

**MINE
ACCOUNTING AND
COST PRINCIPLES**

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Mine accounting and cost principles by T. O. McGrath

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BY

T. O. McGRATH

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PREFACE

The present tax laws of most of the States and of the Federal Government require that accurate records be kept and that complete reports be made to the Government of the results of each year's business. The employes of large industrial units are demanding that they be informed of the results of their labor, and be given a share either of the profits of the business or in the savings resulting from their increased efficiency or effort. The general public is insisting that, being the consumer of all products, the costs and profits of industry shall be accurately determined and made public. As the result of the gradual depletion of our richest deposits of minerals the mining industry is operating on a narrower margin of profit than at any time in its history, and must know its costs from month to month to protect against loss. Also, it is now recognized that a mining enterprise may be properly equipped with the best of mechanical appliances and have an organization of high ability and employes imbued with the spirit of co-operation, nevertheless the business cannot be intelligently managed without a knowledge of the results of operation and the condition of the business for each operating period, which information can be obtained only by proper accounting and costing.

Therefore, each unit of the mining industry feels the need not only of accurately determining its costs and profits so as to have an intelligent guide to operations, and to meet the requirements of the Government, the public and of its employes, but to compile the accounting and costing data in as uniform a manner as possible so as to obtain the benefit of the operating data compiled by the other units of the industry.

To meet this need there is an urgent demand for a complete presentation of accounting and costing of mining operations compiled on a scientific basis and in a uniform manner.

In spite of this demand, however, at the present time the published literature is inadequate and lacking in uniformity and there is practically no agreement nor any great degree of efficiency in the accounting and costing practice of mines. The only explanation of the present status of mine accounting is that the great diversity in methods of mining, treatment and disposal of mine products, as well as in the character of the mines themselves limits the treatment of the subject to a description of individual systems and accounts unless the fundamental principles underlying all mining operations are recognized.

Up to date there have been two principal methods of illustrating accounting procedure: one, by means of books and records used in the business, and the other by means of accounts and statements used in

the business. When the first method is used there is explained how the books are kept in order to get a Balance Sheet and a Profit and Loss, or Income Statement. When the second method is used the balance sheet and the profit and loss account are taken as the basis and there is explained what should enter into these and subsidiary accounts, and what records should be kept to support the balance sheet and profit and loss or income account.

While it is true that the two principal objects of accounting are, to obtain a balance sheet showing the condition of the business at the end of the operating period, and, a profit and loss statement showing the results of the period's operation, nevertheless these two statements are only the results of the accounting and are not the basis of the accounting. Neither are the books the basis of the accounting as they are only part of the accounting machinery. While the accounts are the basis of the accounting they will show the true condition of the business only when they have been created in harmony with the principles underlying the business.

In this presentation of General and Cost Accounting, a new method has been used: First, in order to determine the basis of the accounting, the business has been analyzed and a statement of the principles of the mining business has been drawn; second, charts of accounts have been created that will correctly reflect these principles upon the ledger; third, schedules are drawn showing the charges and credits to these accounts to insure uniformity and correctness; fourth, books and records are created that will allow of the compiling of the operating and business data so as to give a balance sheet showing the true condition of the business and an income or profit and loss statement that will give the results of the period's operation. The accounting procedure is then handled in the order in which the business is done.

It is believed that the correct basis of accounting for mining has been presented herein and that this basis will allow of uniformity in accounting and costing procedure for all mines regardless of operating methods or the character of the ores treated. To achieve such uniformity would result in great benefit to the mining industry and in the directors, managers and department heads comprehending the business from an accounting standpoint as well as from the angle of operations.

The object has not been to endeavor to exhaust the subject of accounting and costing as applied to mining, nor to present the different systems and methods now in use by mines, mills and smelters, but simply to state the principles and to present sufficient forms, charts, records and procedure to illustrate how the principles are applied in actual practice. Also the subject has been worked out in the form of a manual and each sub-division is taken in logical order which should make the book of more value to those who wish practical working knowledge of mine accounting.

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