

MINE ACCOUNTS

Paper Read by Mr. Charles V. Jenkins Before the School of Mines.

The following is the text of the lecture delivered on Wednesday evening before the School of Mines by Charles V. Jenkins...

The study of mine accounting is one of considerable importance to you who are interested in the study of mining. That you appreciate this is evidenced by the fact that you include a paper on this subject in your course of lectures...

Your committee having fixed no limit to the scope of a paper on this subject I take the liberty of showing in a general way the practical value of a correct system of bookkeeping as applied to mine management, and to bring to your attention the general and necessary connection between commercial education and practical mining...

There are many significant and essential reasons why the qualifications should be connected in the education of a man who would bring the best of his store of labor to responsible undertaking of mine management. The business of mining is peculiar in respect that the capital usually employed in the acquisition and development of mining properties is invested by men whose place of business is far distant from the scene of actual operations...

Individual effort cannot avail more in any other line of business than in that of mining. Accidents, the loss of property, loss of time, and what sometimes aid in incompetency, and what seems to be successful for a time attend bad management. But it is true of this as of all other business undertakings, "careless management is never the result of chance."

A manager, capable of directing the practical operation of development and mining the property in his charge, should have some knowledge of law to so arrange and order the keeping of his records and accounts that he may be able to obtain aid at all times in the possession of information relative to the cost of each branch of work in progress, which is so important from a commercial point of view to economical and successful management.

It may be said that a manager can secure the services of an accountant to relieve him of the duties of bookkeeping, but this is no excuse, and there is no justifiable reason why a mine manager capable in all other respects of managing his business should be dependent upon the service of another in the matter of keeping his accounts.

With a general knowledge of accounting he would realize more fully the importance of and the necessity for keeping accurate and detailed records of all transactions, and the records from which he can have prepared a statement or cost showing in detail the actual cost from month to month of each piece of work separately in its progress and its total cost when finished.

Such a statement is not only a most important factor in mine management, and it frequently transpires that the manager assumes personal responsibility in its preparation. I do not mean by this that the manager should, or that he should be necessary for him to do his own bookkeeping, but as I have said, I do think he should be capable of filling this as well as any other position in or about a mine. Or, more particularly, that he should understand the theory of keeping accounts in order to be able to intelligently advise and direct a competent accountant.

I do not deem it advisable in a paper of this nature to discuss the fundamental principles of scientific accounting, but I will say that in my opinion it is much more important to learn the principles that govern correct systems of bookkeeping, than it is to learn any particular form or according to which books should be laid out or statements prepared.

The books necessary and the methods of keeping the general accounts of a mining company, do not differ except in detail from the books and accounts of other corporations. By this term "general accounts" I refer to the accounts of the corporation or company kept by the secretary, which do not concern us in this study. The question we have to deal with is the manner and method of keeping, at the mine, a set of books of record showing in detail the source and amount of revenue, and the expense or cost of operation; and the compiling and analyzing the cost of mining for the information and guidance of the management.

With these preliminary remarks I will now take up and try to outline a method of keeping a set of mine account books. In a general sense that method is best, which with the fewest entries and the least copying, will secure accuracy and completeness as to detail, and show all the results which the directors or manager wish to ascertain.

For all practical purposes, I am sure the voucher system is best adapted for recording all business transactions at the mine. The ledger and two books of original entry, the journal and the voucher journal, are all the books necessary. As the prevalent custom of making all payments is by check, cash very seldom entering into the daily transactions, the cash book is not required and will not be considered here.

The system requires that all invoices and accounts payable shall be vouchered. The voucher ought to show in detail the amount and nature of the expenditure for which it is made, and when duly signed and receipted by the person in whose favor it is drawn this has become in fact what its name implies, a document which serves to vouch for the truth and accuracy of the account and an evidence of the payment of the amount for which it is written, it should be filed with the home office of the company as a complete record of the transaction.

The voucher may be made and executed in duplicate if it is deemed advisable to keep a copy at the mine, though this is practically unnecessary, inasmuch as this impression copy of the voucher, together

with the original invoice filed at the mine office will furnish all the data needed should occasion necessitate reference to the transaction.

A few words only in regard to the books used as above mentioned, when we will pass to the more important consideration of the accounts themselves, and their nature and relevancy to the statement of costs. The Journal.—Modern bookkeeping is rapidly restricting the journal to use only in making cross entries or adjusting errors or mistakes in ledger accounts. In this system the total amount of the vouchers in this respect, and in making the original entry of such daily transactions as do not pass through the voucher journal, the general principle being that each entry made must show a debit and a corresponding credit, with concise and definite information of how and why the items of each transaction entered are subdivided.

The voucher journal is a journal of all transactions entered on all vouchers audited and in course of payment. There may be as few or as many columns as the volume of business demands. One column, usually the first, is reserved for the total amount of the vouchers. In the next following column are entered the extensions of the amount column, for convenience in posting the amount of the various sums expended daily or weekly, as the demands of the business may suggest. This column may bear the heading "Charge Audited Voucher Account—Credit Bank," and the amount so extended in each case, representing actual expenditures and payments by checks issued, is carried to the ledger to the debit of "audited voucher account" and to the credit of "bank account."

Then follow the expense columns, each column headed with the name of the ledger account it stands for. The expenditure represented by the voucher is distributed and expended to the account to which it is to be charged, such distribution usually being written on the reverse side of the voucher, and from the voucher the entry is made, showing the date, voucher number, number of check given in payment, to whom paid, and for what purpose payment is made, and the amount. Then in the column or columns as the case may be under its proper heading according to distribution is entered such portion or so much of the amount as is chargeable to that particular account to which it is to be posted.

In the matter of posting the voucher journal I would suggest the following plan. The entries on the voucher are carried to the audited voucher column of the footings of the vouchers paid, including payments for labor as may be shown upon and entered from the payroll. The amount of such extension representing the debit to the ledger by debiting "audited voucher account" and crediting "bank account."

At the end of the month, or after the regular monthly expenses are all in and vouchers are audited, entered and paid, carry the footings of the voucher journal to the ledger, by posting the total of the "amount" column to the credit of "audited voucher account," and the footing of each of the several expense columns to the debit of the account it represents. In this manner the "audited voucher account" has credit for the amount of the debit of the vouchers paid, and the various expense accounts are debited with such portion of the monthly expenses as is properly chargeable to each.

The ledger is the book of final entry into which all transactions are lodged, distributed under certain heads or accounts, each entry completing the history of the account, which when it is posted up to the date such entry is made. There are of course, and of necessity must be, many other subordinate books, blotters, registers, forms, etc., which enter into and form a part of the system of bookkeeping, but as to the number and nature of these subsidiary books and forms, the demands of the business will dictate and experience and practice will suggest what can be used to the best advantage to facilitate and render convenient the keeping of accounts.

This mention of the books employed in this system of accounting has in it a seeming necessity in order to arrive at a satisfactory explanation of the accounts. Ledger accounts may be classed as individual accounts, such as accounts with persons or firms; representative accounts, which exhibit or show the transactions of some particular item or branch of the business; or which stand for some certain source of revenue, or for some material feature of expense, the balance of which represents some value other than amount expended; the expense accounts, dealing with direct cost and expense of the business; and the account with a separate heading or place of working in the mine.

Individual Account.—As a rule there ought to be few accounts of this nature on the books of the mine. There are several with merchants or dealers whose supplies are purchased from. Such an account will be opened in the name of the dealer by credit entry for amount of purchase, and closed by debit entry when account is paid.

But the two principal accounts of this class will be the account with the head office of the company and the bank account. The "head office account" is a record of the transactions between the mine and the head office of the company. This account on the mine book is credited with all monies received from the home office in the way of remittance; or for amount of payments pertaining to the actual expense of operation as may be paid by them for the company. It is debited either with all remittances made to the home office, or likewise for such amounts as may be paid by the mine once for and on disposition of which it is to be made by them. The bank account is the cash account of a mine. It is debited with all sums deposited to the credit of the company, and audited with the amount of all checks issued. The balance, debit or credit, shows cash on hand, or overdraft as the case may be.

Of the representative accounts the most important, in the method or system here explained the one account is not treated as a revenue account, although it is the one account which stands for the principal source of revenue of the mine. I prefer to call it a representative account, for the reason that it represents or exhibits the revenue derived from the sale of ore only from month to month. Each month's receipts being charged there with the close of the month's business. It is practically speaking a "turn sheet," an account into which the total amount of receipts for ore sold during the month is entered, and the purpose of distributing to the accounts of the various stopes or places of working, the respective amount earned by each in the way of ore production.

This account is credited with the net proceeds from the sale of the ore, and is debited or charged with such amount or amounts as may have to be paid as direct tax or royalty on mine output, and with the amounts to be credited to the different stopes or places of working for their share of the ore produced.

mine, and as there are no entries to be made in this account, it is not necessary to have a ledger for this account. As there is generally speaking a fixed price for this marketable commodity of a mine, the amount of the sale is received in settlement of the ore sold, the matter of keeping the record is very simple. But there is one important and valuable record to be kept of the locality of each lot of ore, and the crediting of each heading with the amount received for the ore it produced. The manner and method of securing this record may be attained by systematizing and keeping records and account of all other daily transactions, must be arranged and provided for by the manager of the mine.

As the same conditions do not prevail at all mines, and as a system of recording the ore output of one mine could not be adapted to the use of another, it will not be worth while to take up the details of an explanation of how such a record can be kept under certain circumstances. But I deem it sufficient to say that by persistent effort and exercise of close and careful attention a record of the cash receipts of the production of ore; and this record of ore production can be reconciled with the returns from the smelter, so that a record of the value of all ore shipped from each mine can be secured.

The Audited Voucher Accounts.—As this system of keeping accounts provides for a separate account for each different class of expenditure and expense, the audited voucher account may be treated as a representative account, and as such it is in the sense that it represents and shows the unclassified expenditures from month to month, which are here entered to be carried into the account originate in the voucher journal, from whence are posted the debit entries for all disbursements at the time expenditure is made; and the credit entries are made in the regular or weekly, as the demands of the business may suggest. This column may bear the heading "Charge Audited Voucher Account—Credit Bank," and the amount so extended in each case, representing actual expenditures and payments by checks issued, is carried to the ledger to the debit of "audited voucher account" and to the credit of "bank account."

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IN THE SUPREME COURT, IN THE MATTER OF O. K. GOLD MINING COMPANY Limited Liability, (Foreign). In Liquidation. The Undereigned Official Liquidator Will Sell by Private Treaty Subject to Ratification by the COURT IN ONE LOT. The property known as the O. K. Mine and the buildings belonging to the said company. Also the entire mining and milling plant of said company, the whole situated on the south slope of O. K. Mountain, in the Trail Creek Mining Division of West Kootenay, Province of British Columbia. The property is about two and one-half miles west of the City of Rossland and close to the main wagon road a Red Mountain railroad, both leading from the City of Rossland to Northport in the State of Washington. BUILDINGS.—The principal buildings include the following: The new mill building containing 10-stamp mill and designed and built to accommodate 25 stamps; engine and boiler house; office building, mess room, coal house, store room and manager's residence. The development consists of three main tunnels, with one winze and numerous drifts, together aggregating over 1,500 feet of work. The mine is open to inspection, but an order for that purpose must be obtained at the office of the liquidator or 3 Imperial block Rossland, B. C., where price, terms and further information can be obtained. Under an order of the court heretofore issued the undersigned is authorized to give a short option or working bond on the mine. Bedford McNeill's Code. RICHARD PLEWMAN Official Liquidator

BUY HUMMING BIRD UNPOOLED (Treasury) Special 12 1/2c. PAY ORE UNPOOLED (Treasury) 7 1/2c. Apply to any Rossland firm of Mining Brokers, or to SMITH CURTIS, Rossland, B. C. P. O. Box 572.

Charles Dangerfield STOCK BROKER IMPERIAL BLOCK ROSSLAND, B. C. Weekly Market Report with Quotations on Rossland, Slovan and Republic Stocks Furnished on Application.

Burlington Route TO CHICAGO NEW SHORT LINE FROM MONTANA, IDAHO AND PUGET SOUND A. C. SHELDON, General Agent, 250 Washington St., PORTLAND, ORE.

count of the labor, expense of running such other labor as may be employed in this service. It is debited and credited in same manner as mine labor account. Having touched upon the principal points involved in the keeping of the books of account, I will now try to explain how these various expenses, as represented by the accounts on the ledger, may be gathered together to form a statement of the function of such a statement of costs to furnish exact specific information regarding the details of the expense of mining. It is the foundation upon which the superstructure of successful mine management is built. Considering it in this light you will perceive the importance and necessity of accuracy in making up such a statement. If the figures you present are not correct; if they are not to be relied upon, then it may be considered that the time and labor spent in compiling such a statement is so much effort and energy wasted, and a statement so prepared is nothing more than an estimate. As I have stated, the payroll is entered upon the voucher journal in the same manner as all other vouchers, and in the voucher journal the various entries are posted to the ledger. The "mine labor account" is an account of all labor directly employed in mining, such as drilling, tramming, shovelling, timbering, hoisting, smithing, ore sorting, and general labor. The account is debited with full amount of expenditure for mine labor as same appears upon the book of original entry, and it is in turn credited with this same amount by cross-entry in the journal when the various places of working are debited with the amount chargeable to each respectively. The "compressor labor account" is an ac-

May. Co effect Jan. 1st, 1899... ROUTE... except Monday at... except Monday at... WAZGEL, JUNEAU... & Northern... Heppard R'y... IN RAILWAY... Route to Nelson... Lake and... year between... AND NELSON. A. M., JAN. 3... ... 6:30 p. m. ... 11:00 p. m. ... Leave 11:55 a. m. ... Weekn Spokane and... ... world... ... with steamers for... ... points... ... Boundary Camp... ... Marcus and... ... Rossland, B. C. ... Trail, B. C. ... Spokane, W... AN... RY... O LINE... WANT THE BEST... NG EAST... THE UNITED STATES... NADA... ... LINE... ... St. Paul... ... Boston, Tuesdays... ... First class sleeper... ... One and one-fourth... ... to Nelson... TRAIN... ... Arrive 11:05 P. M... ... Robson for and from... ... and to and from Nel... ... other Slovan points... ... baggage checked to... DIFFICULTIES... ... all information call on... ... agent or... ... Ticket Agt } Ross... ... } P. A., Nelson... ... Vancouver... West Chain Made it... ... FOREST... ... antal Route... ... equipment, fit at the... ... club room open... ... on the a la carte plan... ... NDEST SCENERY... ... by Daylight... ... the season of navigation... ... luth in connection with... ... ger steamers Northwest... ... complete informati... ... N. Ry. agents, or... ... ACKSON... ... Agent, Spokane, Wash... ... ul. Minn... S. S. LINES... ST. JOHN... ... April 2... ... April 9... OKTLANO... ... April 8... ... March 8... ... March 15... ... March 22... ... March 29... ... March 29... ... d from all European... ... ets and full information... ... agent... MACKENZIE... ... Agt., Rossland, B. C... ... Agt., Winitseta... C. R. HAMILTON... Hmilton... ctors, Notaries... Rossland B. C.