MAGMA COPPER COMPANY

ANNUAL REPORT

For Year Ended December 31, 1944
MAGMA COPPER COMPANY

INCORPORATED UNDER THE LAWS OF THE
STATE OF MAINE IN 1910

President's Office
14 Wall Street
New York 5, N. Y.

Mine Office
Superior
Arizona

CAPITALIZATION
Authorized 410,000 shares of $10 par value
Outstanding 408,000 shares of $10 par value

OFFICERS
CHARLES F. AYER  President
A. J. McNAB  Vice-President
HENRY E. DODGE  Secretary and Treasurer
GUS A. MRKVICKA  Asst. Secretary and Asst. Treasurer

DIRECTORS
CHARLES F. AYER  PHILIP KRAFT
R. H. CHANNING  A. J. McNAB
EDWARD G. DENTZER  FRANCIS J. OAKES, JR.
HENRY E. DODGE

OPERATING OFFICIALS
WESLEY P. GOSS  General Manager
DARRELL GARDNER  Assistant General Manager
J. F. BUCHANAN  Mine Superintendent
JAMES H. ROSE  Mill and Smelter Superintendent
FRANK SERVER  Purchasing Agent
JOHN R. MAYS  Auditor
CHARLES A. WHITE  Traffic Manager

TRANSFER AGENT
GUARANTY TRUST COMPANY OF NEW YORK, 140 Broadway, New York 15, N. Y.

REGISTRAR
BANKERS TRUST COMPANY, 16 Wall street, New York 5, N. Y.

ANNUAL MEETING
Second Monday in May each year at Augusta, Maine
To the Stockholders of
MAGMA COPPER COMPANY:

The accompanying report from Mr. Wesley P. Goss, General Manager, shows the operations of your Company and of the Magma Arizona Railroad Company for the calendar year 1944.

The accompanying report from Mr. H. E. Dodge, Treasurer, shows the consolidated income and expenses of Magma Copper Company and Magma Arizona Railroad Company for the calendar year 1944 and the consolidated financial position of these companies as at December 31, 1944, as certified by the auditors.

No change was made in the capital structure of your Company during the year.

The following dividends were declared and paid during the year:

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Per Share</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>86</td>
<td>March 15</td>
<td>$ .25</td>
<td>$102,000.00</td>
</tr>
<tr>
<td>87</td>
<td>June 15</td>
<td>.25</td>
<td>102,000.00</td>
</tr>
<tr>
<td>88</td>
<td>September 15, 1944</td>
<td>.25</td>
<td>102,000.00</td>
</tr>
<tr>
<td>89</td>
<td>December 15, 1944</td>
<td>.25</td>
<td>102,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$1.00</td>
</tr>
</tbody>
</table>

The average net cost of producing copper after deducting gold, silver and zinc concentrate values was 12.48 cents a pound. This cost includes all operating costs, including Arizona taxes, Federal Social Security Taxes, depreciation and administrative expenses, but does not include any allowance for mine depletion, Capital Stock Tax, Federal Income and Excess Profits Taxes. The comparable cost for the year 1943 is 10.28 cents a pound. Including the bonus paid by the Government for copper production under its Premium Price Plan the Company received for all copper produced in 1944 an average price of 13.11 cents a pound.

It has not been possible during the year covered by this report to secure an adequate supply of labor. The labor situation, bad in 1943, became progressively worse during 1944. It proceeded to such an extent that during the last half of the year the labor shifts actually worked were approximately only sixty per cent. of those necessary for full production. As a consequence production for 1944 compared with production for 1942 and 1943 as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Copper</th>
<th>Zinc</th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1942</td>
<td>40,390,671 lbs.</td>
<td>7,315,034 lbs.</td>
<td>547,396.01 ozs.</td>
<td>12,818,090 ozs.</td>
</tr>
<tr>
<td>1943</td>
<td>37,223,963 lbs.</td>
<td>7,780,306 lbs.</td>
<td>408,396.83 ozs.</td>
<td>11,176,872 ozs.</td>
</tr>
<tr>
<td>1944</td>
<td>23,502,347 lbs.</td>
<td>7,333,007 lbs.</td>
<td>283,088.41 ozs.</td>
<td>7,044,925 ozs.</td>
</tr>
</tbody>
</table>

This decrease in production was the major cause of the greatly increased costs. The shortage of labor is due to the need of men for the armed forces and to the competition of the highly paid labor in war industries. As far as we can now see no relief can be expected
until the purely war industries are greatly curtailed, and the situation may easily get worse before it gets better. In fact, we have no assurance that it may not reach such a point that it will be to the advantage of the Company to stop production entirely and proceed only with development work and plant repairs.

Your attention is directed to the development now in progress on the San Manuel property, details of which are given in the General Manager’s Report.

Stockholders attention is also called to the necessity of making quite large capital expenditures when adequate supplies and labor are again available. Among other things installation of an additional cooling system is required for the mine, which in turn necessitates an increased water supply; changes in mill practice will require expenditures to an extent not yet determined; and considerable exploration and development must be done underground when the time is opportune. The development of the San Manuel property will require expenditure, which, while it cannot now be determined, will be substantial if the property proves sufficiently valuable.

On July 1, 1944, because of ill health, Mr. Edward G. Dentzer, who had been General Manager since August 1, 1940, Assistant General Manager since early in 1925, and in the employ of the Company since about 1914, resigned as General Manager. He has continued as a Director, and in the employ of the Company as Consulting Engineer.

Mr. Wesley P. Goss, a mining engineer of experience and ability, was appointed General Manager to succeed Mr. Dentzer.

Respectfully submitted,
CHARLES F. AYER, President.

TREASURER’S REPORT


To the Stockholders of
MAGMA COPPER COMPANY:

For my report as Treasurer I submit Consolidated Statements of Magma Copper Company and Magma Arizona Railroad Company, as follows:

Consolidated Balance Sheet as at December 31, 1944.
Consolidated Income and Expense Statement and
Consolidated Earned Surplus Statement for the year ended December 31, 1944

Proxies will be requested for the annual meeting of the stockholders to be held on May 14, 1945. In connection with such request a proxy statement and form of proxy will be sent on or about April 10th to stockholders entitled to vote at the meeting.

Respectfully submitted,
H. E. DODGE, Treasurer.
MR. CHARLES F. AYER, President,
Magma Copper Company,
14 Wall Street,
New York 5, N. Y.

Dear Sir:

I submit the following report on operations of the Magma Copper Company for the year ending December 31, 1944:

PROPERTY

The Company owns: 2,478.775 acres of lode claims, of which 846.340 acres are patented; 208.457 acres of mill sites, of which 181.037 acres are patented; 346.15 acres of patented desert land; 365.13 acres of patented farm land; 2 town lots in the Townsite of Superior; and 21 town lots in the First Addition to the Townsite of Superior.

Six patented lode claims containing 105.222 acres were purchased, and two lode claims containing 17.855 acres were located.

MINE

Drifting, Raising, etc.:

The following work was done during 1944 and since commencement of operations:

<table>
<thead>
<tr>
<th></th>
<th>Drifting</th>
<th>Cross-Cutting</th>
<th>Raising</th>
<th>Sinking</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1944</td>
<td>2,927 ft.</td>
<td>642 ft.</td>
<td>2,610 ft.</td>
<td>114 ft.</td>
<td>6,293 ft.</td>
</tr>
<tr>
<td>To date</td>
<td>176,755 ft.</td>
<td>83,110 ft.</td>
<td>94,770 ft.</td>
<td>29,425 ft.</td>
<td>384,060 ft.</td>
</tr>
</tbody>
</table>

Stations and pockets excavated: 1,039 cubic yards. Diamond drilling: 3,701 feet completed.

Shaft Sinking:

No. 5 shaft was deepened 112 feet, and the 4800 level loading pockets and raises were completed. The bottom is at the 4935 level.

No. 3 shaft was concreted for 240 feet below the 3722 level. This included the 3800 level station and loading pocket.

Development:

Due to a shortage of labor very little development work was done during the year. The most important work was on the East 1800; West 4200; West 4400; and West 4600 levels.

East 1800 Level:

A drift originally started at the E. 19 crosscut position was continued 110 feet on the south branch in a westerly direction. The vein exposed assayed 10.1% zinc and .83% copper over an average width of 5 feet for the entire 110 feet. The face is 158 feet west of the E. 19 crosscut position.
West 4200 Level:

The 4200 West footwall drift was driven 1,142 feet in barren schist and diabase from the W. 15 crosscut position to the W. 30 crosscut position. This drift was driven for transportation and access.

West 4400 Level:

The West drift was driven 160 feet in the vein east from W. 14 crosscut position. The vein assayed an average of 8.9% copper over a width of 6.3 feet for the entire 160 feet.

West 4600 Level:

The 4600 West drift west of No. 5 shaft main crosscut was driven 104 feet west in the vein. The face is 25 feet east of 49 crosscut position. No ore of mineable grade was encountered. The vein averaged 2.2% copper for a width of 2.8 feet for the 104 feet driven.

The 4600 West drift driven east of W. 14 crosscut position for a distance of 729 feet on the vein exposed two separate occurrences of ore. The first averaged 6.3% copper over a width of 5.9 feet for 189 feet in length. The second averaged 6.3% copper over a width of 6.6 feet for 115 feet in length. The two blocks were separated by 365 feet of low grade vein. The face is at the Zero crosscut position.

Diamond Drilling:

Horizontal diamond drill holes were put out at 75-foot intervals from the 4600 West drift to explore the North Branch vein. Of the 14 holes drilled between the face and 34 crosscut position only 6 exposed mineable ore. The North Branch vein explored by diamond drilling appears to contain only small lenses of ore spotted along the strike.

The ground south of the 4600 West drift was explored with 12 holes drilled to the south. None of these holes disclosed any vein or ore.

OPERATIONS

The mine operated continuously throughout the year. Work was done on day shift only during August to allow for vacations.

Production dropped from 34,872 tons in January to 15,203 tons in December. This drop in tonnage was due to lack of men. Every legal means possible was used to obtain and hold men, but in spite of our efforts the mine crew dropped from 614 at the beginning of the year to 369 men at the end of the year. There were 995 men on the total pay roll January 5, 1944, and 695 on the total pay roll December 27, 1944.

Copper ore was stoped from the 4400 level to the 3200 level. At the end of the year no ore was left on the West side of the mine above the 3400 level, and mining of copper ore was being confined to the 4000, 3800, and 3600 levels.

Zinc ore was stoped from the 2250 to above the 1500 level on the East side of the mine.

CONCENTRATOR

The mill operated continuously from the first of the year until August when Sunday operations were discontinued due to lack of tonnage. The use of the tables was abandoned in September with the result that operating costs were reduced without sacrifice of metallurgical efficiency.
SMELTER

The smelter was down for repairs from April 1st to April 24th. Shut downs from August 1st to September 13th and from November 11th to December 22nd were necessary because tonnage was not available. Advantage was taken of these shut downs to clean out flues and make repairs.

PRODUCTION

Magma Mine

<table>
<thead>
<tr>
<th>Tons</th>
<th>Cu%</th>
<th>Zn%</th>
<th>Ag Oxs</th>
<th>Au Oxs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Mill Ore</td>
<td>171,642</td>
<td>5.38</td>
<td>-</td>
<td>0.87</td>
</tr>
<tr>
<td>Copper Smelting Ore</td>
<td>44,203</td>
<td>8.05</td>
<td>-</td>
<td>1.16</td>
</tr>
</tbody>
</table>

Total Copper Ore | 215,845 | 5.93 | - | 0.93 | .026 |

Zinc Mill Ore | 88,755 | 1.46 | 7.55 | 2.51 | .015 |

Total Ore | 304,600 | 4.62 | 7.55 | 1.39 | .023 |

Custom ore purchased and smelted was 380 tons.

<table>
<thead>
<tr>
<th>Net Metal Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
</tr>
<tr>
<td>Magma Mine</td>
</tr>
<tr>
<td>Other Sources</td>
</tr>
</tbody>
</table>

Total | 23,528,355 lbs | 7,333,007 lbs | 284,624.04 ozs | 7,113.981 ozs |

Leasers shipped 3,670.98 short wet tons of manganese ore, assaying approximately 30% manganese, to Metals Reserve Company from the Company's property.

SAN MANUEL

An option to purchase was secured on a group of 21 claims known as the San Manuel. Options were also taken on two groups contiguous to the San Manuel. One group contains seven claims, and the other contains six claims. In addition we located 3.5 claims on surrounding property. These claims are not included under "Property" listed above.

The original option taken on the San Manuel group of 21 claims stipulates that after one year from the date of the option Magma Copper Company shall form or cause to be formed a corporation to acquire, develop, and operate the property provided Magma Copper Company desires to continue the enterprise. Provision is made in the agreement that the vendors shall receive a share interest in the new corporation. The amount of this interest will depend on the size and grade of the ore body but in any case will not exceed 10% of the total number of shares. Magma Copper Company will receive an option to purchase the remaining unissued shares in the new corporation. The money so paid by Magma will be used to explore, develop, and equip the property.

The options on the two smaller groups of claims provide for transferring full ownership to Magma Copper Company upon payment of the agreed purchase price at the end of a two-year period.

The property is located approximately one mile south of the town of Tiger, Arizona, and it is seventy miles by road south of the Magma mine at Superior.

A body of quartz monzonite and monzonite porphyry containing disseminated copper minerals is largely covered by a barren overburden of conglomerate which masks the copper bearing material.
The United States Bureau of Mines with geological assistance from the United States Geological Survey examined the property for the owners and decided that some churn drilling was justified. The first group of holes put down disclosed copper mineralization sufficient to justify further exploration.

The Bureau of Mines has drilled 14 holes to date and is continuing on two additional holes. This work indicates the possible presence of a large tonnage of copper bearing rock which may average .7% to 1.0% copper. The wide spacing of the churn drill holes and the small outcrop or surface exposure of mineralization makes it impossible at this time to estimate the tonnage and grade of the deposit. A great many churn drill holes will be required before a correct estimate can be made of the value of the deposit. Magma Copper Company is proceeding diligently and as fast as possible with the exploration of this deposit.

The physical conditions will prohibit open cut methods of recovering the ore body so that some underground caving method of extraction is indicated if the deposit is put into production.

The copper so far seen is mainly in the form of silicates and mixed silicates and sulphides. Ore of this type presents a difficult metallurgical problem from an economic standpoint.

MAGMA ARIZONA RAILROAD

The Magma Arizona Railroad continued to operate a freight train twice weekly between Superior and Magma during the year.

GENERAL

A new 400 H. P. motor was installed on the fan at the collar of No. 8 shaft replacing a 250 H. P. motor formerly in service. This change increased the volume of air exhausted through No. 8 shaft from 160,000 cubic feet per minute to 192,000 cubic feet per minute.

Approximately 1,500 feet of 8-inch pump column was renewed below the collar in No. 8 shaft, the original column having been destroyed by corrosion.

A 250 H. P. 500 G. P. M. centrifugal pump was installed on the 3600 level to complete a stand by or auxiliary pumping system independent of the regular system connected with No. 8 shaft.

VENTILATION AND COOLING

Rock temperatures have continued to increase with depth in the mine, and we will not be able to produce at an economical rate unless we make substantial additions to our underground refrigeration plant. The Carrier system now in use is operating at full capacity and cannot be enlarged due to the limited supply of cool water available for its use.

We contemplate installing a new refrigeration system which will operate in addition to the present system. The capital requirements for complete installation and utilization of the new system will cost close to $1,500,000.00. This amount will be returned from lowered mining costs.

Rainfall for the year was 19.51 inches compared with 17.08 inches last year and an average of 18.51 inches since 1920.

I wish to express my sincere appreciation for the wholehearted cooperation I have received from the staff and ‘other employees of the Company.

Respectfully submitted,

WESLEY P. GOSS, General Manager.
Magma Copper Company and
CONSOLIDATED BALANCE SHEET

ASSETS

CURRENT ASSETS:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$1,824,748.01</td>
</tr>
<tr>
<td>United States Government Securities (Purchased at Par)</td>
<td>$3,050,000.00</td>
</tr>
<tr>
<td>Bonds of Domestic Corporations—at cost (Value based on Market Quotations on December 31, 1944, $69,750.00)</td>
<td>69,746.25</td>
</tr>
<tr>
<td>Accounts Receivable and Accrued Interest</td>
<td>266,773.15</td>
</tr>
</tbody>
</table>

Inventories:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals (Copper at Contract Sales Price; Gold and Silver at Market Value)</td>
<td>$188,714.81</td>
</tr>
<tr>
<td>Ores and Metals in Process—at cost</td>
<td>194,391.44</td>
</tr>
<tr>
<td>Materials and Supplies—at cost</td>
<td>727,456.05</td>
</tr>
</tbody>
</table>

Total Current Assets $6,321,829.71

INVESTMENTS—AT COST—Apache Powder Company, etc. $10,200.00

PROPERTY ACCOUNTS:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Claims and Land</td>
<td>$1,016,684.09</td>
</tr>
<tr>
<td>Mine, Mill and Smelter Buildings, Machinery and Equipment</td>
<td>$4,462,183.38</td>
</tr>
<tr>
<td>Standard Gauge Railroad</td>
<td>682,255.45</td>
</tr>
</tbody>
</table>

Less—Reserve for Depreciation $5,144,438.83

OTHER ASSETS—San Manuel Property $31,986.05

DEFERRED CHARGES:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepaid Development, less Amortization</td>
<td>$808,307.64</td>
</tr>
<tr>
<td>Unexpired Insurance, etc.</td>
<td>47,640.61</td>
</tr>
</tbody>
</table>

$9,093,492.55

REPORT OF INDEPENDENT

To the Board of Directors,

Magma Copper Company,
14 Wall Street,
New York S. N. Y.

We have examined the Consolidated Balance Sheet of Magma Copper Company and Magma Arizona Earned Surplus for the year then ended, have reviewed the system of internal control and the accounting tested accounting records of the Companies and other supporting evidence, by methods and to the extent we

The policy of Magma Copper Company with respect to depletion of Mining Claims and Land is to make

In our opinion, the accompanying Balance Sheet and related Statements of Income and Expense and position of Magma Copper Company and Magma Arizona Railroad Company at December 31, 1944, and the accounting principles applied on a basis consistent with that of the preceding year.

# Magma Arizona Railroad Company

**AS AT DECEMBER 31, 1944**

## LIABILITIES, CAPITAL STOCK AND SURPLUS

### CURRENT LIABILITIES:

- Accounts and Wages Payable: $146,385.30
- Taxes Accrued and Payable: 47,361.85
- Provision for Federal Income Tax-1944: 50,000.00

(Computations indicate the Companies are not liable for Excess Profits Tax)

| Total Current Liabilities | $243,747.15 |

### CAPITAL STOCK AND SURPLUS:

- Capital Stock-Par Value $10.00 per share:
  - Authorized: 410,000 shares, $4,100,000.00
  - Issued: 408,155 shares, $4,081,550.00
  - Less: 155 shares held in Treasury (Cost $1,149.13), 1,550.00

- Outstanding: 408,000 shares, $4,080,000.00

- Capital Surplus (Arising through the conversion of Capital Stock from a no par value to a par value of $10.00 per share): $2,922,600.87

- Earned Surplus-without provision for Depletion of Mining Claims and Land: 1,847,144.53, 8,849,745.40

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**$9,093,492.55**

**CERTIFIED PUBLIC ACCOUNTANTS**

Railroad Company as at December 31, 1944, and the Consolidated Statements of Income and Expense and procedures of the Companies and, without making a detailed audit of the transactions, have examined or deemed appropriate.

No provision in the accounts, the factors necessary for such determination being unknown.

Earned Surplus, with no provision for depletion of Mining Claims and Land, present fairly the consolidated consolidated results of operations for the year ended that date, in conformity with generally accepted

**Barrow, Wade, Guthrie & Co.,**
Accountants and Auditors.
# Magma Copper Company

## Consolidated Income and Expense Statement

For the Year Ended December 31, 1944

### Sales of Metals:
- Copper, Gold, Silver, Zinc Concentrates (Including Premium for Base Metal Production)...

### Cost of Sales:
- Inventories of Metals and Ores-January 1, 1944: $539,409.56
- Operating Expenses: 4,025,861.88
- Depreciation and Amortization: 138,602.32
- Taxes-other than Federal Income Tax: 142,687.81

**Total Cost of Sales:** $4,846,561.57

- Inventories of Metals and Ores-December 31, 1944: 383,106.25

**Inventories of Metals and Ores:** 4,463,455.32

### Copper Company Net Operating Income:

**General, Administrative and Engineering Expenses:**
- Administrative and Engineering Expenses: 41,018.69
- Directors’ Fees and Expenses: 1,125.45
- Rent, Clerical Services, etc.: 5,897.76
- Transfer, Registrars and Dividend Disbursement Expenses: 15,025.00
- Other General Expenses: 8,554.78

**Total General, Administrative, and Engineering Expenses:** 71,621.68

**Net Operating Income:** 209,869.36

### Other Income:
- Cash Dividends: 1,938.00
- Interest: 33,656.86
- Net Profit on Sale of Securities: 4,451.37
- Miscellaneous: 4,652.57

**Total Other Income:** 44,698.80

**Copper Company-Net Profit before Provision for Federal Income Tax:** 182,946.48

### Railroad Operating Income:

**Railroad Expenses:**
- Operating Expenses: 85,505.60
- Depreciation: 6,389.10
- Taxes-other than Federal Income Tax: 4,491.24

**Total Railroad Expenses:** 96,385.94

**Railroad-Net Operating Loss:** 24,937.14

### Other Income:
- Interest: 12,269.77
- Miscellaneous: 28.11
- Profit on Sale of Securities: 11,088.97

**Total Other Income:** 23,386.85

**Railroad-Net Loss before Provision for Federal Income Tax:** 1,550.29

**Provision for Federal Income Tax:**

- 1944—Normal and Surtax-Estimated: $181,396.19
- 50,000.00

**Net Profit for year without Provision for Depletion of Mining Claims and Land:** $131,396.19
MAGMA COPPER COMPANY  
AND  
MAGMA ARIZONA RAILROAD COMPANY  

CONSOLIDATED EARNED SURPLUS STATEMENT  
FOR THE YEAR ENDED DECEMBER 31, 1944

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance January 1, 1944</td>
<td>$2,128,862.04</td>
</tr>
<tr>
<td>Add:</td>
<td></td>
</tr>
<tr>
<td>Net Profit for year, without Provision for Depletion.</td>
<td>131,396.19</td>
</tr>
<tr>
<td>Deduct:</td>
<td></td>
</tr>
<tr>
<td>Adjustment of prior years Federal Income Tax</td>
<td>$5,113.70</td>
</tr>
<tr>
<td>Dividends declared and paid during year-$1.00 per share</td>
<td>408,000.00</td>
</tr>
<tr>
<td>Balance December 31, 1944</td>
<td>$1,847,144.53</td>
</tr>
</tbody>
</table>