

Front cover: An unusual example of copper stained rocks in the Panguna open cut.

Bougainville Copper Limited produces a concentrate containing copper, gold and silver from its mine at Panguna in central Bougainville. The concentrate is pumped in slurry form to the Company's port at Anewa Bay where it is dried before being shipped overseas.

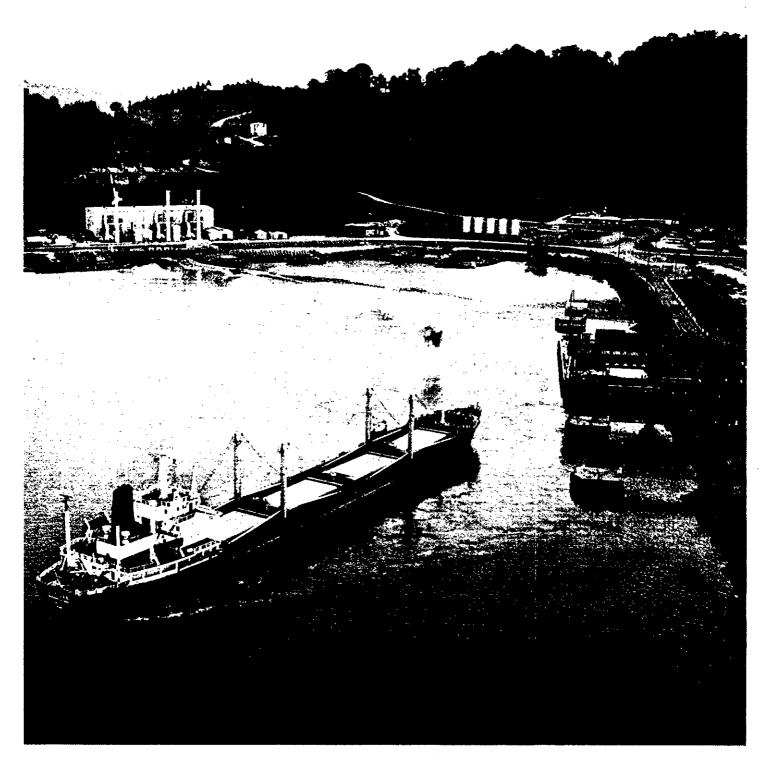
## D/1273

## Notice of Meeting

The Annual General Meeting of Bougainville Copper Limited will be held at 10.00 a.m. on Tuesday, 5th April, 1977 in the Recreational Complex, Panguna, Bougainville, P.N.G. A separate Notice of Meeting is enclosed. All shareholders are cordially invited to attend.

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BCL & the community	





M. Rangai, Company Secretary



S. Bonga, Manager Port Moresby



S. Ampaoi, Manager Community Relations



A. Dani, Superintendent Housing



F. Kaona, Manager Industrial Relations



P. Sissiou, Superintendent Employment

## Highlights 1976

## Directors

#### January

Papua New Guinea became a separate monetary area.

#### March

The first of the new Euclid R170 truck fleet was commissioned.

#### April

A 1975 Final Dividend of K13 368 752 was paid to shareholders.

#### June

Total contained copper produced since startup exceeded three quarters of a million tonnes.

#### July

The Kina revalued by 5% against the Australian dollar.

#### November

An Interim Dividend of K13 368 752 was paid to shareholders. Swearing-in ceremony of the Government of Province of North Solomons.

#### December

Shipments for the year totalled 656 837 wet tonnes of copper in concentrate. Contained copper production was 176 519 tonnes. Earnings for the year amounted to K41 367 332.

Kina appreciated further against the Australian dollar.

F. F. ESPIE, O.B.E. (Chairman)

D. C. VERNON (Managing Director)

J. L. AUNA

R. H. CARNEGIE

B. E. FAIRFAX-ROSS, C.B.E.

J. T. RALPH

I. F. TARUA

Alternate Directors N. R. AGONIA

R. H. HARDING

Secretary M. RANGAI

BOUGAINVILLE COPPER LIMITED (Incorporated in Papua New Guinea) Registered Office: Panguna, Bougainville, P.N.G. Share registers: Melbourne: 95 Collins Street, Melbourne. Canberra: 78 Northbourne Avenue, Canberra City, A.C.T. Panguna: Panguna, Bougainville Island, Papua New Guinea. United Kingdom: c/o Central Registration Limited. I Redcliff Street, Bristol. Stock Exchanges: Listed on the principal exchanges in all Australian states and New Zealand.

## Chairman's Statement



The 1976 net earnings of the Company amounted to K41 367 332, a decrease of K4 831 146 over the previous year. Low metal prices, together with increased costs for raw materials and high wage levels. contributed to the continued low level of net earnings. Dividends declared in respect of 1976 were 10 toea per share, amounting to a total of K26 737 500.

Although the first half of 1976 carried with it the promise of a recovery in the world economic situation, this did not carry through to the second half. Copper prices rose by more than 20 U.S. cents/lb. up to July only to fall again to the depressed levels of 1975 early in December. Gold also fell sharply during the year, under the influence of sales by the International Monetary Fund, although the price recovered somewhat by the end of the year. At the same time, the Company continued to face pressure from escalating costs brought about by high inflation.

In recent years, most businesses have felt the combined impact of inflation and recession and this impact has been particularly marked in the mining industry. In reviewing the year's operations in the light of these conditions, it is evident that the Company has performed well, despite the fall in earnings.

During 1976, much publicity was given to moves towards stabilisation of prices of a number of primary commodities, including copper. Substantial price fluctuations, as have occurred in the copper industry, make it difficult to plan new investments. adversely affect earnings of copper producing countries and encourage consumers to seek alternatives with more stable price structures. The problem is a difficult one. Under the sponsorship of the United Nations, meetings were held during 1976 involving the governments of consuming and producing nations, at which plans were made for further studies to consider possible solutions. However, a successful outcome at an early date is unlikely since there is a wide diversity of views and interests.

The Company has maintained a watching brief on these developments and has exchanged views with the Papua New Guinea Government. The effect on the Government of copper price fluctuations has been reduced by the establishment of the Mineral Resources Stabilisation Fund. This Fund acts as a buffer between the variable revenues received by the Government from Bougainville Copper and helps to ensure a regular transfer of funds to finance a steady programme of Government spending.

There were a number of currency changes during the year between the kina. the Australian dollar and the U.S. dollar. These changes resulted in gains in some areas and losses in others, but the net effect on the Company's overall position during 1976 was favourable. More frequent changes in exchange rates are now a normal expectation of business and will continue to influence the Company's commercial activities. Generally the Government has followed a hard currency policy which has been assisted by high export prices for a number of rural products, particularly coffee and cocoa. This currency policy together with tighter control of wages combined to ease inflationary pressure in Papua New Guinea.

I have referred previously to the moves for the secession of Bougainville from Papua New Guinea. While the Company has been careful to avoid becoming involved in this matter it has nevertheless been a difficult time for both the Company and its employees. I am pleased therefore that during 1976 the Central Government and the Province of North Solomons reached an amicable agreement on the distribution of powers.

Finally, the Directors wish to express their appreciation of the contribution by all staff and employees. Their continued efforts during 1976 have resulted in improved efficiency in many areas and have contained costs at a level significantly below that expected at the prevailing high rates of inflation.

Ropie

F. F. Espie, Chairman 10th February, 1977.

## Statistical Summary

		1976	1975	1974	1973	1972*
Mined				•		
Ore and Waste removed	(millions of tonnes)	58.54	56.40	56.00	56.65	46.75
Ore Milled	(millions of tonnes)	31.21	31.08	30.14	29.14	21.89
Ore Grade	(minicial of tonico)	01.4	01100	00.11		21107
Copper	(per cent)	0.64	0.64	0.70	0.73	0.76
Gold	(grams/tonne)	0.87	0.80	1.02	1.03	0.77
Silver	(grams/tonne)	1.96	1.87	2.12	1.99	2.06
	(grams, tonne)	1.20	1.07			2.00
Produced		E07 929	505 049	(40.910	(50.173	430 115
Concentrate	(dry tonnes)	596 838	595 948	640 818	650 172	438 115
Contained Copper	(tonnes)	176 519	172 477	184 083	182 890	123 961
Concentrate Grade		20.50	20.04	20.72	20.12	20.20
Copper	(per cent)	29.58	28.94	28.73	28.13	28.29
Gold	(grams/tonne)	33.9	30.5	32.0	31.6	27.25
Silver	(grams/tonne)	76.1	71.0	72.0	69.0	69.3
Shipped						
Total Concentrate	(dry tonnes)	605 793	586 947	665 702	625 227	434 387
Shipped to:						
W. Germany		223 170	243 543	221 365	200 333	186 827
Japan		256 406	250 658	343 204	342 878	209 032
Spain		58 169	72 184	57 368	35 778	27 565
Other		68 048	20 562	43 765	46 238	10 963
· · ·						
Received	(K'000)	205 240	101 751	279 825	249 048	95 695
Net Sales revenue	(K'000)	205 349	184 754	219 823	249 048	95 095
Contribution by:		142.021	117 505	104 150	202 422	75 226
Copper		142 021	117 505	194 159	203 422	75 226
Gold		59 253	63 706	81 417	43 623	19 328
Silver		4 075	3 543	4 2 4 9	2 003	1 141
Other Statistics						
Average Metal Prices						
Copper-						
L.M.E. cash sellers						
price for electrolytic						
wire bars	(expressed in USc/lb)	63.6	55.9	93.3	80.9	48.6
Gold –						
Mean of London						
Gold Market	(US\$/oz.)	124.8	160.9	158.7	97.3	58.2
Silver –						
Spot price, London						
Silver Market	(expressed in US\$/oz.)	4.4	4.4	4.7	2.5	1.7
Work force at 31st Dece						
Overseas	(number)	858	942	980	929	971
National	(number)	2 989	3 094	3 242	2 915	2 594
Number of Shareholders		50 082	54 129	55 558	45 353	46 726*
Shareholders' Funds at 2		302 514	287 884	268 423	227 377	146 679
	Tst December (K 000)	41 367	46 199	114 575	158 410	27 678
Net Earnings (K'000)	$\mathbf{V}_{aar} (\mathbf{K}' 0 0 0)$	26 738	26 738	73 528	80 212	11 000
Dividends in Respect of	I cal (N UUU) Cunde (nor cont)	20 / 38	20/38	15 328	00 212	11,000
Return on Shareholders		12 7	14.0	17 7	60 7	10 /
-before extraordinar -after extraordinar	ry item	13.7 13.7	14.9 16.0	42.7 42.7	69.7 69.7	18.4 18.4

NOTES: \*Full year figures; but commercial production commenced 1st April, 1972. \*\*1972 figure is for Bougainville Mining Limited.

## **Review of Operations**



**Measured Ore Reserves:** During the year the diamond drilling programme within the Special Mining Lease continued. It is aimed at a fuller evaluation of ore reserves within the lease but the programme is not yet complete. Proven ore reserves at the end of 1976 were just over 800 million tonnes averaging 0.45% copper and 0.51 gms of gold per tonne.

Production: A total of 58 539 140 tonnes of ore and waste was removed from the mine. Of this 31 209 679 tonnes of ore were processed through the concentrator and 176 519 tonnes of contained copper were produced. The original R105 Euclid trucks operating in the mine have now reached the end of their economic life and they are being progressively replaced by electric wheel R170's. Pumping operations commenced during the year as the pit bottom is now below the river level and therefore no longer self draining. The concentrator operated continuously throughout the year with only minor stoppages following periods of very heavy rainfall. Continued metallurgical improvements produced the highest concentrate grade since startup. Production statistics were as follows:

1.	luction
F 1 6 94	
1100	

Year Ended Year Ended 31/12/76 31/12/75

#### Ore Milled

#### Concentrate Grade:

Copper (per cent)		
Gold – grams/tor		
Silver grams/to	nne 76.1	

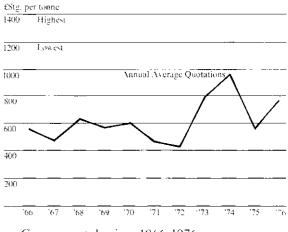
#### Marketing: Total sales for 1976

amounted to 605 793 dry tonnes of copper concentrates, containing 179 081 tonnes of copper. 20 494 kilograms of gold and 46 065 kilograms of silver. As in previous years the full production for the year was sold.

Deliveries to the Japanese buyers during 1976 were again reduced below the contract level because of adverse market conditions in Japan. The Company has agreed to this deferment in deliveries in the spirit of co-operation which is an essential part of a long term sales contract. It is hoped that the Japanese buyers will be able to return to their committed contract levels of deliveries at an early date. All other sales contract commitments were fulfilled and in addition sales were made to the People's Republic of China. Eastern Europe and North America.

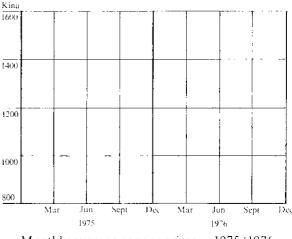
Cost escalation and currency fluctuations have caused difficulties for both buyers and seller. The contracts have been modified by the inclusion of indexation formulae to take account of these factors.

The depressed level of metal prices continued during 1976. Copper prices staged a brief rally mid year, but with the slower than expected recovery in world economies and a continuing increase in stock levels, this was not sustained. The average London Metal Exchange cash sellers' price for electrolytic copper wirebars for 1976 was the equivalent of US63.6 cents



Copper metal prices 1966-1976

Annual Range and Annual Average Quotation of Official London Metal Exchange Daily Cash Copper Wirebar Quotations. (Source: London Metal Exchange.)



Monthly average copper prices 1975/1976 Kina equivalent of Monthly Average Official London Metal Exchange Daily Cash Copper Wirebar Quotations.

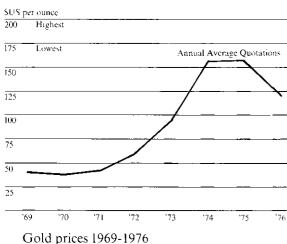
per pound compared with US55.9 cents per pound in 1975.

Gold prices on the London Gold Market moved over a relatively wide range during the year, averaging USS124.8 per ounce (US\$160.9 per ounce in 1975). Silver prices averaged US\$4.4 per ounce (US\$4.4 per ounce in 1975).

**Finance:** In meeting its loan obligations during 1976, the Company paid interest of K11.1 million and loan repayments of K19.5 million were made.

Three loans totalling K28.4 million (US\$35M) were finalised during 1976 and by the end of the year K13.1 million (US\$17M) had been drawn down. The remaining balance will be drawn down during 1977. The loans, which are being provided by four leading international banks, are being funded in the Eurodollar and Asia Dollar markets and will be repayable over the period to 1982. These loans will be used to finance expenditure on new housing and the purchase of the replacement mine haul trucks. The Company expects to undertake new borrowings in 1977 which will enable it to carry out its planned capital expenditure programme and repay the long term loan of US\$67.4 million (K54.7M) from the Commonwealth Trading Bank during the first quarter of 1978.

From 1st January 1976, Papua New Guinea became an independent monetary area separate from Australia. This necessitated some changes in the Company's banking arrangements and these were successfully concluded.



Annual Range and Annual Average of Mean Price for Fine Gold on London Gold Market. (Source: Sharps Pixley and Company Limited, London )

Exchange Rates: Papua New Guinea adopted a hard currency policy for the kina during 1976. This involved a 5% unilateral revaluation in July thus severing the direct relationship with the Australian dollar. Australia is a major supplier to Papua New Guinea and its revaluation was seen as one way of easing the pressure on domestic costs of the very high level of inflation in Australia. The kina did not automatically follow the movements in the Australian currency in November and December so that at the end of the year the exchange rate with the Australian dollar to the kina had risen to 1.13. On average over 1976, the kina devalued slightly against the US dollar thus favourably affecting Bougainville's sales figures. Such gains were partly offset by the increased loan obligations.

**Capital Expenditure:** 1976 was marked by a high level of capital expenditure. Over K30 million was spent with significant items being replacement haul trucks and other equipment (K12 million), preparation for the 10th ball mill (K2 million), housing and other buildings (K4 million). and completion of river diversions and concentrator water collection (K5 million).

**Training:** The Company programme for training Papua New Guinea nationals to assume added responsibilities in the workforce continued. A record of 112 apprentices completed their indentures early in the year leaving 272 in training under the apprenticeship scheme.

Tradesmen trained in prior years are to an increasing extent commencing to assume supervisory roles, having gained job experience and completed courses in supervisory instruction. On the administrative side, Papua New Guinea nationals are undertaking management responsibilities within the Company.

D. C. Vernon, Managing Director. 10th February, 1977.

To the Members:

Net Earnings: The Company's net earnings for 1976 totalled K41 367 332 after providing K31 102 869 for depreciation and amortisation, K2 577 508 for royalties and K20 302 774 for income tax.

**Capital:** There was no change in the Company's capital structure during the year. At 31st December, 1976, the paid up capital of the Company was K133 687 500 representing 267 375 000 shares on issue to shareholders.

**Exchange Fluctuation:** Repayment of U.S. dollar loans during 1976 resulted in a realised exchange gain of K1 600 791 which has been credited to 1976 earnings. The balance of the Exchange Fluctuation account at 31st December, 1976 was K9 030 929, which represents the unrealised portion of gains on outstanding loans at the prevailing exchange rate on 31st December, 1976.

Loans: Loan repayments totalling K19 543 750 were made during the year. At 31st December, 1976, outstanding loans, totalling K121 017 511 were as follows: Secured Loans:

- Credit Agreement Seven Year loans \$US67 400 000 (K54 734 449)
  Japanese Cash Loan
- Agreement \$US13 500 000 (K10 963 131) • Japanese Equipment Loan
- Agreement \$US12 262 115 (K9 957 865) • Eximbank Loan
- Agreement \$US18 300 000 (K14 861 134) Unsecured Loans:
- Deferred payment arrangements with Australian suppliers (guaranteed by Export Finance Insurance \$A12 583 926 Corporation) (K11 101 342)
   Press New Colored Parking
- Papua New Guinea Banking Corporation Housing Loan K5 594 165 (this loan was transferred from the Commonwealth Savings Bank of Australia during 1974)
- International Westminster Bank Housing
   ↓ Loan
   ○ Bank of America
   ↓ US12 000 000

Housing Loan (K9 745 006) The secured loans are covered by a charge over shares held by Conzinc Riotinto of Australia Limited, the Government of Papua New Guinea and the Investment Corporation of Papua New Guinea. Shares directly held by the public in the Company are not encumbered.

**Dividends:** An interim dividend of 5 toea per share was declared on 10th August, 1976 and paid on 4th November, 1976.

A final dividend of 5 toea per share was declared payable on 4th May, 1977. Withholding tax will be deducted from dividends paid to shareholders who are not residents of Papua New Guinea. This dividend will bring the total dividend in respect of 1976 earnings to 10 toea per share.

**Directors:** In accordance with Article 94 of the Company's Articles of Association, Mr. F. F. Espie, O.B.E., and Mr. B. E. Fairfax-Ross, C.B.E., retire, and being eligible, offer themselves for re-election.

The closing date for the receipt of nominations for the office of Director is 17th March, 1977.

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

**Statutory:** In accordance with the provisions of Section 162 of the Companies Act 1963, as amended to date, the directors state that in their opinion:

 The results of the Company's operations in the year under review have not been materially affected by items of an abnormal character except as mentioned in this report.
 No circumstances have arisen which render adherence to the existing method of valuation of assets or liabilities of the Company misleading or inappropriate.
 No contingent liabilities have arisen since the balance date of the accounts, 31st December, 1976, and the date of this report, 10th February, 1977.

4. No contingent liability has become enforceable or is likely to become enforceable within twelve months from the date of this report which will materially affect the Company in its ability to meet its obligations as and when they fall due.

For and on behalf of the Board,

spil

F. F. Espie, Chairman 10th February, 1977.

## Simplified Balance Sheet

Bougainville Copper Limited			Million
WHAT WE OWN (ASSETS)	Mine leases, treatment plant, housing, power station, port facilities, etc.	350.4	
	Copper concentrate in storage awaiting shipment and stores on hand	31.2	
	Money held by banks on deposit and in cash	53.2	
	Amounts owed to your company mainly for copper concentrates recently shipped	51.7	
			486.5
LESS WHAT WE OWE	Long term loan borrowings to be repaid after 1977	100.7	
(LIABILITIES)	Short term overdraft	2.0	
	Loan borrowings to be repaid during 1977	20.3	
	Amounts owing to suppliers and others for goods and services	18.3	
	Money set aside for payment of dividends to the Company's shareholders	13.4	
	Money set aside for payment of income tax	20.3	
			175.0
AMOUNT REMAINING	This amount (K311.5 million) is retained to finance operations of the business and represents:	-	311.5
	Contributions by the Company's shareholders	133.7	
	Profits which Directors currently intend to retain in the business	168.8	
	The gain (based on present exchange rates and not yet realised) on future United States loan repayments.		
	This gain results from the increase in the value of the Kina compared with the United States dollar	9.0	

# Statement of Earnings year ended 31st December, 1976

Bougainville Copper Limited

Notes	1976 K'000	1975 K'000
NET SALES REVENUE	205 349	184 754
Other Income	3 097	8 628
	208 446	193 382
Less: Cost of sales, financing and other costs	114 696	104 909
Depreciation and amortisation 4	31 103	29 591
Royalties	2 578	2 309
	148 377	136 809
	60 069	56 573
Add:		
Exchange gains realised on loan repayments	1 601	1 981
EARNINGS (Before taxation)	61 670	58 554
Taxation current	20 303	15 666
	41 367	42 888
Add:		
Abnormal item:		2.211
Taxation over provision previous year	_	3 3 1 1
NET EARNINGS	41 367	46 199
Plus:	154 197	134 736
Unappropriated earnings brought forward		
	195 564	180 935
Less: Dividends Interim paid	13 369	13 369
Final payable	13 369	13 369
I	26 738	26 738
UNAPPROPRIATED EARNINGS CARRIED FORWARD	168 826	154 197
UTALI KULALED EARDINGS CARALED FORWARD	100.020	137 197

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All amounts expressed in Papua New Guinea currency

The notes attached hereto form part of these accounts and are to be read in conjunction with them.

## Balance Sheet at 31st December, 1976

### Bougainville Copper Limited

	Notes	1976 K'000	1975 K'000
CAPITAL AND RESERVES			
CAPITAL			
Authorised		135 000	135 000
Paid up		133 688	133 688
REVENUE RESERVES			
Unappropriated earnings		168 826	154 197
Total capital and reserves		302 514	287 885
EXCHANGE FLUCTUATION		9 031	11 495
LIABILITIES			
MATURING LATER THAN ONE YEAR:	10	100 (00	106.044
Loans		100 692	106 844
Long Service Leave		978	284
		101 670	107 128
CURRENT Bank overdraft		1 957	4 032
Loan instalments		20 325	19 734
Creditors		17 302	16 282
Income tax		20 365	15 666
Dividend payable		13 369	13 369
		73 318	69 083
Commitments & contingent liabilities		—	_
TOTAL FUNDS		486 533	475 591
These funds are represented by:			
ASSETS	14	350 435	346 001
PROPERTY, PLANT AND EQUIPMENT			
INVESTMENTS		. 83	
CURRENT Cash and bank balances		2 383	1 590
Short term deposits and loans		2 383 50 770	34 670
Debtors		51 699	56 881
Stocks and stores		31 163	36 366
		136 015	129 507
		486 533	

All amounts expressed in Papua New Guinea currency.

The notes attached hereto form part of these accounts and are to be read in conjunction with them.

## Notes forming part of the 1976 accounts

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

Bougainville Copper Limited

#### **1. ACCOUNTING POLICIES**

In general, accounting policies and practices are adopted which follow the joint recommendations of the principal Australian Professional Accounting Bodies.

In particular, some of the practices are:

#### FIXED ASSETS

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

#### DEPRECIATION AND AMORTISATION

Depreciation is provided on the straightline method by charges to income at rates based on estimated useful lives of the various assets. Additions are depreciated from the commencement of the month following their completion or installation.

Generally the assets are fully depreciated over the shorter of economic life or twenty years from the commencement of commercial operations.

Borrowing costs incurred prior to the commencement of commercial operations have been capitalised and are being amortised over a five year period commencing 1st January 1974. Borrowing costs incurred on the two loans negotiated in 1976 have also been capitalised and are being amortised over a five year period from 1976.

#### STOCK VALUATIONS

Concentrate stocks are valued at cost, which is lower than net realisable value. Cost includes direct and indirect labour, materials and services, but excludes depreciation and overheads, except those directly related to production activities.

Other stocks and stores are valued at cost less allowance for obsolesence.

#### CURRENCY CONVERSION

Current assets, current liabilities and long term loans in foreign currencies are converted to Papua New Guinea currency at the rates of exchange ruling at 31st December. All other amounts in foreign currencies have been converted at the rates of exchange at the dates of the relevant transactions. Unrealised gains on overseas loans are held in Exchange Fluctuation Account and transferred to Earnings as and when realised.

#### INCOME TAX

The provision for income tax is calculated on earnings before tax. Certain items of expense, principally depreciation and major consumable stock items, are deductible for tax purposes in periods different from those for accounting purposes, but at the present time such differences do not affect the determination of the Company's liability for income tax.

#### MAINTENANCE AND REPAIRS

Maintenance, repair costs and minor renewals are charged against income as incurred. Some maintenance occurs over a cycle of more than one accounting period. Accordingly provisions are made for deferred maintenance which are reviewed annually.

#### NET SALES REVENUE

Sales revenue is recognised on shipment of concentrates from Bougainville. However, final sales values are determined by reference to weights, assays, prices and refining and smelting charges applying after a shipment has arrived at its destination. The values used in estimating sales revenue for 1976 shipments, not due for final pricing until 1977, are realistic. Any variation in sales revenue actually realised from the estimated revenue will be included in the accounts for next year.

#### 2. SALE OF SUBSIDIARY

The shares in Bougainville Copper's wholly owned subsidiary, Bougainville Mining Limited, were sold on 16th December, 1976. Consequently, consolidated accounts are no longer produced to reflect the combined operations and financial position of the two companies.

Bougainville Copper Limited

	1976 K000	1975 K000
3. EARNINGS (BEFORE TAXATION)	*	
Earnings (before taxation) have been determined after allowing for: DEDUCTIONS WHICH INCLUDE:		
Interest paid/payable (Note 5)	11 060	11 469
Grants and donations	23	53
Bad and doubtful debts (Note 6)	_	23
Auditors' remuneration (Note 7)	80	82
Directors' emoluments (Note 18)	4	3
Loss on disposal of non-current assets	418	
Loss on overseas cash balances (Note 11)	501	
ADDITIONS WHICH INCLUDE:	2 600	0.25
Interest on short-term deposits Gain on overseas cash balances (Note 11)	3 598	8 354 273
Profit on disposal of non-current assets	_	175
Profit on sale of shares in Bougainville Mining Limited (Note 15)	12	1/.
4. DEPRECIATION AND AMORTISATION		
The amount charged against earnings comprised:		
Depreciation on: buildings	10 094	9 423
plant, machinery and equipment	17 903	
Amortisation of mine property	3 106	
	31 103	29 591
5. INTEREST PAID/PAYABLE		
Long term loans	10 999	11 229
Bank overdrafts	61	240
	11 060	11 469
No interest was paid or is payable to related Companies.		
6. BAD AND DOUBTFUL DEBTS		
Amounts provided during the year for doubtful debts were in respect of: Trade debtors		
Other debtors	_	23
other debiois	_	
7. AUDITORS' REMUNERATION		
Amounts paid/payable to Auditors for:		
Auditing the accounts	52	48
Other services	28	34
	80	. 82
No other benefits were received by the Auditors.		
• • • • • • • • • • • • • • • • • • • •		
8. CURRENT TAXATION		
(a) The income tax charged against earnings is determined in accordance with the policy set out in Note 1.	20 303	15 666
which the policy set out in Note 1.	20 303	15 000
Under the terms of the Mining Agreement (as amended) the Company is requ		
1974 to pay company tax pursuant to a prescribed formula. This provides that	the Company	will pay
the normal company tax rate (currently $33\%\%$ ) on a certain level of taxable in	come and $10\%$	on any
excess over this level. The Company was not liable for tax at the higher scale i		
(b) The charge for income tax would have varied by more than 15% on that	payable at noi	rmal
company tax rates but for compensating items. These items were:		
Income tax at normal rates on: Exchange gains/losses	(367)	(66(
THE TRADE DATES / DECAY	1 4m / )	(56)

(367)	(660)
(1 275)	(1555)
1 086	(1 784)
(115)	_
480	147
(191)	(3 852)
	(1 275) 1 086 (115) 480

		Bougai Copper I	inville Limited
· · · · ·			
· ···· · ·····························	· · · · · · · · ·		· ·
		1976	1975

K000

K000

#### 9. CAPITAL

The authorised capital of K135 000 000 is made up of 270 000 000 ordinary shares of 50 toea each. At 31st December, 1976, the paid up capital of the Company was K133 687 500 represented by 267 375 000 ordinary shares of 50 toea each, fully paid.

No change in authorised or paid up capital occurred during 1976.

#### **10. REVENUE RESERVES**

Unappropriated earnings:		
1st January	154 197	134 736
Net earnings for year	41 367	42 888
	195 564	177 624
Prior year's tax overprovision	-	3 311
	195 564	180 935
Dividends paid/payable	26 738	26 738
31st December	168 826	154 197

The Company's earnings are not wholly available for payment to shareholders because of restrictions imposed on the payment of dividends under the terms of the Credit Agreement dated 28th July, 1969 (as amended).

#### **11. EXCHANGE FLUCTUATION**

Because of currency realignments, a loss of K501 091 was realised on conversion of overseas cash balances to Papua New Guinea Kina (1975 gain K273 242).

Exchange fluctuations relating to long term loa		2:	
Unrealised gains 1st January		11 495	19 078
Reduction due to currency realignments duri	ng the year	(863)	(5 602)
	<b>C</b>	10 632	13 476
Gains realised on loan repayments during th	e year	1 601	1 981
Unrealised gains 31st December	2	9 031	11 495
12. LONG TERM LOANS			
(a) Repayments due later than one year:			
Secured		78 202	94 260
Unsecured		22 490	12 584
		100 692	106 844
(b) Repayments due within one year:			
Secured		17 909	17 395
Unsecured		2 416	2 339
		20 325	19 734
TOTAL OBLIGATIONS OUTSTANDING		121 017	126 578
The various loans which make up the total obli BANK LOANS (Secured other than by debent	gations are as follows: ures)		
	Repayable		
Credit agreement	1078	54 734	53 615
Seven year loans	1978	54 / 54	55 615
Other bank loans: Eximbank loans	1977-1978	14 861	24 262
Housing loan (1)	1977-1978	5 594	8 079
Total bank loans		75 189	85 956
OTHER SECURED LOANS		15 105	05,50
Japanese cash loans	1977-1979	10 963	14 3 1 9
Japanese equipment loans	1977-1982	9 958	11 380
Total secured loans (2)		96 110	111 655
UNSECURED LOANS			
Australian equipment (3)	1977-1982	11 101	14 923
International Westminster Bank (4)	1979-1981	4 061	
Bank of America (4)	1979-1983	9 745	
Total unsecured loans		24 907	14 923
		121 017	126 578
		- · ·	

· · · · · · · · · · · · · · · · · · ·	Bougai Copper I	inville Limited
	1976 K000	1975 K000

#### 12. LONG TERM LOANS (Continued)

(1) The Housing Loan is secured by an equitable charge over certain of the Company's housing leases in Arawa township. Interest rate for this loan is 8% per annum. This loan was originally advanced by the Commonwealth Savings Bank of Australia, which transferred its assets and liabilities in Papua New Guinea on 22nd April, 1974 to the Papua New Guinea Banking Corporation under legislation passed in the Australian Parliament.

(2) Except for the Housing Loan, the secured loans are repayable in U.S. dollars and are secured by a charge over 194 000 676 shares in the Company owned by Conzine Riotinto of Australia Limited. the Papua New Guinea Government and the Investment Corporation of Papua New Guinea. Interest rates on these loans during 1976 varied between 6% and 10.6% per annum.

(3) The Company entered into deferred payment arrangements with Australian suppliers of goods and services during the construction phase. Annual interest rates on these loans vary from 7.25% to 7.75%.

(4) In 1976, the Company drew down two loans to finance housing and office construction. US\$5 000 000 was drawn down from International Westminster Bank at an interest rate of 10.625% and US\$12 000 000 from Bank of America at an interest rate of 9.875%.

### 13. CREDITORS

Related corporations Holding company		1
Other	1 402	1 377
Trade creditors and bills payable	9 2 1 9	9 308
Other current liabilities		2000
Secured	566	885
Unsecured	6 115	5 711
	17 302	16 282
14. PROPERTY, PLANT AND EQUIPMENT		
Leasehold, land and buildings (at cost)	197 020	181 861
Less depreciation	41 529	32 023
	155 491	149 838
Plant, machinery and equipment (at cost)	192 575	180 566
Less depreciation	61 207	48 397
	131 368	132 169
Mine property (at cost)	62 121	62 121
Less amortisation	14 741	11 635
	47 380	50 486
Capital works in progress	16 196	13 508
	350 435	346 001
15. INVESTMENTS		
RELATED COMPANIES—shares not listed on Stock Exchange		
at cost		
Subsidiary Company	-	_
Other	38	38
	38	38
OTHER COMPANIES—shares not listed on Stock Exchange	45	A 6
at cost	45	45
	83	83
- Rougainville Mining Limited incornerated in the Australian Capital Terri	tomy and having a	n icou ad

Bougainville Mining Limited, incorporated in the Australian Capital Territory and having an issued capital of 200 ordinary shares of 50 cents each fully paid, was sold on 16th December, 1976.

#### **16. DEBTORS**

Related companies	682	1 575
Trade debtors	48 679	52 752
Other debtors and payments in advance	2 381	2 604
Provision for doubtful debts	(43)	(50)
	51 699	56 881

				ugainville per Limited
			1976	1975
			К000	
17. STOCKS AND STORES				
Unshipped concentrate			612	1718
Other stocks and stores			30 551	34 648
			31 163	36 366
	19	976	197	75
		Related		Related
	Company ( <b>K000</b>	Corporation <b>K000</b>	is Company Co K000	orporations K000
18. DIRECTORS' EMOLUMENTS				
The total of emoluments received or due and				
receivable (whether from the Company or from a related corporation) by:				
(a) Directors of the Company engaged in 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				
and				

#### 19. COMMITMENTS FOR CAPITAL EXPENDITURE AND CONTINGENT LIABILITIES

The approximate commitments for the purchase of land, buildings, plant and equipment not reflected in the Balance Sheet amount to K15 253 000 (1975 K15 158 000).

The Company has contingent obligations attaching to the terms of:

(a) the Credit Agreement dated 28th July, 1969 (as amended)

and

(b) the Amending Agreement as referred to in the Mining (Bougainville Copper Agreement) (Amendment) Act, 1974.

However, no circumstance has yet arisen to suggest that an enforceable claim has or is likely to arise in respect of these obligations.

In addition, the Company may have a contingent obligation following the outcome of claims by various groups for compensation resulting from the effects of the mining operation. However, many of these claims have now been settled.

Except for the foregoing the Company has no contingent liabilities which are material in nature and/or amount.

#### 20. ULTIMATE HOLDING COMPANY

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

#### 21. COMPARATIVE FIGURES FOR 1975

Where necessary, these figures have been adjusted to conform with changes in presentation made in 1976.

#### Statement by Directors

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

Signed at Panguna this 10th day of February, 1977. On behalf of the Board

F. F. ESPIE, D. C. VERNON Directors

#### **Declaration by Secretary**

I, Misac Rangai, Secretary of Bougainville Copper Limited, do solemnly and sincerely declare that the accompanying balance sheet and statement of earnings of the Company 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 10th day of February, 1977. M. RANGAI Secretary

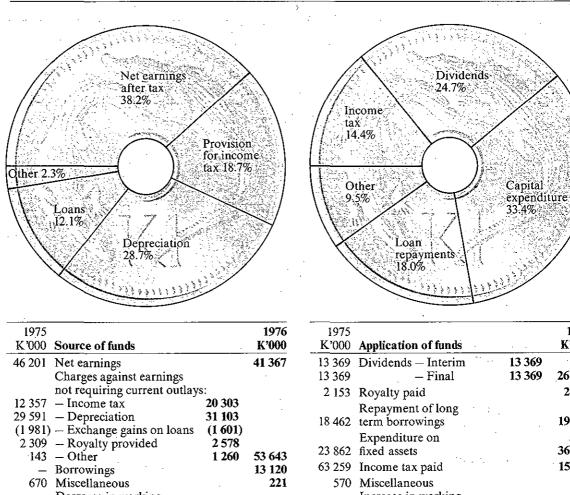
Secretary Before me: L. G. SMITH Justice of the Peace

#### Report of the Auditors to the Members

In our opinion, the balance sheet and statement of earnings set out on pages 10 to 16 are properly drawn up in accordance with the provisions of the Companies Act 1963, as amended to date and so as to give a true and fair view of the state of affairs and the profits of the Company. The accounting and other records, including registers examined by us have, in our opinion, been properly kept in accordance with the provisions of the Act.

COOPERS & LYBRAND Chartered Accountants (Australia) ARAWA. 11th February, 1977

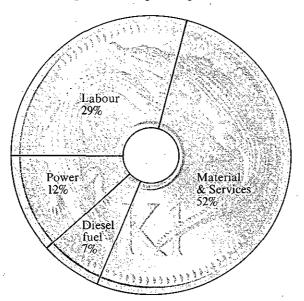
#### Application of funds Source of funds



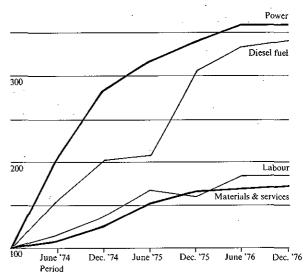
. <b>K</b>	2'000
41	l 367
3	
3	
1)	
8	
0 53	3 643
13	3 120
	221
	_
108	8 351

1976 K'000	• •	Application of funds	1975 K'000
	13 369	Dividends – Interim	13 369
26 738	13 369	— Final	13 369
2 604		Royalty paid	2 153
19 544		Repayment of long term borrowings	18 462
36 176		Expenditure on fixed assets	23 862
15 604		Income tax paid	63 259
158		Miscellaneous Increase in working	570
7 527		capital	_
108 351			135 044

Composition of operating costs 1976

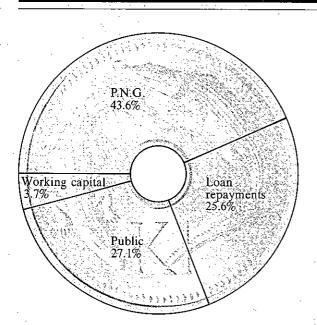


Relative cost indices 1973-1976 (1973 = Base 100)  $\frac{\text{Index}}{400}$ 



## Distribution of Cash

## Shareholdings



#### **Cash Distributed**

Cash distributed by the business (before payment of royalty and taxation but after spending for new plant).

#### P.N.G.

P.N.G. Government and Investment Corporation – dividends, royalty, taxation and withholding tax.

#### Public

Public dividends after withholding tax.

· · · · · · · · · · · · · · · · · · ·	K mi	K million	
·	1976	1975	
CASH DISTRIBUTED	72.0	64.8	
P.N.G.	.31.4	26.5	
Public	18.4	18.4	
Loan Repayments	19.5	18.5	
Working Capital	2.7	1.4	
	72.0	64.8	

Complete details of Bougainville Copper's Source and Application of funds are shown on page 18.

The distribution of holdings of the issued shares in Bougainville Copper Limited at 31st January 1977 was:

0-1000 shares	41 625
1001-5000 shares	6 939
5001-10000 shares	- 718
10001 shares and over	577
	49 859

Substantial shareholders at 31st January 1977 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

Government of Papua New Guinea Investment Corporation of Papua New Guinea

53 475 000 shares

80.73% of the total issued shares were held by the 20 largest shareholders of the Company at 31st January 1977.

The voting rights are one vote for each share held.

Directors' interests in Bougainville Copper Limited and its associated companies – 21st January, 1977: F. F. Espie 1 300 Mary Kathleen Uranium

	Ltd. 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
I. F. Tarua	No interests

J. L. AunaNo interestsI. F. TaruaNo interestsD. C. VernonNo interests

143 258 644 shares

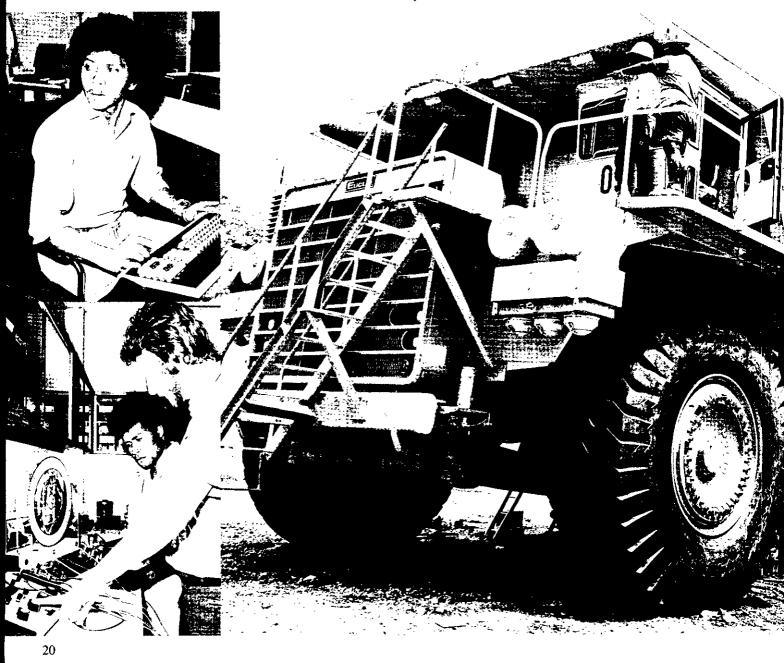
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## BCL & the community

The operation of any large scale mining project has an impact on the area in which it is situated. In the case of Bougainville Copper Limited, the effect of establishing its mine was particularly marked, for it occurred in a tropical region which possessed little in the way of modern communications and roads and it brought an entirely new way of life to the local inhabitants. It is of interest, therefore, after almost five years of operation of the mine, to review some of the social developments which have occurred during that time.

## Training

The development of human resources is an important objective of the Company, and through its mine training centre it provides a steady flow of Papua New Guineans who have been trained in a variety of technical skills. Considering the widely different background of the Company apprentices and trainees and their limited experience in an industrial situation, the training programme has been highly successful. There is no requirement that tradesmen, or graduates, when qualified serve with the Company after their training. Consequently a number have sought opportunities outside the Company in Government, industry and universities. At present there is a general shortage of trained manpower in Papua New Guinea, but in planning its training programmes the Company takes a long term view and endeavours to match its intake for specific trade training to the likely future supply and demand for those particular skills in Papua New Guinea.



## Community Development

The establishment of the mine has provided a substantial impetus to the growth of light industry and food production. Much of this growth has been assisted by the Company; indirectly through providing access to the areas of the island which were previously remote and almost inaccessible, and directly through its encouragement of food production and processing industries to meet the needs of the mine workforce.

Apart from the many work of an inville Island is of cominantly an agriculturally based ciety. Thus it is in agriculture that the community at large seek economic growth. Company sponsored agricultural extension officers, working in conjunction with Government agencies are playing an important role in this agricultural development.

One such example is the breeding of new strains of pigs. Pigs are the traditional form of animal husbandry in village life. Other fields of agricultural development are the introduction of cattle, egg production and the introduction of broiler chicken production on a commercial level



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### Recreation

Bougainville Copper personnel reside in the townships of Panguna and Arawa and, being relatively isolated communities, recreational outlets are an important consideration in the welfare of employees. For those who prefer the aquatic sports, the Company is well assisted by nature as Bougainville Island can boast of a coastal fringe equal to most international tourist resorts. However as variety is the keynote to

recreation the Company has sponsored and encouraged the development of a wide range of leisure activities. Football and basketball fields are well frequented and night games on the floodlit ovals are popular for both participant and spectator. Tennis and squash enthusiasts are catered for and, although the mountainous topography in the mine area is hardly suitable for golf, an active golf club is justly proud of its nine hole course at Arawa.



Safety Industrial safety, a prime concern of any responsible Company, has a special significance for Bougainville Copper as many of the workforce have little or no prior exposure to a large scale industrial operation. Thus training programmes place particular emphasis on safe practices and a

team of safety officers continually monitor

operating procedures. The success of this is proven in a safety record that compares most favourably with similar operations in a more industrial oriented environment.



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### Environment

The Company is continuing to monitor and investigate the environmental implications of all aspects of its operation. The major studies are concerned with quantifying and predicting sediment transport rates, conducting revegetation trials on dumped waste rock and deposited sediments and determining the effects on marine life.

A wide range of grasses, legumes and trees have been grown successfully in tailings in both greenhouse and field trials. From this research, forest development has been selected as the prime objective in tailings reclamation. This development is likely to be a multispecies forest using mainly local trees. Tests have revealed the tailings material to be deficient in three nutrients, nitrogen, phosphorus and boron all of which can be supplied by adding conventional fertilisers.

Grasses, reeds and trees have established naturally on the tailings delta at the mouth of the Jaba River. By systematic planting the Company has introduced a greater range of mangroves than that colonising naturally.

The Company's research has required the addition of a number of scientific disciplines amongst its staff above those normally associated with a mining operation. Included are agronomy, silviculture, microbiology, hydrology, marine biology and taxonomy.





## **Review of Operations**



Measured Ore Reserves: During the year the diamond drilling programme within the Special Mining Lease continued. It is aimed at a fuller evaluation of ore reserves within the lease but the programme is not yet complete. Proven ore reserves at the end of 1976 were just over 800 million tonnes averaging 0.45% copper and 0.51 gms of gold per tonne.

Production: A total of 58 539 140 tonnes of ore and waste was removed from the mine. Of this 31 209 679 tonnes of ore were processed through the concentrator and 176 519 tonnes of contained copper were produced. The original R105 Euclid trucks operating in the mine have now reached the end of their economic life and they are being progressively replaced by electric wheel R170's. Pumping operations commenced during the year as the pit bottom is now below the river level and therefore no longer self draining. The concentrator operated continuously throughout the year with only minor stoppages following periods of very heavy rainfall. Continued metallurgical improvements produced the highest concentrate grade since startup. Production statistics were as follows:

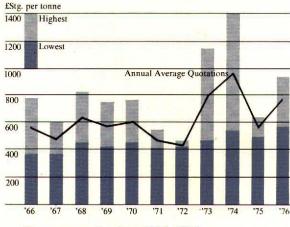
Production:	Year Ended Y	lear Ended
	31/12/76	31/12/75
Ore Milled (millions of dry ton	nes) 31.21	
Ore Grade:		
Copper (per cent	)0.64	0.64
Gold - grams/to		
Silver - grams/to		
Concentrate produc		
(dry tonnes)		595 948
Concentrate Grade	:	
Copper (per cent	)	
Gold - grams/to		
Silver – grams/to		

**Marketing:** Total sales for 1976 amounted to 605 793 dry tonnes of copper concentrates, containing 179 081 tonnes of copper, 20 494 kilograms of gold and 46 065 kilograms of silver. As in previous years the full production for the year was sold.

Deliveries to the Japanese buyers during 1976 were again reduced below the contract level because of adverse market conditions in Japan. The Company has agreed to this deferment in deliveries in the spirit of co-operation which is an essential part of a long term sales contract. It is hoped that the Japanese buyers will be able to return to their committed contract levels of deliveries at an early date. All other sales contract commitments were fulfilled and in addition sales were made to the People's Republic of China, Eastern Europe and North America.

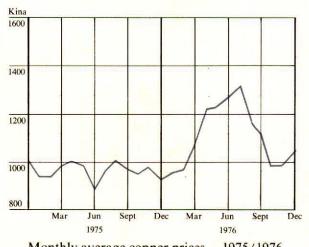
Cost escalation and currency fluctuations have caused difficulties for both buyers and seller. The contracts have been modified by the inclusion of indexation formulae to take account of these factors.

The depressed level of metal prices continued during 1976. Copper prices staged a brief rally mid year, but with the slower than expected recovery in world economies and a continuing increase in stock levels, this was not sustained. The average London Metal Exchange cash sellers' price for electrolytic copper wirebars for 1976 was the equivalent of US63.6 cents



Copper metal prices 1966-1976

Annual Range and Annual Average Quotation of Official London Metal Exchange Daily Cash Copper Wirebar Quotations. (Source: London Metal Exchange.)



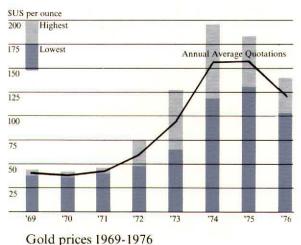
Monthly average copper prices – 1975/1976 Kina equivalent of Monthly Average Official London Metal Exchange Daily Cash Copper Wirebar Quotations. per pound compared with US55.9 cents per pound in 1975.

Gold prices on the London Gold Market moved over a relatively wide range during the year, averaging US\$124.8 per ounce (US\$160.9 per ounce in 1975). Silver prices averaged US\$4.4 per ounce (US\$4.4 per ounce in 1975).

**Finance:** In meeting its loan obligations during 1976, the Company paid interest of K11.1 million and loan repayments of K19.5 million were made.

Three loans totalling K28.4 million (US\$35M) were finalised during 1976 and by the end of the year K13.1 million (US\$17M) had been drawn down. The remaining balance will be drawn down during 1977. The loans, which are being provided by four leading international banks, are being funded in the Eurodollar and Asia Dollar markets and will be repayable over the period to 1982. These loans will be used to finance expenditure on new housing and the purchase of the replacement mine haul trucks. The Company expects to undertake new borrowings in 1977 which will enable it to carry out its planned capital expenditure programme and repay the long term loan of US\$67.4 million (K54.7M) from the Commonwealth Trading Bank during the first quarter of 1978.

From 1st January 1976, Papua New Guinea became an independent monetary area separate from Australia. This necessitated some changes in the Company's banking arrangements and these were successfully concluded.



Annual Range and Annual Average of Mean Price for Fine Gold on London Gold Market. (Source: Sharps Pixley and Company Limited, London.)

Exchange Rates: Papua New Guinea adopted a hard currency policy for the kina during 1976. This involved a 5% unilateral revaluation in July thus severing the direct relationship with the Australian dollar. Australia is a major supplier to Papua New Guinea and its revaluation was seen as one way of easing the pressure on domestic costs of the very high level of inflation in Australia. The kina did not automatically follow the movements in the Australian currency in November and December so that at the end of the year the exchange rate with the Australian dollar to the kina had risen to 1.13. On average over 1976, the kina devalued slightly against the US dollar thus favourably affecting Bougainville's sales figures. Such gains were partly offset by the increased loan obligations.

**Capital Expenditure:** 1976 was marked by a high level of capital expenditure. Over K30 million was spent with significant items being replacement haul trucks and other equipment (K12 million), preparation for the 10th ball mill (K2 million), housing and other buildings (K4 million), and completion of river diversions and concentrator water collection (K5 million).

**Training:** The Company programme for training Papua New Guinea nationals to assume added responsibilities in the workforce continued. A record of 112 apprentices completed their indentures early in the year leaving 272 in training under the apprenticeship scheme.

Tradesmen trained in prior years are to an increasing extent commencing to assume supervisory roles, having gained job experience and completed courses in supervisory instruction. On the administrative side, Papua New Guinea nationals are undertaking management responsibilities within the Company.

D. C. Vernon, Managing Director. 10th February, 1977.