income 1972-1978



Revenue is more sensitive to copper and gold prices than to sales volume.

K137/oz, while the London Gold Market price, which is set in US currency, rose by 31%.

Nevertheless, revenue accruing from gold continued to make a significant contribution to the profitable operation of the mine.

The Company was able to achieve record production of copper concentrates in 1978, despite a slight decrease in the average head grade of ore mined. New plant and facilities installed in the previous year were fully operational and contributed to the good result. However, production from existing plant is expected to decline in future years because of a continuing fall in head grade.

Improvements in operating techniques and productivity maintained the Company's position amongst the world's more efficient producers. Continued research and development work on operating and maintenance processes is expected to bring further benefits in the future. This is particularly important as the plant is now at a production capacity where the economic benefits of further major expansion are uncertain.

The level of measured ore reserves of the ore body continues to decline and the Company sees a need for further exploration in areas surrounding the Special Mining Lease. It holds Authorities to Prospect over nearby areas of interest, but the Bougainville Mining Agreement provides that exploration cannot commence there until Government approval is obtained.

The Papua New Guinea economy has continued to develop, providing a stable business climate. While Australian grants in aid are still

required to assist in the country's development, their importance to the total government budget is declining. Export earnings have been strong in recent years, enabling the kina to be revalued upwards against the US and Australian dollars in a period when a number of major currencies have weakened. The Government has made control of cost inflation a major policy and the strength of the kina and supervision of wages have been major contributors to its success. The company has benefited this year from the low level of local cost increases and stability of the economy. Offsetting these benefits have been the repetitive effects on earnings of the strengthening of the kina and the increase in the Papua New Guinea company tax rate. The value of sales revenue in local currency was reduced by the revaluation of the kina, although some offsetting benefit was received from the lowered cost of imported goods and services, as well as of debt servicing. The increase in the income tax rate for companies from 33½% to 36½%, effective from 1st January, 1978, resulted in the 1978 income tax charge being raised by K2.0 million.

The North Solomons Provincial Government became firmly established in 1978, its major responsibilities being to set up administrative processes and to decide on appropriate policies for the Province. The first Budget was brought down in December, with the major allocation of funds being made for the development of public works, particularly roads and bridges. The Company works with the Provincial Government in areas

of mutual interest and has established a good working relationship. The National Government has also provided an opportunity for the North Solomons Provincial Government to be associated more closely with the Company's activities by nominating Mr. M. Togolo, Provincial Planner for the Province, as an alternate Director on the Board of Directors. During the year, the National Government nominated Miss J. Kekedo as an alternate Director. Miss Kekedo's experience as a senior officer in the Prime Minister's Department will assist the Company in maintaining close relationships with the Government.

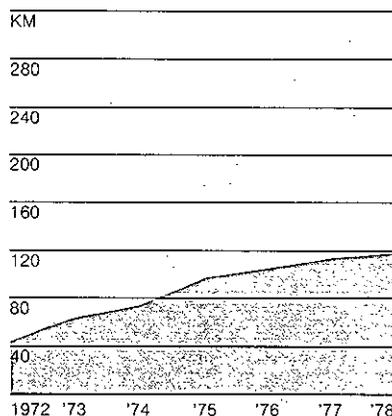
The Company ended 1978 in a stronger position than was anticipated at the beginning of the year. Its financial position is healthy and the need for major borrowings to finance capital expenditure in 1979 is unlikely if metal prices continue at present levels. By maintaining its present efficiency, the Company is well placed to benefit from any future increases in metal prices.

The record production and the higher earnings achieved in 1978 were largely the result of excellent efforts by staff and employees during the year. An increasing contribution is being made by Papua New Guinea nationals as they take on extra responsibilities. The directors wish to record their appreciation for these efforts.



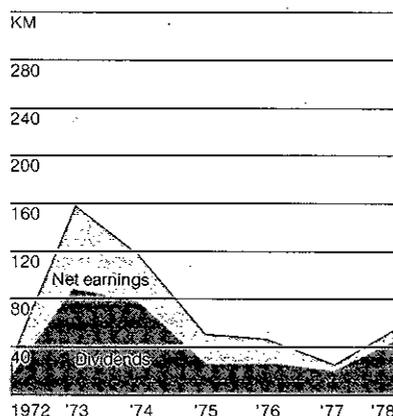
F. F. Espie, Chairman.
6th February, 1979.

Cost of sales 1972-1978



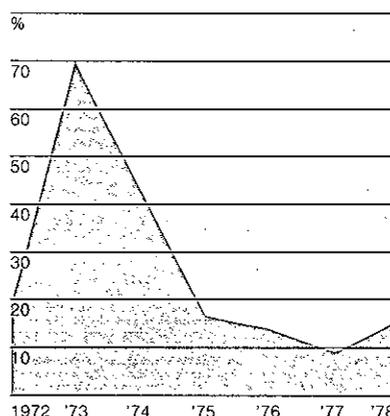
Inflation in suppliers' countries and higher mining rate have increased costs.

Net earnings & dividends 1972-1978

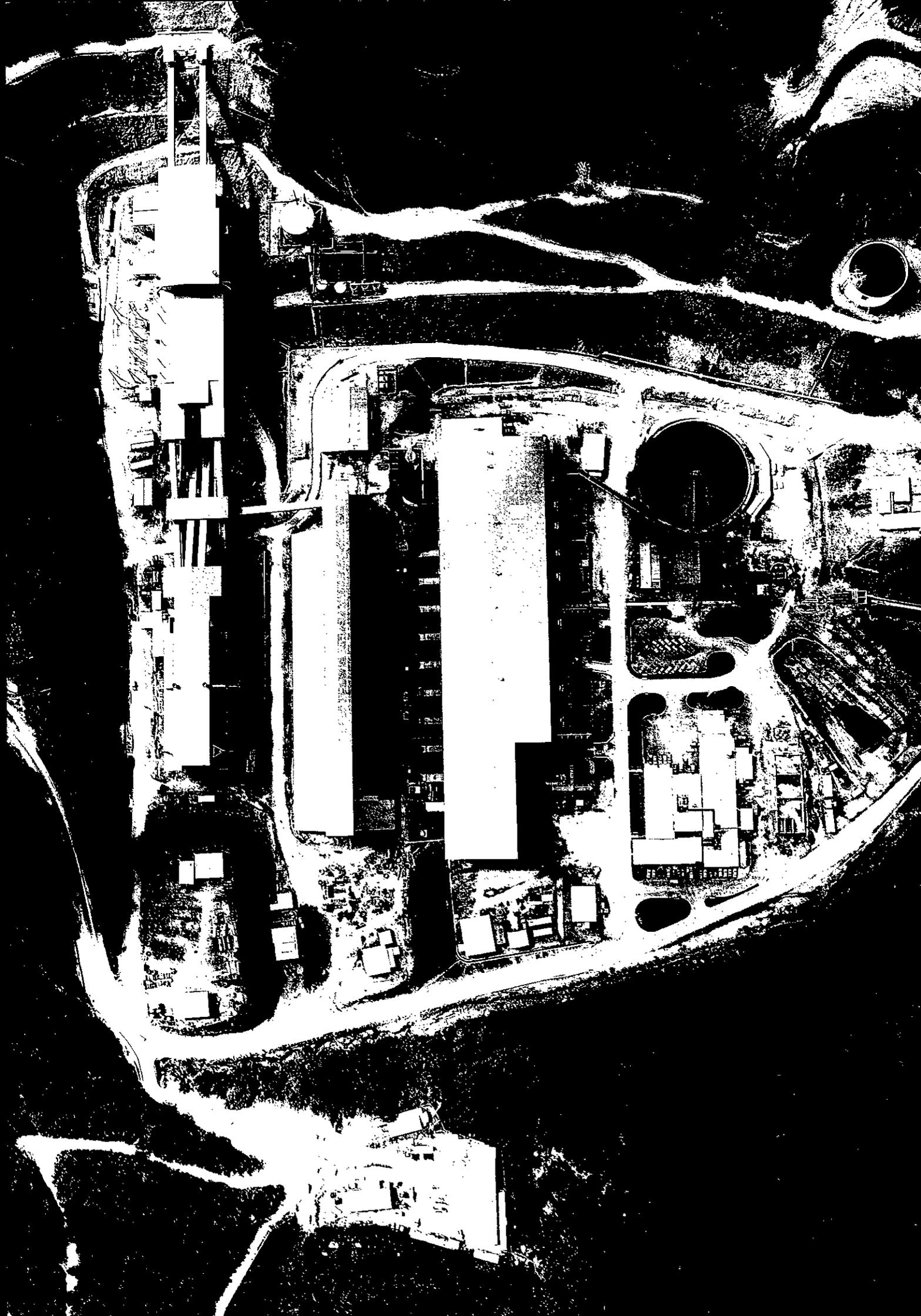


Proportion of earnings distributed as dividends has increased as loans have been repaid.

Return on shareholder's funds 1972-1978



Returns on shareholders' funds have been at depressed levels for the past 4 years.



Review of Operations



P. W. Quodling, General Manager

Measured Ore Reserves:

Measured ore reserves at the end of 1978 were estimated at approximately 720 million tonnes, averaging 0.44% copper and 0.49 grams of gold per tonne of ore.

Production:

Production statistics were as follows:

	Year Ended 31/12/78	Year Ended 31/12/77
Material mined (millions of tonnes)		
Ore	38.1	34.1
Waste	40.9	36.7
Waste/Ore ratio	1.07/1	1.07/1
Ore grade		
Copper (per cent)	0.60	0.61
Gold (grams/tonne)	0.82	0.90
Silver (grams/tonne)	1.80	1.86
Concentrate produced (dry tonnes)		
	658 587	615 605
Concentrate grade		
Copper (per cent)	30.2	29.6
Gold (grams/tonne)	35.5	36.3
Silver (grams/tonne)	79.8	77.1
Contained metal in concentrates		
Copper (tonnes)	198 603	182 291
Gold (kilograms)	23 367	22 374
Silver (kilograms)	52 525	47 430

Mine:

Total material mined from the pit during 1978 consisted of 38.1 million tonnes of ore and 40.9 million tonnes of waste. This was an increase over previous years, reflecting the effect of both additional equipment commissioned in 1977 and high productivity. Mine equipment now comprises nine P & H 2100 shovels and 43 Euclid R170 haul trucks of 155 tonnes capacity. A further three

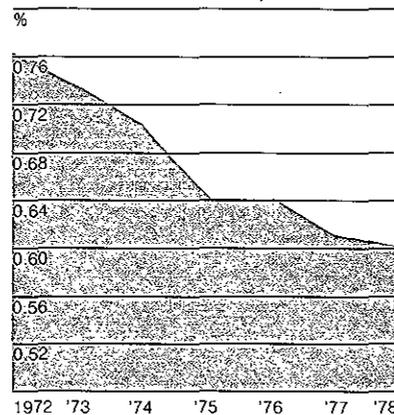
trucks will be purchased in early 1979 to provide the additional capacity required to compensate for longer haul distances. A computer based truck/shovel allocation system has been installed to optimise the utilisation of equipment.

Introduction of the larger R170 haul truck led to a significant improvement in the efficiency of haulage of material from the pit. The heavier demands on haul roads have been met by a revision of haul road specifications, together with acquisition of additional road construction and maintenance equipment. Careful and successful attention has been given to maintaining a satisfactory tyre life. The increased level of waste removal reflects extension of pit development towards the north. Also a cut back into the range on the eastern perimeter of the pit has provided access to ore to be mined in 1979.

Pit depth increased by 30 metres during the year, a drop of two additional benches. Pit water levels were satisfactorily controlled by pumping, with only one minor disturbance occurring to production during a period of abnormal rainfall. Work is proceeding on construction of a 6 400 metre tunnel which will provide for gravity drainage of the pit in the longer term. Tunnelling had advanced to 2 000 metres by year end.

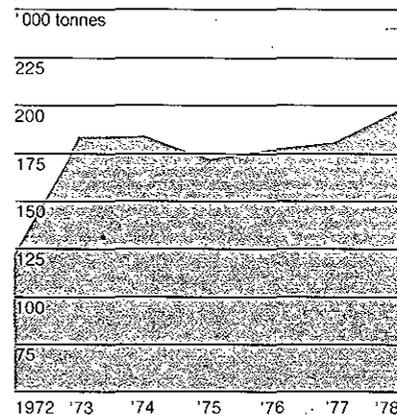
Ore grades continued to decline as mining activities extended into lower grade sections of the orebody. This trend will continue in the future. Average grades were 0.60% copper (0.61% in 1977) and 0.82 grams/tonne of gold (0.90 grams/tonne in 1977).

Copper ore grade 1972-1978



Ore grade continues its decline.

Production of contained copper 1972-1978



Increases in capacity have offset effect of declining head grade.

Concentrator:

The Concentrator treated 38.1 million tonnes of ore, compared with 34.1 million tonnes in the previous year. Throughput capacity increased with a full year's operation of the tenth, and larger, ball mill which was installed during 1977. Production was also enhanced by a programme to raise the operating speed on all ball mills. This increased throughput by some 3% without any deterioration in grinding performance.

The increased level of ore throughput more than compensated for the decline in ore grade. Production for the year was 658 587 tonnes of concentrate containing 198 603 tonnes of copper, 23 367 kilograms of gold and 52 525 kilograms of silver.

Plant availability was held at very satisfactory levels, in spite of a deterioration in the physical condition of the crushers. A programme was commenced for the replacement of the tertiary crushers with heavier, more robust units. Five of the fourteen crushers had been replaced by year end and the balance will be changed over during the first half of 1979.

Operating Costs:

The revaluation of the kina against the currencies of certain countries, which are major suppliers of goods, and services to the Company, provided cost benefits. Also, the high levels of throughput and productivity contributed to lower unit costs. The net result was that the kina cost of producing each tonne of concentrate was held steady, despite inflation in countries supplying materials and services.

Marketing:

Sales during 1978 totalled 640 911 dry tonnes of concentrate, containing 193 050 tonnes of copper, 22 832 kilograms of gold and 51 373 kilograms of silver. Small sales of two by-products, cement copper and gold bearing ball mill residues, were also made.

The major proportion of concentrates continued to be supplied under long-term contracts to buyers in Japan, West Germany and Spain. Delivery commitments under these contracts were fulfilled and the buyers sought additional deliveries. The strong demand for concentrates is encouraging and continues to ensure that the Company's output will be fully sold. Following spot sales made in earlier years, a contract was signed with the People's Republic of China for the shipment of 60 000 tonnes of concentrates over a three year period. Consideration is also being given to locating market outlets in other developing Asian countries.

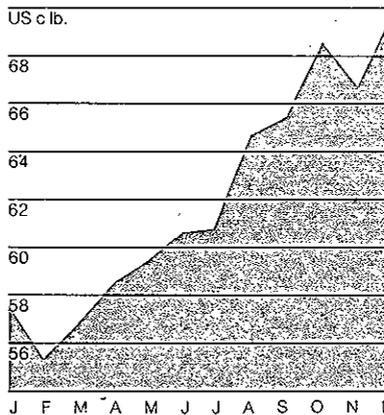
The copper price fell in the early months of 1978 to its lowest level in real terms for twenty years.

However, after four years of over-supply of copper metal, a gradual emergence of a more balanced supply/demand relationship has resulted in some fall in the large stock holdings throughout the world. This, in turn, has led to a steady improvement in the price. The weakening of the US dollar also contributed to a rise in the copper price in terms of US currency. The 1978 average LME price (cash sellers' price for electrolytic wirebars) was the equivalent of US\$61.9c/lb, compared with US\$59.3c/lb in 1977.

The gold price rose to historically high levels during 1978, in the wake of severe currency fluctuations and monetary problems. The average of the London Gold Market price for 1978 was US\$193.5/oz, compared to US\$147.9/oz in 1977. Silver prices averaged US\$5.42/oz compared to US\$4.64/oz in 1977.

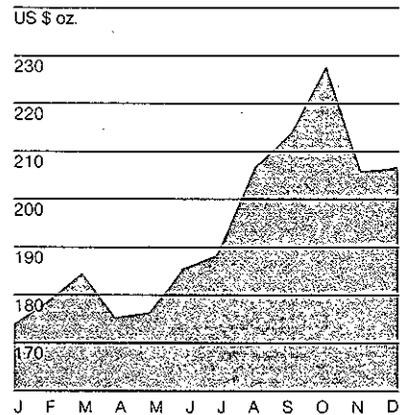
The past year has been dominated by almost continuous turmoil in international currency markets. The most important movements in major currencies were the dramatic weakening of the US dollar and the appreciation of the Japanese yen and West German deutschemark. Together with the relative performance of the kina and the Australian dollar, these currencies are critical to the Company's profitability.

Monthly average copper prices 1978



Prices improved from depressed levels in response to better market situation.

Monthly average gold prices 1978



Prices increased in response to international currency uncertainties and speculation.

Right:
Aerial view of power station, port and Lolohe recreation area.



The Papua New Guinea Government maintained a strong kina as a key element in its policy to restrain inflation. In June, the Government introduced a broadly-based currency basket mechanism in place of the prior informal link with the Australian dollar. As a result, the kina appreciated significantly against both the US and Australian dollars, whilst it depreciated slightly against such strong currencies as the yen and deutschemark. The major effect on the Company has been to give a lower kina value of sales revenue than would have occurred if the previous year's exchange rates had prevailed. Some offsetting benefit has been received, however, from a reduction in the kina cost of debt servicing and imported goods and services.

Finance:

The year's long term loan obligations, consisting of principal repayments of K64.6 million and interest payments of K5.9 million, were all met. Included in the principal repayments was the Commonwealth Trading Bank of Australia term loan of US\$67.4 million. This completed repayment of the US\$177.4 million term loan, advanced by an international syndicate of banks to finance the construction of the Bougainville

Copper project. New borrowings against long term loan facilities of K15.8 million were made during the year to finance capital expenditure. The year-end balance of loans outstanding of K60.8 million was the lowest since operations commenced.

As a reflection of improving liquidity, a request was made to the Bank of America and Commonwealth Trading Bank of Australia to reduce the commitment under the joint term loan agreement, negotiated in 1977, from US\$60 million to US\$20 million. Agreement was also reached to extend the period of offer from the end of 1978 to the end of 1979. This facility has not been utilised to date. Similarly, the A\$4.2 million Export Finance Insurance Corporation facility, arranged in 1977 to finance the purchase of replacement crushers, remains undrawn.

Human Resources:

The higher level of activity in the mine and the wider range of maintenance services undertaken has resulted in an increase in the number of employees to 4 098 during the year. 3 243 of these are Papua New Guinea nationals, many of whom have undergone Company organised training programmes to acquire new skills. Contractors who provide services to the Company also employ approximately 1 000 people, a similar proportion of whom are nationals.

As part of the Company's wide training programme, a total of 81 apprentices received their trade indentures at the end of 1978 and a similar intake in 1979 will maintain apprentice training at a constant level. Since commencement of the

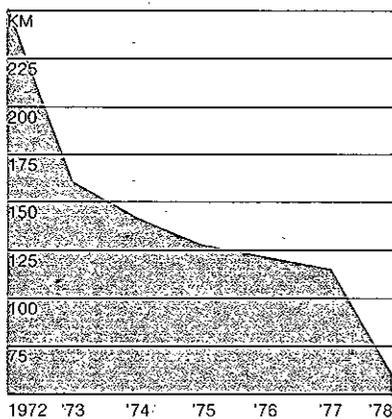
apprentice programme, 403 nationals have qualified as tradesmen. Of these, 246 have remained with the Company, many proceeding to undertake supervisory roles.

A further 14 national graduates joined the Company at the closing of the 1978 academic year, the intake at the tertiary trained level being constrained by the excess of employer demand over university output. One national graduate undertook further studies in Australia to qualify in Mine Engineering.

Employee Amenities:

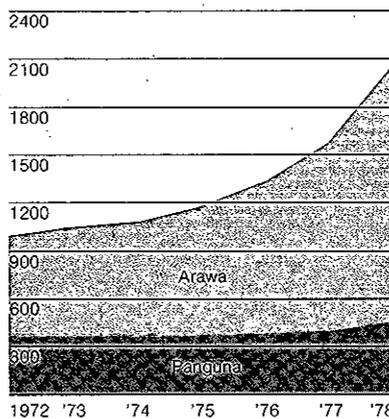
A house construction programme, undertaken to increase the level of married accommodation available to employees, was completed in 1978. This lifted the total number of married accommodation units to 1 966. In addition, 80 self-contained units have been constructed for single staff. These additional accommodation units have allowed for the closure and demolition of a camp accommodation complex, which was in the path of the mine advance. The complex had been built in the construction period.

Loans outstanding 1972-1978



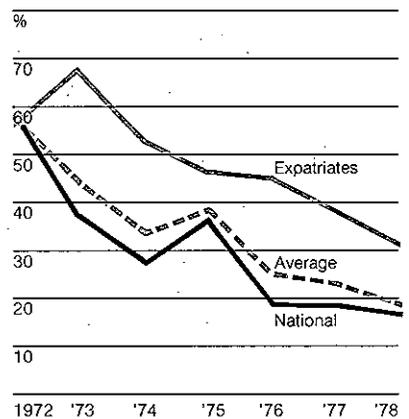
Loan balances have declined, despite metal price fluctuations and high capital expenditure.

Company houses 1972-1978



A substantial house building programme has been undertaken in the last 3 years.

Annual labour turnover 1972-1978



Labour turnover rates have shown improving trends.

Right: Aerial view of Arawa township.



Environment:

Environmental monitoring and research continued during 1978 with a staff of 32 employed full time on this work. Other staff were engaged in providing support services for this group, particularly in the areas of chemical analyses of environmental samples, computer processing of data and helicopter transport.

The physical, biological and social impacts of the operation are being progressively identified and defined. Based on these findings, measures to minimise and contain environmental stresses are being developed.

Technical Services:

Maintenance requirements have increased as plant becomes older. The additional demand for maintenance services has been met by an extension to engineering workshops and installation of more equipment. This has expanded the range of work that can be undertaken on site, thus reducing the lead time in equipment repair.

In November, the Mine Training College, central warehouse and workshops were flooded, following three days of very heavy rain. No production was lost and quick control of the situation minimised damage.

Greater use was made of computers during the year. Previously, applications have been mainly in the commercial area, but the introduction of new systems for use in operating divisions are broadening this scope. New applications included mine production control through the allocation of trucks to shovels, plant maintenance control systems, geo-statistical models for mine planning and production simulation to evaluate process improvements.

Exploration and Technology:

Exploration activities were restricted to the Special Mining Lease. A limited drilling programme was carried out in three separate areas to further define the Panguna ore body.

Investigations are proceeding to determine if copper can be economically extracted from waste dumps by leaching and if additional gold can be recovered from tailings. The ore treated by the concentrator contains both molybdenum and magnetite and research is being undertaken to ascertain the viability of their extraction.

Capital Expenditure:

Capital expenditure for the year totalled K30.3 million. Major items of expenditure were housing (K4.3 million), mining equipment (K4.7 million), pit drainage tunnel (K1.6 million), workshop extensions (K1.2 million) and stream diversion (K3.0 million).

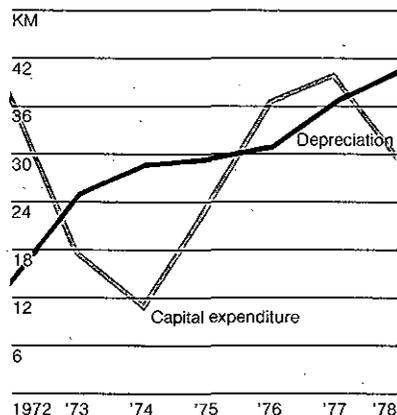
The work undertaken on stream diversion is a continuation of a long term programme. In 1976, the Kawerong River, the principal river passing through the Company's operations, was diverted into a 2.5 km long concrete channel over the mine waste dumps. The completion of this project overcame the major environmental problem of waste rock from the mine being carried into the river system. By 1980, the mine waste dumps will have developed to the end of this channel. During 1978, a 1.2 km extension of the channel was commenced, to safeguard the river system through to 1990. The cost of this project, which will be completed in 1980, is estimated to be K12 million.

Total investment in property, plant and equipment now stands at K529 million, of which K189 million has been written off, as depreciation, against earnings to date. It is estimated that the current cost of a similar investment would be K1 200 million.



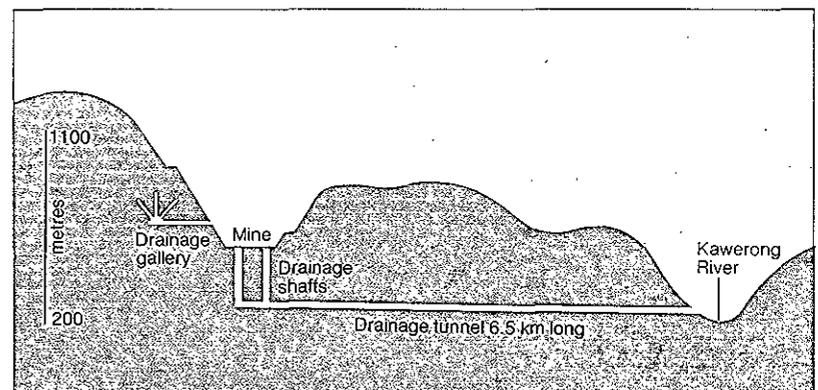
P. W. Quodling, General Manager.
6th February, 1979.

Capital expenditure & depreciation
1972-1978



Capital expenditure has been required to maintain production capacity as ore grades decline.

Pit drainage system



Right:
Aerial view of port-mine
access road.



Training



Mr. W. Herry, Manager - Training

Employee Development:

Since development of the Bougainville Copper project commenced, a major objective has been to maximise the number of positions in the workforce held by Papua New Guinea nationals. As the project is the only large scale open cut mine in the country, local recruitment of sufficient numbers of appropriately trained employees has not been possible. The Company has had to undertake an extensive educational and training programme to develop employees' own capabilities. This is now in its tenth year.

The scope of training activities has expanded substantially in recent years. In the early days of the mine's development, emphasis was placed on developing employees for operating positions involving work of a routine nature. However, as employees matured and their experience levels expanded, increasing attention has been given to developing their supervisory skills so that they could take over more responsible positions.

Mine Training College:

The employee training and development activity is centred at the Mine Training College, which is a complex of lecture theatres, classrooms and administrative offices. Attached to the college are a number of apprenticeship training centres. The investment in the Mine Training College and its facilities now stands at K3.9 million, while its teaching and administrative staff establishment totals 61.

Apprentice training:

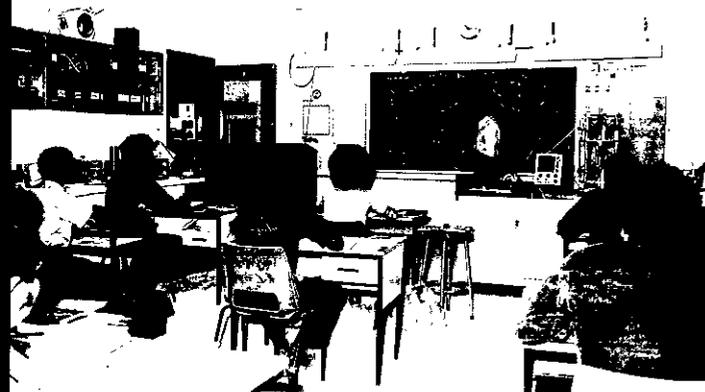
Apprentice training has been one of the main activities of the Mine Training College. The objective being to train all tradesmen required for the operation. Recruits come from many provinces of Papua New Guinea and live in single quarters built by the Company. The periods of apprenticeship vary between three and four years. Both formal classroom work and on the job training are undertaken.

Since 1970, a total of 403 has completed technical apprenticeships in the range shown in the diagram on the opposite page. Some 66% are still with the Company, either working as supervisors, practising their trade or undertaking further training for promotion to supervisory positions. A further 320 apprentices were being trained at the end of 1978.

The content of courses has altered over time to cater for changing needs and to ensure consistency with courses sponsored by the Papua New Guinea Government elsewhere in the country. These changes have improved the quality of courses and are expected to produce better tradesmen.

Other Training:

A wide range of courses is conducted at the Mine Training College in addition to apprentice training. Subject matters range from those such as "English in a Business Environment" and "Office Procedures" which are suitable for school leavers entering the workforce, to advanced accounting subjects, which are required for staff to gain admission to internationally recognised professional institutes. Girls are also trained to become stenographers.



Class at Mine Training College



Mine Training College



Left
National students being shown over Mine Training College

and typists. A number of courses covering various management skills are given, either by the Company's own teaching staff, or by overseas lecturers and management consultants. In 1978, a total of 1 674 attended the various management development activities presented at the Mine Training College.

57
Metal
Welders

12
Plumbers

25
Joiner-
Carpenters

External Studies:

National staff who hold management positions are sent to external educational institutions to attend specialist courses. In 1978, 17 members of staff were sent to courses held in either Port Moresby, Australia or Fiji. Another five employees were seconded for extended periods to mining operations in Australia to gain practical experience. The benefits gained from exposing employees to outside ideas and techniques have been substantial.

71
Motor
Mechanics

52
Electricians

63
Heavy Equip.
Fitters

3
Instrument
Mechanics

44
Diesel
Mechanics

4
Radio
Mechanics

6
Refrigeration
Mechanics

20
Linesmen

4
Painter-
Signwriters

Company Scholarship Scheme:

The Company has granted scholarships for students to study for degree courses at either the University of Papua New Guinea in Port Moresby or the Papua New Guinea University of Technology in Lae. Particular emphasis has been placed on recruiting university graduates who can fill professional positions. However, scholarship holders are not bonded to the Company on graduation and are free to choose employment wherever they wish. In 1978, 53 students holding company scholarships studied for their degrees in ten different disciplines. Of these, 15 gained their degrees and 14 joined the Company as graduate cadets. They commenced development programmes which will equip them for senior positions.

37
Fitter
Machinists

5
Panel
Beaters

Statistical Summary 1972-1978

Mined		1978	1977	1976	1975	1974	1973	1972*
Ore and Waste removed	(millions of tonnes)	79.05	70.79	58.54	56.40	56.00	56.65	46.75
Ore Milled	(millions of tonnes)	38.12	34.11	31.21	31.08	30.14	29.14	21.89
Ore Grade								
Copper	(per cent)	0.60	0.61	0.64	0.64	0.70	0.73	0.76
Gold	(grams/tonne)	0.82	0.90	0.87	0.80	1.02	1.03	0.77
Silver	(grams/tonne)	1.80	1.86	1.96	1.87	2.12	1.99	2.06

Produced		1978	1977	1976	1975	1974	1973	1972*
Concentrate	(dry tonnes)	658 587	615 605	596 838	595 498	640 818	650 172	438 115
Contained Copper	(tonnes)	198 603	182 291	176 519	172 477	184 083	182 890	123 961
Concentrate Grade								
Copper	(per cent)	30.16	29.61	29.58	28.94	28.73	28.13	28.29
Gold	(grams/tonne)	35.5	36.3	33.9	30.5	32.0	31.6	27.25
Silver	(grams/tonne)	79.8	77.1	76.1	71.0	72.0	69.0	69.3

Shipped		1978	1977	1976	1975	1974	1973	1972*
Total Concentrate	(dry tonnes)	640 911	614 819	605 793	586 947	665 702	625 227	434 387
Shipped to:								
W. Germany		206 806	198 321	223 170	243 534	221 365	200 333	186 827
Japan		326 720	337 090	256 406	250 658	343 204	342 878	209 032
Spain		62 082	47 019	58 169	72 184	57 368	35 778	27 565
Other		45 303	32 389	68 048	20 562	43 765	46 238	10 963

Received		1978	1977	1976	1975	1974	1973	1972*
Net Sales revenue	(K 000)	223 282	200 578	205 349	184 754	279 825	249 048	95 695
Contribution by:								
Copper		120 704	114 699	142 021	117 505	194 159	203 422	75 226
Gold		97 144	81 282	59 253	63 706	81 417	43 623	19 328
Silver		5 434	4 597	4 075	3 543	4 249	2 003	1 141

Other Statistics

Average Metal Prices								
Copper —								
L.M.E. cash sellers								
price for electrolytic								
wire bars	(expressed in US\$/lb)	61.9	59.3	63.6	55.9	93.3	80.9	48.6
Gold —								
Mean of London								
Gold Market	(US\$/oz.)	193.5	147.8	124.8	160.9	158.7	97.3	58.2
Silver —								
Spot price, London								
Silver Market	(expressed in US\$/oz.)	5.4	4.6	4.4	4.4	4.7	2.5	1.7
Work force at 31st December (P.N.G.)								
Overseas	(number)	855	853	858	942	980	929	971
National	(number)	3 243	3 063	2 989	3 094	3 242	2 915	2 594
Number of Shareholders at 31st December		40 935	43 820	50 082	54 129	55 558	45 353	46 726
Shareholders' Funds at 31st December	(K'000)	317 565	309 656	302 515	287 884	268 423	227 377	146 679
Net Earnings	(K'000)	48 015	28 531	41 368	46 199	114 579	158 411	27 679
Dividends in Respect of Year	(K'000)	40 106	21 390	26 738	26 738	73 528	80 212	11 000
Return on Shareholders' Funds	(per cent)							
—before extraordinary item		15.1	9.2	13.7	14.9	42.7	69.7	18.4
—after extraordinary item		15.1	9.2	13.7	16.0	42.7	69.7	18.4

Notes:

* Full year figures; but commercial production commenced 1st April, 1972.

** 1972 figure is for Bougainville Mining Limited

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Bougainville Copper Limited
(Incorporated in Papua New Guinea)

Registered Office:
Panguna, Province of North Solomons,
Papua New Guinea.

Share Registers:
Victoria: 84 Flinders Lane, Melbourne.
A.C.T.: 78 Northbourne Avenue, Canberra City.
P.N.G.: Panguna, Province of North Solomons.
United Kingdom: c/o Central Registration Limited,
1 Redcliff Street, Bristol.

Stock Exchanges:
Listed on the principal exchanges in all Australian
states and New Zealand.

Auditors:
Coopers & Lybrand

Bankers:
Commonwealth Trading Bank of Australia
Bank of America NT & SA
Papua New Guinea Banking Corporation

Solicitors:
Gadens
Arthur Robinson & Co.

Directors' Report

The directors of Bougainville Copper Limited present their report on the audited financial statements of the Company and its subsidiary for the year ended 31 December, 1978.

Directors:

The directors of Bougainville Copper Limited at the date of this report are:

Sir Frank Espie, O.B.E. (Chairman)
N.R. Agonia
J. L. Auna
Sir Roderick Carnegie
B. E. Fairfax-Ross, C.B.E.
P. W. Quodling
J. T. Ralph
D. C. Vernon

Sir Roderick Carnegie and Mr. J. T. Ralph retire in accordance with the Company's Articles of Association and being eligible, offer themselves for re-election.

Activities:

Bougainville Copper Limited has produced concentrates containing copper, gold and silver from a mine at Panguna, North Solomons Province, since 1972. Its subsidiary, Bougainville Copper Finance N.V. is incorporated in the Netherlands Antilles for fund raising purposes. No change in the activities of the group occurred during the year.

Net earnings:

The net earnings of Bougainville Copper Limited and its subsidiary for 1978 totalled K48 015 000 after providing K40 425 000 depreciation and amortisation, K2 790 000 for royalties and K22 000 000 for income tax.

Subsidiaries:

No subsidiaries were acquired or disposed of during the year. No dividends were paid by Bougainville Copper Finance N.V.

Share Capital:

There was no change in the Company's capital structure during the year.

Exchange Fluctuations:

Exchange gains of K11 740 000 were realised on the repayment of U.S. and Australian dollar loans, while exchange losses of K1 445 000 were suffered on overseas bank balances. These gains and losses were respectively credited and debited to 1978 earnings.

Long Term Loans:

Draw downs against long term loan arrangements consisted of the balance of the Bank of America Syndicate truck loan (U.S. \$8 000 000) and a term loan from the Papua New Guinea Banking Corporation (K10 000 000). Repayments of K64 642 000 were made against existing loans, leaving a balance outstanding at year end of K60 819 000.

Dividends:

An interim dividend of 5 toea per share was declared on 17 August, 1978 and paid on 3 November, 1978. A final dividend of 10 toea per share has been declared and is payable on 3 May, 1979 bringing the total dividend from 1978 earnings to 15 toea per share. Withholding tax is deducted from dividends where required by the Chief Collector of Taxes.

Auditors:

The retiring Auditors, Coopers & Lybrand, being eligible, offer themselves for re-appointment.

Statutory Information:

In accordance with the provisions of Section 162 of the Papua New Guinea Companies Act 1963, as amended to date, the directors state that:

1. In their opinion, the results of the group's operations in the year under review have not been materially affected by items of an abnormal character except as mentioned in this report.
2. In their opinion, the current assets will realise at least the value at which they are shown in the accounts and that the value is an amount that these current assets might reasonably be expected to realise in the ordinary course of business.
3. In their opinion, no circumstances have arisen which render adherence to the existing method of valuation of assets or liabilities misleading or inappropriate.
4. No contingent liabilities have arisen since the balance date of the group accounts, 31 December 1978, and the date of this report, 6 February, 1979.
5. No contingent liabilities have become enforceable or are likely to become enforceable within twelve months from the date of this report which will materially affect the group in its ability to meet its obligations as and when they fall due.

Additional Information:

The directors also state that:

1. They took reasonable steps before the statements of earnings and balance sheets were made out to ascertain what action had been taken so far as debts owing to the Holding Company were concerned in relation to the writing off of bad debts and the making of provisions for doubtful debts and are satisfied that there were no bad debts and that a provision for doubtful debts of K50 000 was adequate.
2. They are not aware of any circumstances which would render the amounts written off for bad debts or the amounts of the provision for doubtful debts inadequate to any substantial extent.
3. Since the end of the financial year, no charge on the assets of either of the companies in the group has arisen which secures the liability of any other person.
4. They are not aware of any circumstances not otherwise dealt with in this report or group accounts, which would render any amount stated in the group accounts misleading.
5. No item, transaction or event of a material and unusual nature has arisen in the interval between the end of the financial year and the date of this report, which in the opinion of the directors of Bougainville Copper Limited, is likely to substantially affect the results of the operations of the group in 1979.

Signed this 6th day of February, 1979 in accordance with a resolution of the directors of Bougainville Copper Limited.



F. F. Espie (Chairman)



P. W. Quodling
(General Manager and Director)

Simplified Financial Statements

Bougainville Copper Limited

Balance Sheet

Funds employed: K466m.	KM.	KM.	Assets: K466m.
Shareholders' funds	317	340	Net investment in property, plant and equipment
Potential exchange gains on future loan repayments	9		
Borrowings	61	35	Stocks and shares
Amount owed to creditors and for income tax	52	56	Amount owed by debtors
1978 final dividend payable	27	35	Cash at bank

Earnings Statement

Income: K235m.	KM.	KM.	Expenses: K235m.
Sales and other income	225	122	Cost of sales
Exchange gains realised on financing transactions	10	40	Depreciation
		25	Taxation and royalties
		48	Net earnings

Statements of Earnings

Bougainville Copper Limited
and Subsidiary Company

year ended 31 December, 1978

	Notes	Consolidated		Bougainville Copper Limited	
		1978 K'000	1977 K'000	1978 K'000	1977 K'000
Income					
Net sales revenue		223 282	200 578	223 282	200 578
Other income		1 864	4 756	1 864	4 756
		<u>225 146</u>	<u>205 334</u>	<u>225 146</u>	<u>205 334</u>
Costs and expenses					
Costs of sales, general and administration expenses		116 118	112 674	116 118	112 671
Depreciation and amortisation	3	40 425	36 203	40 425	36 203
Royalties		2 790	2 490	2 790	2 490
Interest		6 093	11 661	6 093	11 661
		<u>165 426</u>	<u>163 028</u>	<u>165 426</u>	<u>163 025</u>
Earnings from operations					
Net exchange gains/(losses)	6	59 720	42 306	59 720	42 309
		<u>10 295</u>	<u>(51)</u>	<u>10 295</u>	<u>(51)</u>
Earnings before taxation					
	2	70 015	42 255	70 015	42 258
Current income tax	4	22 000	13 724	22 000	13 724
Net earnings for year					
Add:		48 015	28 531	48 015	28 534
Retained earnings brought forward		175 968	168 827	175 971	168 827
		<u>223 983</u>	<u>197 358</u>	<u>223 986</u>	<u>197 361</u>
Less:					
Dividends					
Interim paid		13 369	10 695	13 369	10 695
Final payable		26 737	10 695	26 737	10 695
Total dividends					
		<u>40 106</u>	<u>21 390</u>	<u>40 106</u>	<u>21 390</u>
Retained earnings carried forward					
		<u>183 877</u>	<u>175 968</u>	<u>183 880</u>	<u>175 971</u>

All amounts are expressed in Papua New Guinea kina.
Rounding to the nearest thousand kina has been adopted.
The notes commencing on page 22 form part of these
accounts and are to be read in conjunction with them.

Balance Sheets

Bougainville Copper Limited
and Subsidiary Company

at 31 December, 1978

	Notes	Consolidated		Bougainville Copper Limited	
		1978 K'000	1977 K'000	1978 K'000	1977 K'000
Funds employed by the group:					
Shareholders' funds					
Paid up capital	5	133 688	133 688	133 688	133 688
Retained earnings		<u>183 877</u>	<u>175 968</u>	<u>183 880</u>	<u>175 971</u>
Total shareholders' funds		<u>317 565</u>	<u>309 656</u>	<u>317 568</u>	<u>309 659</u>
Exchange fluctuation	6	9 003	14 608	9 003	14 608
Long term liabilities					
Loans	7	40 510	51 952	40 510	51 952
Provision for long service leave		<u>1 550</u>	<u>1 360</u>	<u>1 550</u>	<u>1 360</u>
		<u>42 060</u>	<u>53 312</u>	<u>42 060</u>	<u>53 312</u>
Current liabilities					
Loans	7	20 309	63 724	20 309	63 724
Creditors	8	28 044	23 678	28 042	23 675
Income tax		22 293	13 749	22 293	13 749
Dividend payable		<u>26 737</u>	<u>10 695</u>	<u>26 737</u>	<u>10 695</u>
		<u>97 383</u>	<u>111 846</u>	<u>97 381</u>	<u>111 843</u>
Total funds		<u>466 011</u>	<u>489 422</u>	<u>466 012</u>	<u>489 422</u>
These funds are represented by:					
Fixed assets					
Property, plant and equipment	9	340 144	352 228	340 144	352 228
Investments	10	83	83	92	92
Current assets					
Bank balances and short term deposits		34 426	70 896	34 418	70 887
Debtors for sale of concentrates		51 794	32 527	51 794	32 527
Other debtors	11	4 174	3 585	4 174	3 585
Stocks and stores	12	<u>35 390</u>	<u>30 103</u>	<u>35 390</u>	<u>30 103</u>
		<u>125 784</u>	<u>137 111</u>	<u>125 776</u>	<u>137 102</u>
Total assets		<u>466 011</u>	<u>489 422</u>	<u>466 012</u>	<u>489 422</u>

All amounts are expressed in Papua New Guinea kina.
Rounding to the nearest thousand kina has been adopted.
The notes commencing on page 22 form part of these
accounts and are to be read in conjunction with them.

Notes forming part of the 1978 accounts

Bougainville Copper Limited
and Subsidiary Company

These notes form part of the accounts and consolidated accounts of Bougainville Copper Limited and should be read in conjunction with them.

1. Statement of significant accounting policies

The principal accounting policies adopted in the preparation of the group accounts are stated to assist in a general understanding of the financial statements.

The policies generally comply with the accounting standards of the principal Australian professional accounting bodies. They are consistent with those adopted in the previous year.

Historical Cost Convention

The financial statements have been prepared under the historical cost convention and have not been adjusted to take account of changing money values, or the current cost of replacing assets.

Valuation of Fixed Assets

Mine property, buildings, plant, machinery and equipment are valued at cost less accumulated depreciation and amortisation.

Depreciation and Amortisation of Property, Plant & Equipment

Depreciation and amortisation are provided on the straightline method by charges against income based on the estimated useful economic life of respective assets.

New assets are depreciated from the month following their commissioning. Generally, assets are fully depreciated or amortised over the shorter of economic life or twenty years.

Amortisation of Borrowing Expenses

Borrowing expenses incurred on loans arranged prior to the commencement of commercial operations have been capitalised and amortised over the five year period beginning 1 January, 1974. Borrowing expenses incurred on loans arranged after the commencement of commercial operations have also been capitalised, with the amount applicable to each loan being amortised over a five year period from the year in which it was arranged.

Exploration and Development Expenditure

Expenditure on exploration within the mining lease and development is written off or provided against as incurred. Exploration has not been undertaken outside the mining lease.

Maintenance and Repairs

Expenditure on maintenance and repairs is charged against income as incurred.

Valuation of Stocks and Stores

Concentrate stocks at year end are valued at direct production cost, which is lower than net realisable value. Cost includes direct materials, services and overheads, but excludes depreciation and indirect overheads. Other stocks and stores are valued on an average cost basis less an allowance for obsolescence.

Net Sales Revenue

Sales are recognised on shipment of concentrates from Bougainville, when title passes to the buyer. However, final sales value can only be determined from weights, assays, prices, and treatment charges applying after a shipment has arrived at its destination. Consequently, estimates are used to determine net sales revenue of consignments in the period between their shipment and final valuation. The estimates of sales revenue for shipments not due for final valuation until the following year are considered realistic. Any variation from revenue actually realised will be included in the following year's financial statements.

Taxation

Income tax charged against earnings is calculated on taxable income for the year. Certain items of expenditure, consisting of depreciation, provisions for future liabilities and major consumable stock items, are deductible for income tax in different years from which they are charged against earnings. Such timing differences would not materially affect the determination of income tax had it been calculated on earnings before taxation.

Foreign Currency Conversion

Monetary assets held and liabilities and borrowings due in foreign currencies are converted to Papua New Guinea currency at the rates of exchange ruling at balance date. All other overseas transactions are converted at the rates of exchange applying when they occurred. Unrealised exchange gains on overseas borrowings are held in the Exchange Fluctuation Account and transferred to earnings when realised.

Subsidiary

The wholly owned subsidiary, Bougainville Copper Finance N.V., is incorporated in the Netherlands Antilles for fund raising purposes. This Company has been consolidated in accordance with conventional consolidation principles.

		Bougainville Copper Limited	
Consolidated		1978	1977
1978	1977	K'000	K'000

2. Earnings before taxation

Earnings before taxation have been determined after allowing for the following income and expense items:

Income:				
Interest on short term deposits	1 807	4 756	1 807	4 756
Dividends — received from non-related corporation	1	—	1	—
Expenses:				
Interest — on long term loan from subsidiary	—	—	1 442	1 105
— on long term loans and standby facilities	6 093	11 661	4 651	10 556
Provision for doubtful debts (Note 13)	13	32	13	32
Loss on disposal of fixed assets	1 397	667	1 397	667
Research and development expenditure	160	805	160	805
Directors' emoluments (Note 14)	4	4	4	4
Auditors' remuneration —				
auditing the accounts	64	58	64	58
other services	14	17	14	17
(The auditors received no other benefits)				

3. Depreciation and amortisation

The amount charged against earnings comprises:

Depreciation on: buildings	11 201	10 048	11 201	10 048
plant, machinery and equipment	25 037	22 085	25 037	22 085
Amortisation of: mine property	3 106	3 106	3 106	3 106
borrowing expenses	1 081	964	1 081	964
Total	<u>40 425</u>	<u>36 203</u>	<u>40 425</u>	<u>36 203</u>

4. Current taxation

The income tax charged against earnings is determined in accordance with the policy set out in Note 1.

The following reconciliation discloses the income and expense items which caused the charge for income tax in the statement of earnings to vary from the income tax prima facie payable on reported earnings:

Income tax prima facie payable on reported earnings	25 555	14 086	25 555	14 086
plus/(minus) income tax at normal rates on:				
variation between provision for depreciation in statement of earnings and amount deductible for taxation	105	(652)	105	(652)
excess of other provisions over payments	388	370	388	370
other	46	138	46	138
net exchange (gains)/losses which are exempt from taxation	(3 778)	22	(3 778)	22
allowance on purchase of consumable aids	(23)	(215)	(23)	(215)
Income tax payable on year's earnings	22 293	13 749	22 293	13 749
Less taxation over-provided in previous year	(293)	(25)	(293)	(25)
Charges for income tax in statements of earnings	<u>22 000</u>	<u>13 724</u>	<u>22 000</u>	<u>13 724</u>

The Mining (Bougainville Copper Agreement) Act provides the basis for determining the Company's income tax liability. The standard Papua New Guinea company tax rate applies to taxable income up to a certain level and a rate of 70% applies to any excess above that level.

The standard Papua New Guinea company tax rate was increased from 33½% for 1977 taxable income to 36½% for 1978 taxable income. The Company's taxable income did not reach the level above which a taxation rate of 70% applies.

5. Capital

The authorised capital of K135 000 000 consists of 270 000 000 ordinary shares of 50 toea each. The issued capital of the Company is 267 375 000 ordinary shares of 50 toea each, fully paid.

No change in authorised or issued capital occurred during 1978.

6. Exchange fluctuation

(a) The movements in Exchange Fluctuation Account relating to overseas loan obligations were:

Balance of unrealised gains 1 January	14 608	9 031	14 608	9 031
increase due to currency movements during year	6 135	7 754	6 135	7 754
	<u>20 743</u>	<u>16 785</u>	<u>20 743</u>	<u>16 785</u>
Gains realised on loan repayments during year	11 740	2 177	11 740	2 177
Balance 31 December	<u>9 003</u>	<u>14 608</u>	<u>9 003</u>	<u>14 608</u>

(b) The net exchange gains/(losses) credited/(debited) to earnings consist of:

Gains realised on loan repayments	11 740	2 177	11 740	2 177
Losses on conversion of overseas cash balances to Papua New Guinea kina	(1 445)	(2 228)	(1 445)	(2 228)
Net exchange gains/(losses)	<u>10 295</u>	<u>(51)</u>	<u>10 295</u>	<u>(51)</u>

Consolidated		Bougainville Copper Limited	
1978	1977	1978	1977
K'000	K'000	K'000	K'000

7. Long term loans

(a) Total long term loans, which are all secured, are repayable as follows:

within one year	20 309	63 724	20 309	63 724
later than one year	40 510	51 952	40 510	51 952
Total outstanding obligations	<u>60 819</u>	<u>115 676</u>	<u>60 819</u>	<u>115 676</u>

All loans are secured by a charge over 194 500 676 shares in the Company owned by Conzinc Riotinto of Australia Limited, the Government of Papua New Guinea and the Investment Corporation of Papua New Guinea. The charge was established under a Credit Agreement dated 28 July, 1969, but can only become enforceable after default in respect of the Japanese cash and equipment loans. The charge is not directly enforceable by other lenders.

(b) The following are the individual loans which make up the total outstanding loan obligations:

Bank loans	Interest Rate 1978	Repayable				
Commonwealth Trading Bank of Australia (US Dollars)	10.57%	—	—	51 061	—	51 061
Papua New Guinea Banking Corporation housing loan (Kina)	8.00%	—	—	2 907	—	2 907
International Westminster Bank (US Dollars)	10.63%	1979-1981	3 441	3 788	3 441	3 788
Bank of America (US Dollars)	10.50%	1979-1983	6 882	9 090	6 882	9 090
Bank of America Syndicate (US Dollars) (Note (c) (1))	9.19%	1979-1981	9 773	6 818	9 773	6 818
Papua New Guinea Banking Corporation (Kina) (Note (c) (2))	9.25%	1979-1984	10 000	—	10 000	—
			<u>30 096</u>	<u>73 664</u>	<u>30 096</u>	<u>73 664</u>
Other loans						
Japanese cash loan (US Dollars)	8.22%	1979	3 097	6 818	3 097	6 818
Japanese equipment loan (US Dollars)	6.85%	1979-1982	5 626	7 741	5 626	7 741
Australian equipment loans (Aust. Dollars)	7.50%	1979-1982	5 620	8 513	5 620	8 513
Bearer Notes due 1984 (US Dollars)	8.75%	1979-1984	16 380	18 940	—	—
Loan from Subsidiary (US Dollars)	8.75%	1979-1984	—	—	16 380	18 940
			<u>30 723</u>	<u>42 012</u>	<u>30 723</u>	<u>42 012</u>
Total outstanding obligations			<u>60 819</u>	<u>115 676</u>	<u>60 819</u>	<u>115 676</u>

(c) Additional details applicable to individual loans follow:

(1) In February, 1978, draw down was made of the final \$US10 million available from the \$US18 million loan, arranged in 1977 with the Bank of America, Toronto Dominion Bank and Security Pacific National Bank. The funds were used to complete the replacement of the haul truck fleet. Notice for prepayment of this loan by February, 1979, was given in December, 1978.

(2) A K10 million loan was arranged with the Papua New Guinea Banking Corporation and drawn down in July, 1978. The funds were used to finance the Company's capital expenditure program and working capital requirements.

8. Creditors

Amounts due to creditors comprise:

Related corporations:				
Subsidiary company	—	—	962	1 105
Other	55	292	55	292
Trade creditors	10 386	9 082	10 386	9 082
Other current liabilities:				
Secured	1 578	3 156	614	2 048
Unsecured	16 025	11 148	16 025	11 148
Total	<u>28 044</u>	<u>23 678</u>	<u>28 042</u>	<u>23 675</u>

9. Property, plant and equipment

Leasehold, land & buildings (at cost)	221 471	208 389	221 471	208 389
Less depreciation	62 016	51 400	62 016	51 400
	<u>159 455</u>	<u>156 989</u>	<u>159 455</u>	<u>156 989</u>
Plant, machinery & equipment (at cost)	232 268	219 021	232 268	219 021
Less depreciation	100 588	79 294	100 588	79 294
	<u>131 680</u>	<u>139 727</u>	<u>131 680</u>	<u>139 727</u>
Mine property (at cost)	62 122	62 122	62 122	62 122
Less amortisation	20 953	17 848	20 953	17 848
	<u>41 169</u>	<u>44 274</u>	<u>41 169</u>	<u>44 274</u>
Capitalised borrowing expenses	5 817	5 016	5 817	5 016
Less amortisation	5 020	3 274	5 020	3 274
	<u>797</u>	<u>1 742</u>	<u>797</u>	<u>1 742</u>
Capital work in progress	7 043	9 496	7 043	9 496
Total	<u>340 144</u>	<u>352 228</u>	<u>340 144</u>	<u>352 228</u>

Consolidated		Bougainville Copper Limited	
1978	1977	1978	1977
K'000	K'000	K'000	K'000

10. Investments

Investments are valued at cost.

Unquoted shares in related corporations:

Subsidiary company	—	—	9	9
Other	38	38	38	38
	<u>38</u>	<u>38</u>	<u>47</u>	<u>47</u>
Unquoted shares in other companies	45	45	45	45
Total	<u>83</u>	<u>83</u>	<u>92</u>	<u>92</u>

11. Other debtors

Amounts due from other debtors comprise:

Related corporations	661	654	661	654
Other debtors and payments in advance	3 563	2 976	3 563	2 976
Provision for doubtful debts	(50)	(45)	(50)	(45)
Total	<u>4 174</u>	<u>3 585</u>	<u>4 174</u>	<u>3 585</u>

12. Stocks and stores

Unshipped concentrates	4 610	822	4 610	822
Other stocks and stores	30 780	29 281	30 780	29 281
Total	<u>35 390</u>	<u>30 103</u>	<u>35 390</u>	<u>30 103</u>

13. Bad and doubtful debts

Amounts provided during the year for doubtful debts were in respect of:

Debtors for sale of concentrates	—	—	—	—
Other debtors	13	32	13	32

Bad debts of K7 896 in respect of other debtors, were written off against the provision for doubtful debts.

14. Directors' emoluments

The total of the emoluments received, or due and receivable (whether from the Company or from related corporations) by:

	1978		1977	
	Company K'000	Related Corporations K'000	Company K'000	Related Corporations K'000
(a) directors of the Company engaged in the full-time employment of the Company or its related corporations (including all bonuses and commissions received or receivable by them as employees but not including the amount received or receivable by them by way of fixed salary as employees), was	—	—	—	—
(b) other directors of the Company, was	4	—	4	—

No commissions for subscribing for, or agreeing to procure subscriptions for any shares in or debentures of the Company or any related corporation, were received or are due and receivable by any director.

15. Commitments for capital expenditure

The commitments for capital expenditure not reflected in the financial statements total approximately K9 774 000 (1977, K10 676 000).

16. Contingent liabilities

Bougainville Copper Limited has guaranteed the Bearer Notes issued by its subsidiary (K16 380 000). There are no other contingent liabilities which are material in nature or amount.

17. Ultimate holding company

The ultimate holding Company is The Rio Tinto-Zinc Corporation Limited (incorporated in England).

18. Comparative figures for 1977

These figures have been adjusted where necessary to conform with changes in classification made in 1978.

Declarations

Statement by Directors

In the opinion of the Directors of Bougainville Copper Limited the accompanying statements of earnings are drawn up so as to give a true and fair view of the results of the business of the Company and group for the period covered by the statements and the accompanying balance sheets are drawn up so as to exhibit a true and fair view of the state of affairs of the Company and group at the end of that period.

Signed at Panguna this 6th day of February, 1979.

On behalf of the Board
F. F. ESPIE, P. W. QUODLING
Directors

Declaration by Secretary

I, Misac Rangai, Secretary of Bougainville Copper Limited, do solemnly and sincerely declare that the accompanying balance sheets and statements of earnings of the Company and group are, to the best of my knowledge and belief, correct. And I make this solemn declaration by virtue of the Oaths, Affirmations and Statutory Declarations Act 1962, as amended to date, conscientiously believing the statements contained herein to be true in every particular.

Declared at Panguna this 6th day of February, 1979.

M. RANGAI
Secretary
Before me:
L. G. SMITH
Commissioner for Oaths

Report of the Auditors to the Members

We report on the accompanying balance sheets and statements of earnings of the Company and of the group set out on pages 20 to 25 which have been prepared under the historical cost convention described in note 1.

In our opinion the balance sheets and statements of earnings are properly drawn up in accordance with the provisions of the Companies Act 1963, as amended, and so as to give a true and fair view of the state of affairs of the Company and of the group as at 31st December, 1978, and the results for the year ended on that date.

In our opinion the accounting and other records, including registers, examined by us have been properly kept in accordance with the provisions of the Act.
COOPERS & LYBRAND
Arawa, 8th February, 1979

Shareholdings

Substantial shareholders

The distribution of holdings of the issued shares in Bougainville Copper Limited at 31st January, 1979, was:

1- 1 000 shares	33 669
1 001- 5 000 shares	6 049
5 001-10 000 shares	609
10 001 shares and over	495
Total shareholders	<u>40 822</u>

Substantial shareholders at 31st January, 1979, were:
The Rio Tinto-Zinc Corporation Limited,
R.T.Z. Australian Holdings Limited,
C.R.A. Holdings Pty. Limited,
Conzinc Riotinto of Australia Limited,
C.R.A. Base Metals Pty. Limited,
143 258 644 shares.

The Independent State of Papua New Guinea,
The Investment Corporation of Papua New Guinea,
53 975 000 shares.

83.07% of the total issued shares were held by the 20 largest shareholders of the Company at 31st January, 1979.

The voting rights are one vote for each share held.

Ten largest shareholders

The ten largest shareholders at 31st January, 1979, and the number of shares held by each were:

Name & Registered Address:	Shares
Conzinc Riotinto of Australia Limited, Melbourne. Vic.	140 525 676
The Independent State of Papua New Guinea, P.N.G.	50 948 113
The National Mutual Life Association of Australasia Limited, Melbourne. Vic.	5 214 426
ANZ Nominees Limited, Melbourne. Vic.	3 579 929
Bank of New South Wales Nominees Pty. Ltd., Sydney. N.S.W.	3 097 757
The Investment Corporation of Papua New Guinea, Port Moresby. P.N.G.	3 026 887
C.R.A. Base Metals Pty. Ltd., Melbourne. Vic.	2 732 968
Panguna Development Foundation Limited, North Solomons Province. P.N.G.	2 400 000
The Colonial Mutual Life Assurance Society Limited, Melbourne. Vic.	2 100 991
National Nominees Limited, Melbourne. Vic.	<u>2 074 199</u>
	<u>215 700 946</u>

Directors' interests

Directors' interests in Bougainville Copper Limited and its related companies — 31st January, 1979:

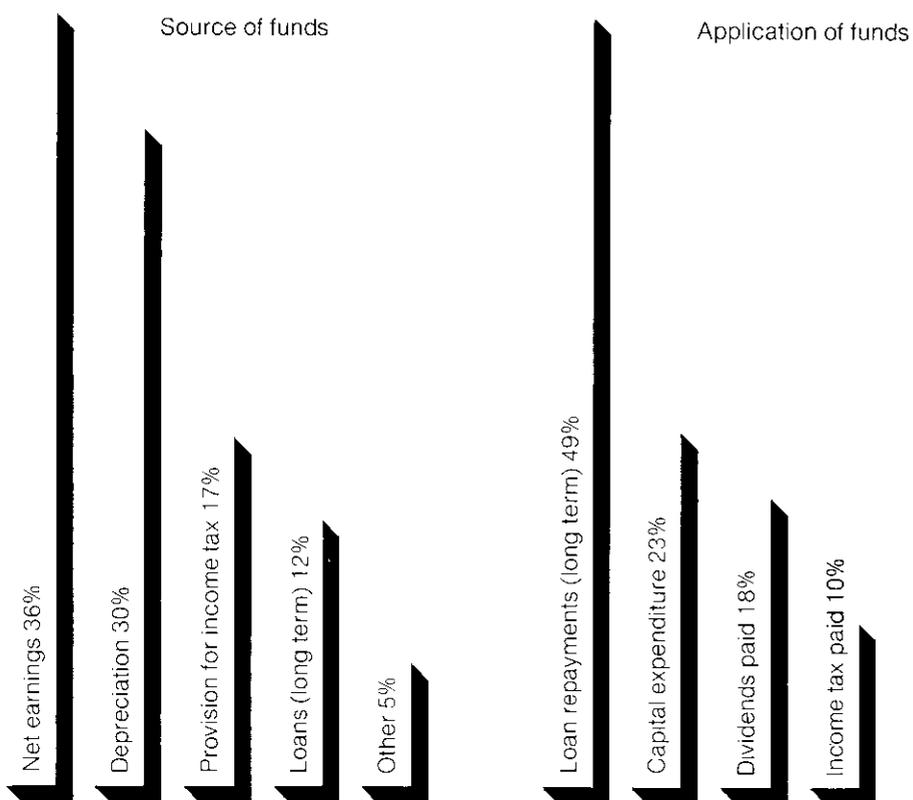
F. F. Espie	1 300	Mary Kathleen Uranium Limited shares
R. H. Carnegie	6 000	Bougainville Copper Limited shares
	1 000	Mary Kathleen Uranium Ltd shares
	6 000	Conzinc Riotinto of Australia Limited shares
	1 000	Hamersley Holdings Limited shares
J. T. Ralph	114	Bougainville Copper Limited shares
	476	Conzinc Riotinto of Australia Limited shares
	£750	The Rio Tinto-Zinc Corporation Limited convertible loan stock
B. E. Fairfax-Ross	2 400	Bougainville Copper Limited shares
J. L. Auna		No interests
D. C. Vernon		No interests
P. W. Quodling		No interests
N. R. Agonia		No interests

Source & application of funds

Source of funds	1978 K.Mill	1977 K.Mill
Net earnings	48.0	28.5
Depreciation	40.4	36.2
Provision for income tax	22.0	13.7
Loans (long term)	15.8	28.1
Other:		
Decrease in working capital	14.2	1.3
Proceeds from sale of assets	0.5	1.0
Miscellaneous	1.8	1.0
Exchange gains on financing	(10.3)	3.2
	<u>6.2</u>	<u>3.2</u>
	<u>132.4</u>	<u>109.7</u>

Application of funds

Loan repayments (long term)	64.6	25.6
Capital expenditure	30.3	39.7
Dividends paid	24.1	24.1
Income tax paid	13.4	20.3
	<u>132.4</u>	<u>109.7</u>



Financial Summary 1972-1978

Earnings (K million)	1978	1977	1976	1975	1974	1973	1972*
Net sales revenue and other income	225.1	205.3	208.9	193.1	292.6	252.4	95.9
Operating and other expenses	125.0	126.8	117.5	107.2	90.0	81.8	53.3
Depreciation	40.4	36.2	31.1	29.6	28.5	24.8	14.5
Earnings before taxation and exchange gain	59.7	42.3	60.3	56.3	174.1	145.8	28.1
Exchange gains	10.3	(0.1)	1.3	2.3	7.0	12.9	(0.4)
Earnings before taxation	70.0	42.2	61.6	58.6	181.1	158.7	27.7
Taxation	22.0	13.7	20.3	12.4	66.5	0.3	—
Net earnings	48.0	28.5	41.3	46.2	114.6	158.4	27.7
Dividends	40.1	21.4	26.7	26.7	73.5	81.4	11.0
Earnings retained	7.9	7.1	14.6	19.5	41.1	77.0	16.7
Balance sheet (K million)							
Property, plant and equipment	340.1	352.2	350.4	346.0	352.2	371.7	378.7
Investments	0.1	0.1	0.1	0.1	0.1	0.1	—
Current assets	125.8	137.1	136.0	129.5	205.6	130.4	73.9
Total assets	466.0	489.4	486.5	475.6	557.9	502.2	452.6
Shareholders funds	317.5	309.7	302.5	287.9	268.4	227.4	146.7
Exchange fluctuation	9.0	14.6	9.0	11.5	19.1	39.5	24.2
Long term liabilities	42.1	53.3	101.7	106.8	121.1	127.5	204.0
Current liabilities	97.4	111.8	73.3	69.4	149.3	107.8	77.7
Funds employed	466.0	489.4	486.5	475.6	557.9	502.2	452.6
Other data							
Return on shareholder funds (%)	15.1	9.2	13.7	16.0	42.7	69.7	18.9
Earnings per share (toea)	18.0	10.7	15.4	17.3	42.9	59.2	10.7
Dividends in toea per fully paid share (par value, 50 toea)	15.0	8.0	10.0	10.0	27.5	30.0	4.2
Number of shares issued at end of year (thousands)	267 375	267 375	267 375	267 375	267 375	267 375	260 000**
Number of shareholders at end of year	40 935	43 820	50 082	54 129	55 558	45 353	46 726
Debt: Equity ratio	0.19/1	0.37/1	0.40/1	0.44/1	0.52/1	0.72/1	1.62/1

Notes:

*Commercial production commenced 1 April, 1972.

**130 000 000 one kina shares; 50 toea equivalent shown for comparison purposes.



**Bougainville
Copper Limited**

**Annual
Report 1978**

The Papua New Guinea Government maintained a strong kina as a key element in its policy to restrain inflation. In June, the Government introduced a broadly-based currency basket mechanism in place of the prior informal link with the Australian dollar. As a result, the kina appreciated significantly against both the US and Australian dollars, whilst it depreciated slightly against such strong currencies as the yen and deutschemark. The major effect on the Company has been to give a lower kina value of sales revenue than would have occurred if the previous year's exchange rates had prevailed. Some offsetting benefit has been received, however, from a reduction in the kina cost of debt servicing and imported goods and services.

Finance:

The year's long term loan obligations, consisting of principal repayments of K64.6 million and interest payments of K5.9 million, were all met. Included in the principal repayments was the Commonwealth Trading Bank of Australia term loan of US\$67.4 million. This completed repayment of the US\$177.4 million term loan, advanced by an international syndicate of banks to finance the construction of the Bougainville

Copper project. New borrowings against long term loan facilities of K15.8 million were made during the year to finance capital expenditure. The year-end balance of loans outstanding of K60.8 million was the lowest since operations commenced.

As a reflection of improving liquidity, a request was made to the Bank of America and Commonwealth Trading Bank of Australia to reduce the commitment under the joint term loan agreement, negotiated in 1977, from US\$60 million to US\$20 million. Agreement was also reached to extend the period of offer from the end of 1978 to the end of 1979. This facility has not been utilised to date. Similarly, the A\$4.2 million Export Finance Insurance Corporation facility, arranged in 1977 to finance the purchase of replacement crushers, remains undrawn.

Human Resources:

The higher level of activity in the mine and the wider range of maintenance services undertaken has resulted in an increase in the number of employees to 4 098 during the year. 3 243 of these are Papua New Guinea nationals, many of whom have undergone Company organised training programmes to acquire new skills. Contractors who provide services to the Company also employ approximately 1 000 people, a similar proportion of whom are nationals.

As part of the Company's wide training programme, a total of 81 apprentices received their trade indentures at the end of 1978 and a similar intake in 1979 will maintain apprentice training at a constant level. Since commencement of the

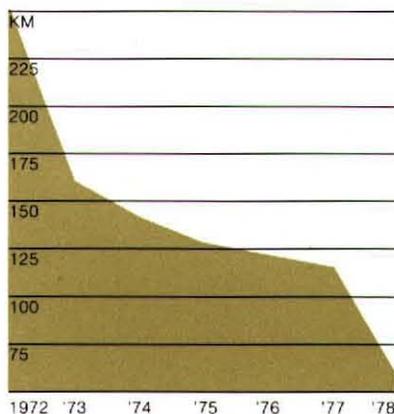
apprentice programme, 403 nationals have qualified as tradesmen. Of these, 246 have remained with the Company, many proceeding to undertake supervisory roles.

A further 14 national graduates joined the Company at the closing of the 1978 academic year, the intake at the tertiary trained level being constrained by the excess of employer demand over university output. One national graduate undertook further studies in Australia to qualify in Mine Engineering.

Employee Amenities:

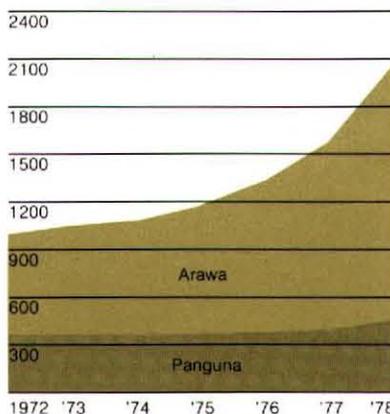
A house construction programme, undertaken to increase the level of married accommodation available to employees, was completed in 1978. This lifted the total number of married accommodation units to 1 966. In addition, 80 self-contained units have been constructed for single staff. These additional accommodation units have allowed for the closure and demolition of a camp accommodation complex, which was in the path of the mine advance. The complex had been built in the construction period.

Loans outstanding 1972-1978



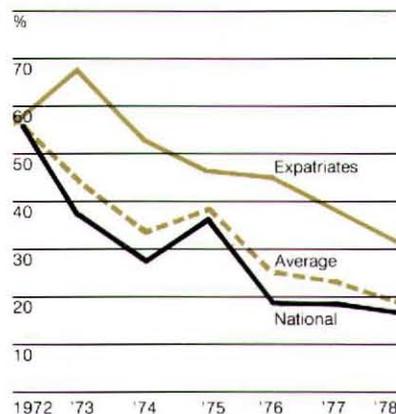
Loan balances have declined, despite metal price fluctuations and high capital expenditure.

Company houses 1972-1978



A substantial house building programme has been undertaken in the last 3 years.

Annual labour turnover 1972-1978



Labour turnover rates have shown improving trends.

Environment:

Environmental monitoring and research continued during 1978 with a staff of 32 employed full time on this work. Other staff were engaged in providing support services for this group, particularly in the areas of chemical analyses of environmental samples, computer processing of data and helicopter transport.

The physical, biological and social impacts of the operation are being progressively identified and defined. Based on these findings, measures to minimise and contain environmental stresses are being developed.

Technical Services:

Maintenance requirements have increased as plant becomes older. The additional demand for maintenance services has been met by an extension to engineering workshops and installation of more equipment. This has expanded the range of work that can be undertaken on site, thus reducing the lead time in equipment repair.

In November, the Mine Training College, central warehouse and workshops were flooded, following three days of very heavy rain.

No production was lost and quick control of the situation minimised damage.

Greater use was made of computers during the year. Previously, applications have been mainly in the commercial area, but the introduction of new systems for use in operating divisions are broadening this scope. New applications included mine production control through the allocation of trucks to shovels, plant maintenance control systems, geo-statistical models for mine planning and production simulation to evaluate process improvements.

Exploration and Technology:

Exploration activities were restricted to the Special Mining Lease. A limited drilling programme was carried out in three separate areas to further define the Panguna ore body.

Investigations are proceeding to determine if copper can be economically extracted from waste dumps by leaching and if additional gold can be recovered from tailings. The ore treated by the concentrator contains both molybdenum and magnetite and research is being undertaken to ascertain the viability of their extraction.

Capital Expenditure:

Capital expenditure for the year totalled K30.3 million. Major items of expenditure were housing (K4.3 million), mining equipment (K4.7 million), pit drainage tunnel (K1.6 million), workshop extensions (K1.2 million) and stream diversion (K3.0 million).

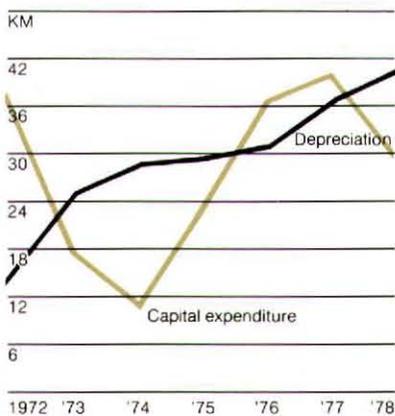
The work undertaken on stream diversion is a continuation of a long term programme. In 1976, the Kawerong River, the principal river passing through the Company's operations, was diverted into a 2.5 km long concrete channel over the mine waste dumps. The completion of this project overcame the major environmental problem of waste rock from the mine being carried into the river system. By 1980, the mine waste dumps will have developed to the end of this channel. During 1978, a 1.2 km extension of the channel was commenced, to safeguard the river system through to 1990. The cost of this project, which will be completed in 1980, is estimated to be K12 million.

Total investment in property, plant and equipment now stands at K529 million, of which K189 million has been written off, as depreciation, against earnings to date. It is estimated that the current cost of a similar investment would be K1 200 million.



P. W. Quodling, General Manager.
6th February, 1979.

Capital expenditure & depreciation
1972-1978



Capital expenditure has been required to maintain production capacity as ore grades decline.

Pit drainage system

