Bulletin No. 62 *Economic Series No. 13*

University of Arizona Bulletin

SELLING PROSPECTS

BY CHARLES F. WILLIS

Entered as second class matter November 23, 1915, at the postoffice at Tucson, Arizona, under the Act of August 24, 1912. Issued weekly, September to May.

PUBLISHED BY THE

University of Arizona
Bureau of Mines

CHARLES F. WILLIS, *Director*

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SELLING PROSPECTS

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From all sides we hear of the demand for mines and prospects. The surplus of Eastern money caused by the large profits of the past few years has been seeking an outlet, and is ready to take the speculative or semi-speculative opportunities that the purchasing of prospects offers. Then we hear from all sides of the hundreds and even thousands of prospects that are for sale, but we hear but little of actual sales and the working of new properties. Probably more money is available for investment in mines than at any time during recent years, but the mines are not being found. It is an encouraging sign of the times that substantial business men of large resources are prepared to invest in metal mines on terms fair to all concerned, including the promoter and miner stockholder, and there is no more important problem in the hands of the prospector than the making of mining less of a game for gamblers and more of a business for investors worth while.

Selling mines and selling prospects are two quite different things, and the methods applied to each should be quite different. When we have a mine or prospect for sale, why not look at it precisely in the light of having any other commodity for sale, and apply the same marketing methods that have proven so successful in other commodities. Mining is a business to be conducted precisely as other business is conducted. The same rules of the game apply to mining, and if rules have been made for the successful marketing of commodities by a study of the market, a study of the people purchasing, a study of the method of presenting your commodity, why should it not be applied to mining? If we have many mines and prospects to sell and we also have many people desiring to buy mines and prospects, and still the buyers and sellers can not get together, there is evidently a reason, and it is the object of this bulletin to analyze these reasons for the purpose of correcting them as far as possible.

The large exploration and mining companies are frank in their expression of the desire for acquisition of meritorious mines and prospects, and spend fortunes annually in the examination of many supposedly such submitted to them from all quarters of the world. As a matter of fact, it is a good deal of a merry-go-round in which the engineers of the different large syndicates take turns in examining the different properties of their respective plants. It was but a short time ago when the large exploration and development companies not only required mines with more surface showing, but required the ore to be blocked out. While such companies are still conservative in their selections they are not as conservative in desiring only mines rather than prospects. It is very interesting to note the progress of prospect examination by the larger exploration companies. In 1913, the United States Smelting, Refining & Mining Company reported that 639 properties were submitted to their engineering staff and that 538 were rejected on examination of data and reports. Eighty-two of the remainder failed to pass the preliminary field examination, and out of the remaining 19, two properties were taken over, and a long time option secured on interest on the third property. This is but the history of every large exploration company and every large mining company that desires to expand, and it is also a matter of record that only about one in six of the mining properties favorably passed upon live up to the expectations of the examining engineers.

It does seem as though the above figures, which are representative of general practice, may give us an answer as to why mines and prospects do not sell readily, when 538 out of 639 properties were rejected upon the examination of the reports and data. The investigation of this side shows that the real trouble was not with all the properties, but was with the reports and data submitted.

That the larger syndicates are really in earnest in desiring properties is evidenced by the fact that they have in the field continually many scouts for mining properties, and scouting is a truly expensive way of finding such properties, being absolutely unproductive except when mines are found, and the companies that spend hundreds of thousands of dollars in scouting and examination work must find the properties to repay this expense.

When you have something to sell, the first thing to do is to analyze it. In the first place, what are your chances as a prospector in handling your property yourself and making the entire profit? Your chances on this are undoubtedly small. The days of the bonanzas are gone. The days of mining rich surface ores are in the past. The country has been well scoured over and the properties which will be developed in the future into large mines will be those which geological indications have shown to be opportunities. The saying has been existent for a long while that it takes a million dollars to make a copper mine, and as a matter of fact it takes several times that at the present time. The gopher-hole, in which the prospector could take out sufficient ore to pay for his beans and bacon, is gone and the field of the prospector is entirely changed.

With the change in the field has come a real change in the prospector himself, for the real prospector of the present day is generally a good economic geologist, who has had his training from experience, who knows many uncorrelated facts regarding geology. Now that the superficial rich deposits have become rare, the prospector may only expect to find deposits of so low grade as to be unprofitable to his own limited means of exploitation. Truly in many ways the independence of the prospector is gone, for he finds something that is of no use to him, and is therefore at great disadvantage in selling it to some one to whom it is of use. Yet the prospector is absolutely necessary to successful mining, for it must be the prospector who originally finds the property for the mining engineer who scouts for the capitalist. Prospecting, economically conducted, is bound to be a matter for individuals. No corporation can require from its employee the endurance of the hardships which are cheerfully undertaken when the gain to be made is his own or to be shared with a few individuals, all of whom are known to him. It depends on how much the individual prospector can be improved in knowledge of commercial mineral products, their occurrence, and the wise expenditure of money, as to whether the available funds will prove adequate to the finding of new mineral deposits or not.

In analyzing what you have to sell, you should first analyze your competition, and in the selling of mines and prospects there is intense competition, for every one believes most sincerely that his property is a world beater, and sees things in his property that really do not exist. It is difficult for the prospector to look at cold, bare and hard facts, for to be a prospector a man must be an optimist and an optimist can only see the most glorious side of things. Yet in the selling of prospects the dreams of the prospector and the hopes of the prospector do not in the least interest or even excite the enthusiasm of the prospective buyer. He hears that story on every side. It is the prospector who, while he himself can see millions in his prospect, can present only facts and not fancies to the prospective buyer, who makes many sales of properties, where the dreamer makes but few. The competition then that the seller of prospects is up against is not so much the competition of the value of the prospect, as much as it is of the salesmanship of the seller, his ability to present his case in a convincing manner.

Then the good salesman would analyze the demand. The one thing that the prospector seems to forget in his selling argument is that there is really a risk in mining. If an automobile salesman said to a buyer that he had a car which he would sell at $1500 which was sure to give satisfaction, and that he had another car which he was not certain of, which might and might not work, which he would sell at $500, do you imagine the purchaser would select the latter? It is very certain that he would not want it, were he to sell it at $400 or even $300. The increased risk necessarily makes the lower price. The risks in mining are like the risks in any productive business, and are a legitimate subject for consideration for the seller of the property in order that he may know the viewpoint of the buyer of that property. The risks in mining are, first, the uncertainty in the supply of raw material; secondly, the uncertainty in the cost of production; and thirdly, the uncertainty in marketing. In the first particular, the risks vary greatly according to the kind of mine. The sources of iron and coal, for example, are fields of great magnitude and uniform condition, and a few small bore holes enable the operator to learn the extent of the deposits and accurately estimate the amount and value of their contents. The average gold content of great tracts of placer ground suitable for dredging may be learned in advance by borings and small wells. Long preliminary development is unnecessary because all parts of the deposit are easily reached from the surface. So far as the raw material is concerned, there is less uncertainty in mining operations of this character than there is in the manufacturing business, depending, for example, on the supply of cotton, leather or other commodities.

In some mines the ore supply is uncertain and the metal may be concentrated in rich pockets or scattered here and there at irregular intervals, and the miner never knows in advance how much worthless rock he must remove before striking a bonanza. In a large number of mines from which the ore is obtained in veins or lodes there may be a variation in amount or value of the ore and vein carrying it at different places. Till the mine is opened, blocked out and sampled, it is impossible to make even an approximate estimate of its value, and consequently investment in mines and ore bodies of this character yet to be developed is attended by more or less risk. It is well in making a mining investment to ascertain the state of development of the property, the supply of raw material in sight or reasonably certain. It should be remembered, that at the same time where unusual risks are assumed, there is a possibility of unusual profits.

After the mine and value of the ore are known, the cost of production can be figured successfully, but previous to that time who knows but what unexpected flows of water may be encountered, and there may be extra bills for timber. The actual cost of breaking down the ore and getting it to the surface is generally a problem of easy determination. The concentration of the ore and the smelting of the ore are also of easy determination, but, outside of gold, while all of the metals have a market, the prices are dependent upon industrial conditions, and when a man makes a mine and is going to spend several years in making it, he is gambling largely on future prices. These are the things least likely of consideration by the seller of a prospect and of the utmost consideration by the buyer, and yet a man to be a successful salesman must know the problems of the purchaser. Then, too, to be a successful seller of mining prospects the salesman must know something about his market. If he has several different kinds of markets there must be something known about how to present his problem to each and every one of them, and the kind of men with whom he will have to deal. This often in true salesmanship makes a very considerable difference in the method of presenting a property for sale.

In the first place we have many different types of men who are in the market for the purchase of mining prospects. We have first the individuals. These individuals are generally engineers who have been commissioned by their clients, who are mostly men of large interests occasionally dabbling in mines, and their commission is often of a more or less uncertain and indefinite character. A certain engineer, for instance, will be told by his client, "If you happen to run across a good copper property let me know." And practically every engineer of any prominence has from one to a dozen commissions of this kind at the present time. Yet from the point of view of the seller of the property these are the hardest type of men to reach. There is some difference between telling an engineer to go find a copper mine, or—if he happens to run across a copper mine, for such men are not going to spend their own time and money in making examinations unless the prospect looks very attractive and alluring, and under such conditions the engineer is likely to be more conservative than when scouting for a large syndicate, or when he is commissioned to FIND a property. So that the first branch of the market for mining prospects is the more or less prominent mining engineer, but to induce him to examine your prospect personally is a comparatively difficult proposition. As has been said, your presentation must be very attractive. Yet no one is quicker to detect exaggeration than is such a man, and exaggeration will do more harm and is less likely to get personal examination than conservatism.

Then, of course, another type of man with whom the seller of property has to deal is the promoter, and unfortunately it is the promoter who has largely been responsible for the way mining prospects are presented for sale at the present time, for but a few years ago the promoter was the only source for a market, but the promoter of today is far different from the promoter of a few years ago. It is unfortunate that the promoter of the present carries with him to some extent the odium of the promoter of the past, and while we still have some of the get-rich-quick type of promoters, the improving business judgment of the small investor is going far toward eliminating him. Every wild-cat mine in a county or a state takes many more dollars away from the future development of the state than it ever puts into the development of the properties under its control, and every prospector who sells to a promoter who desires to use the mine for a wild-cat proposition is doing more to retard the development of the state than any other agent. The wild-cat promoter does not quibble much about price, for he does not expect to pay it. What he desires generally are good talking points, such as the extension of the prominent dividend paying deposit, high assay values even though they may be from selected samples, large acreage, etc. This is the type that the seller of prospects should avoid.

The legitimate mine promoter, that is, the man who makes his business the development of a mine by the accumulation of capital in small quantities is a necessary part of our economic progress in mine development, but such a man, who has any legitimate mining operation, should be treated by the seller as are the larger exploration companies and mining companies.

Another type with whom the prospector may have to deal as a seller is the broker, the man who, for a commission, will endeavor to be the salesman for the mine. This method offers in many ways excellent opportunities for the prospector who, as a rule, is in the field or in a place where he can seldom hear of or meet prospective purchasers. The broker relieves the prospector of any necessity of a knowledge of salesmanship of prospects, for to be a successful broker he must be a salesman. The greatest disadvantage in dealing with brokers is that the larger exploration companies and mining companies do not desire to deal through an intermediary and they also desire to have the commission generally paid these brokers. So that the placing of a property with a broker to some extent limits the market. Prospects are seldom sold on the original proposition as submitted to the purchaser, and dealing through an agent is difficult and unsatisfactory. Yet many prospectors cannot do otherwise, and for the prospector who is more or less out of communication with the business interests of the country the broker offers an opportunity for the sale of his property. For the presentation of a property to a broker it is necessary to have it similar to the method of presenting to an individual or an engineer, although the more data given the broker, if he is at all wise in the use of that data, the better.

Another type with whom the prospective seller will have to deal is the larger mining company which desires, by the acquisition of other properties and the expansion of its work, to retain its corporate existence. As a rule, this type desires properties containing as its most prominent metal the metal in which they are already working, and such companies are also on the lookout for properties which contain as well as the metal the fluxes in which their own properties are deficient, and besides the other facts which will later be outlined in this bulletin, a complete analysis of average samples will be of the greatest assistance in presenting your case to the larger mining company which desires to expand.

Then, too, we have companies that are organized particularly for the exploration and development of mining properties. These companies explore lands, concessions and mining districts for promising mineral deposits and develop such as seem worthy, and then sell or operate the same. As every one knows, development companies, properly so-called, do confine themselves chiefly to such work, and having developed a mining deposit sufficiently to prove that it will be profitable under the conditions, form a subsidiary company to operate the same. Such companies have main offices at many points, and inasmuch as they are distinctly in the business of purchasing prospects they offer the greatest market, and the point in salesmanship that must be considered in dealing with such companies is how to attract a sufficient interest in your prospect for them to send a man to investigate.

We hear from both the buyers and sellers of mining prospects the complaints as to why they cannot get together. The prospector claims that he cannot get a hearing, or cannot get them to examine his property. Generally the reason for this is that the report which he submitted to them was either too short or too long or does not contain the principal points on which they may determine whether or not it is worth while their investigating. These large corporations have hundreds and even thousands of prospects called to their attention in the course of the year, and it is probable that if you have not heard from them it is because you did not present your case right or that your valuation was entirely out of the question. The former is more probable, because had your proposition been presented in good form they undoubtedly would have taken the matter up further with the chance of later adjusting the price. The complaint always comes that these larger companies will take only a sure thing, but that they do not want to pay anything for the property. It stands to reason that these different syndicates are not in business for their health and are no different from any one else in any other business. It is perfectly natural that they are going to drive the best possible bargain, and the seller is perfectly willing to take more than his property is worth if he can get it. It is nothing more or less than a question of bargaining, and it will be found that these larger syndicates will sometimes take chances in purchasing that smaller companies cannot afford to take. Another complaint is that they want control. Is it not perfectly natural? It is unlikely that any company is going to spend any great sum in the development of a property without its control, so that the seller must expect to give up at least the control and also he must not expect to receive more than it is worth. Often the prospector has his hopes capitalized very high and the buyer will seldom pay much for this evidence of good-will.

Then, too, the buyers complain that there is no real desire on the part of many prospectors to sell,—that they take an attitude when approached of antagonism, treating the buyer as if he desired to take away from them something which they possessed. It is not probable that the prospector would trade long in a store that did not present its goods in a pleasing and willing manner.

The exploration companies also feel that when a large company examines with the view of purchasing, the price often goes up. Also, it is not probable that the prospector would trade in a store which he knew had a different price for different people.

Many prospectors do not wish to sell their properties under lease. A property purchased outright for cash offers the greatest risk and with the greatest risk would naturally come the lowest price. To buy an undeveloped property without the privilege of working it would be like "buying a pig in a bag," or "swapping sight unseen," and it really takes a remarkable prospect to get a cash payment except under lease. Other commodities are sold with the privilege of examination, why not prospects, and as we look through the advertising pages of any of the magazines we see many things advertised, "Use for thirty days at our expense and then return if not satisfactory." Why not with prospects? Although the period that anything could be determined about a prospect would be, of course, much greater than thirty days. This plan is going into the marketing of all commodities, and is no more than fair, for even though the buyer does not take the prospect, he has often spent thousands of dollars upon it, which has taught the former owner how much it is really worth and at no expense to himself. Moreover, the longer term of the lease the less risk, and the less risk, the greater price that can be asked.

Often it is found that the prospector in order to show his faith in the property desires to retain an interest, and it is seldom that the purchaser desires that the prospector retain his interest, for when he buys a thing he desires to own it outright, and while the evidence in good faith is shown in the desire to retain an interest it often acts against the sale of the property. Without full control the management is often hampered in the working of a property, and inasmuch as the management is one of the most important factors in the success of the mining property, and often the factor that determines between success and failure, it is natural that they cannot wish it hampered.

Probably the greatest complaint that the prospective purchaser of mining properties has to make, however, is on the question of reports and valuation, and this will be taken up in some detail.

It is really amusing to read the common type of report which is issued by the prospector, even by men who claim to be engineers. Frequently long descriptions of scenery, climate and general conditions constitute the major portion of the report, and it is not uncommon to have a long dissertation on original geology. A strong point is often made of the acreage owned and the description of the mine and its workings, and the many features which have a bearing on whether or not it would be a paying venture occupy a subordinate position. Maps are seldom, if ever, presented and statements as to width of ore, assays, tons developed, etc., are given in round numbers, usually not the result of measurement or calculation. Costs are generally neglected, and the value of the ore in sight given as its gross value. In general, it may be said that the economic and business features of the enterprise are entirely neglected, and since the investor's engineer can usually get from the report no idea of this most important feature, he cannot advise his clients to spend several thousand dollars in the examination of the prospect. If this one point was borne in mind in the making of the report to submit to possible purchasers, much of the difficulty would be overcome. Do not forget that the examination of the prospect is unproductive in so far as the purchaser is concerned, and that your presentation of the case must be such as to induce him to pay for the examination.

Of course, in the case of a prospect all such data cannot be given, but even then some data of economic value can be given. Most prospectors lose sight of the fact that in many cases much information as to the distribution and value of the deposit may be obtained by exposing a vein, by cross-cuts at frequent intervals, and by taking samples and measuring widths. The man who can stake a claim certainly should be able to make a rough map showing the vein and the points where samples were taken and widths marked down.

The seller should remember that the prospective purchaser does not know him and is basing his judgment on a report, and the conservative and brief report will bring more results, particularly if accompanied by maps which are so readily interpreted by the prospective purchaser's engineer. It should also be remembered that both the purchaser and his engineer are ordinarily busy men, and even though they have the time, they generally have not the time or inclination to wade through a mass of indefinite data and select the most important facts.

The engineer wants to know primarily whether or not there is a reasonable chance of making a mine, the operation of which will return the money invested and will pay a profit. Naturally, two men may differ as to what constitutes a reasonable chance, but the data they require will always be the same and will consist of such information as the extent of the vein, its width and the width of the ore, the value it carries and the distribution, all of which may be embodied in the assay map. He further would want to get an idea of the composition of the ore and the cost of production, if such figures are obtainable, the cost of drifting and sinking, wages paid, etc., while data as to the climate, topography, means of access, are of interest only as they affect the cost of operation. All this and other data are, of course, what go to make up a properly constituted engineer's report. If the purchaser's engineer, after considering all the data presented, examines the mine, they are what he will gather himself to verify the vendor's statement, but if all these points are presented by the seller and in such a way that the calculations going to make up the totals may be checked, he will find that his proposition gets much more attention than if he presented a rambling description containing hardly a figure. The seller may have to employ an engineer to get up such a report and assay map, but there is no doubt but that this is the cheapest way and will well repay him. Many meritorious propositions fail to attract attention because of the indefinite and unbusiness-like way in which the facts regarding the property are presented.

Some of the larger syndicates have issued suggestions for a preliminary description of the mining property, one of which is shown below:

SUGGESTIONS FOR PRELIMINARY DESCRIPTION OF MINING PROPERTY

In view of the natural limitations to the field examinations of a single company, it is impossible to consider for investigation propositions presented without some definite, clear and reliable data to go on.

For the general guidance of those who may desire to bring propositions to our notice and may not be acquainted with the requirements for certain data necessary for us to know before the examination of a property can be decided on, we make the following suggestions for preliminary description:

PROSPECTS AND PARTLY DEVELOPED MINES.

Location: Country, State, County. Approximate altitude. Nearest R. R. station and distance. Roads to mine (wagon road or trail). Transportation facilities and freight rates.

General Description: Character of deposit, ore, and country rock. Include maps, if any, in plan and section showing work done. If no maps exist, describe workings in detail. Sketches, however rough, are of great value. State average width of vein, the distance over which it can be traced, state number of samples taken and their respective values.

Economic Conditions: Water, timber and fuel supply.

History: Of property, noting by whom it has been previously examined. Nearest mines, active or idle.

Title: How held.

DEVELOPED MINES

In the case of developed mines, possibly having a record of production, the information available may be very extensive. In this case, those submitting a proposition to us, if no engineer's report exists, should give description and history of the property as fully detailed as possible, indicating what plans, sampling data, records of production, expenditure, analyses, etc., could be forwarded for inspection, should we find the proposition sufficiently promising for further consideration.

It is also desirable to state how far the mine workings are open for examination and sampling.

In other cases a blank is often issued to be filled out, and it is rather peculiar that the spaces allowed for writing make the report of necessity very brief. One in particular merely asks 26 questions, each one to be answered as briefly as possible. These questions are given below:

1. Name and location of property?
2. Acreage?
3. Do you own the property or directly represent the owner?
4. Distance from railway and conditions of roads?
5. Is the property patented?
6. Formation?
7. Number of veins?
8. Length of veins covered by locations?
9. Average width of veins?
10. Amount and character of development?
11. Is ore free milling or refractory?
12. How best treated?
13. Length of ore shoots?
14. Metal contents of ore? What mineral productions?
15. Average value per ton?
16. Amount of past productions?
17. Amount of ore in sight and how determined?
18. Water and timber facilities?
19. Is the mine wet; if so how much water does it make daily?
20. Kind and condition of equipment?
21. Can you supply an up-to-date engineer's report, with map of surface and underground workings?
22. Give climatic conditions?
23. Distance to nearest mill or smelter?
24. Cost of transportation to mill or smelter?
25. Daily wage for miners? Number of hours?
26. Nearest point for mining supplies?

The claims can be best shown by a sketch map. The location of the property and method of reaching it are of very considerable importance. It should also be shown by what right the claims are held. A brief history of the property and district is often of value. The geology should be simply and briefly treated, avoiding theories and not going into discussions as to the probable genesis of the ores. The transportation facilities, the question of water, labor and fuel are important. It is well to remember that brevity on reports is highly desirable when presenting to a prospective purchaser.

The question of the valuation of a prospect is a most serious one and extremely difficult to give any rules for, but is probably one of the most serious obstacles in the making of new mines. The undeveloped prospect is not a mine—it is not even a probable mine—and can only be a possible mine.

A mine is a property that has its ore-bodies exposed underground in such wise that the different blocks of ore can be examined and sampled on more than two sides at stated distances, and the ore must be of a quality and quantity to pay a fair profit over all expenses, including purchase price, taxes and interest on the money invested for a term of several years.

A probable mine is a partly developed prospect that has the ore-bodies exposed at least on two sides at a depth of approximately 100 feet below the surface, and the ore must be of a grade to pay all expenses of mining and treatment and leave a fair profit. A possible mine is what the majority of prospectors have to sell, and which they style a mine. It consists of one or more 10 to 20-foot holes in the ground, and sometimes a location notice, while the ore in most instances is composed of the common sulphide, optimism in big chunks. A large number of prospectors have no confidence in their claims and will not develop them even when in a position to do so.

The best men to do business with are those that have prospected widely, have read up on economic geology, know what constitutes a mine, and realize that the days of the sucker is past. Large investors do not buy undeveloped properties, and as a great many prospectors cannot open up their claims sufficiently to interest capital, the need for an intermediate or middle man is created. He is either a mining man himself and does his own selecting; or else a man that knows little about mining, but engages an engineer who is competent and makes a specialty of such work. Having found the right property, he bonds for a reasonable figure without cash payment, develops the property, and, if the showing warrants it, pays the purchase price when the bond expires. Conversely, if the results are bad, the bondee is out the money expended, while the prospector, without cost to himself, learned a good deal about his property, a knowledge which is very seldom desired, however. This is one of the safest and most rapid ways of making honest money in mining, provided the man employed in making the selection is capable. The price for a good prospect is so much less than that paid for a mine that one can afford to lose once or even twice if the third attempt is a winner. The amount of ore yet to be extracted is much greater in the case of a prospect than that of a partly worked out mine. While the prospect has parted with none of its ore, its capabilities are all held in reserve and its whole life is still before it. The reason the prospector experiences difficulties in selling is not that he has not a market for his wares if they have genuine merit, not that investors are shy of losing their money, as witness the number of mining men in the field searching for good properties, but because of his demand to be paid a fortune for some ore-body that he claims is somewhere in the ground but which, in nine cases out of ten, is situated in his imagination.

The common form of selling is by bond and lease, that is, with the privilege of working and making payments on the purchase price at regular intervals. In the past the bond and lease privilege has been somewhat abused, owing to the fact that often a bond and lease would be taken on a property by some one who hoped to turn it over at a larger price, thereby tying up the property for a long time. This has caused opposition to that method, which can readily be obviated, however, by inserting the time when work must start and having a provision for some method of continuous operation. At the end of this bulletin will be found the blank legal forms used for mining deeds, bond and lease agreements, and escrow agreements, although in all cases a competent lawyer should be consulted.

The opinion among purchasers of mining prospects is that at least 95% of the owners of undeveloped mining properties put an entirely prohibitive price upon their possessions. The value of undeveloped mining lands is one of the most difficult values to determine, and consequently the imagination and cupidity of the owners have free rein and the price that they fix for an entirely indefinite value bears no sort of relation to the risk that has to be run. It is believed that with some improvement in the making of reports and some consideration before fixing the price that many more sales of mining prospects will be made.

According to Hoover, the value of a mine depends upon four factors:

a. The profit that may be won from ore exposed.
b. The prospective profit to be derived from the extension of ore beyond exposures.
c. The effect of the price of metals.
d. The efficiency of the management during realization.

The only positive feature is the first, which may be determined by sampling or test treatment runs and even that is approximate. The second and third are largely speculative and are based on geological evidence and industrial outlook. The fourth is a question of capable executive control. It is absolutely impossible to accurately value any mine as there are too many speculative factors involved. A minimum and maximum value may be determined, the minimum being with the least risk, and the various stages above being with greater degrees of risk. Furthermore, the life of every mine is limited and the valuation cannot be based upon simple interest. The metallurgical treatment is an essential factor.

The price that a buyer is willing to pay for a mining property is dependent on the risk of loss of his investment and on the profits he estimates can be made over and above the total cost of developing and equipping. For instance, a claim on which little work is done represents the maximum of risk, the value thereof is low, whereas the mine with ore already blocked out and needing only equipment to make it pay involves little risk and the value is high. But a developed mine usually sells for more than the net profit to be derived from the ore blocked out, as it is assumed that there is an extension of the ore. This is the risk that has to be assumed by the buyer. These represent two extremes, as development increases the risk decreases.

It would be impossible to give any general rule as to the valuation of the prospects or even developed mines, but if it is looked at in the light of the risk involved in the spending of money for the property and its development, it would be found that the price of many prospects would take a tumble downwards and would be nearer within reason. No legitimate mine operator is paying very much for the optimism of the prospector but is paying for what can be seen or indicated, and many such buyers may be found ready and willing to pay all that a mine is worth to them.

DEED

THIS INDENTURE, Made the................day of..........................
A. D. 19........

BETWEEN..

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....the part......of the second part, WITNESSETH: That the said part......of the first part, for and

in consideration of the sum of..
..................Dollars, lawful money of the United States of America, to..........................in hand paid by the said part......of the second part, the receipt whereof is hereby acknowledged, ha......granted, bargained, sold, remised, released and forever quitclaimed, and by these presents do...... grant, bargain, sell, remise, release and forever quitclaim, unto the said part......of the second part, and to..........................heirs and assigns, all the following described real estate, situate in..........................
...................................mining district, County of....................................
State of.......................................to-wit: (Here follows description.)

....

....

....

Together with all and singular the mines, minerals, lodes and veins within the lines of said claims and their dips and spurs, and all dumps, plant, fixtures, improvements, rights, privileges, and appurtenances thereunto in anywise belonging.

To have and to hold the lands, tenements and hereditaments hereby conveyed unto the said part......of the second part, ...
heirs and assigns forever

IN WITNESS WHEREOF, the said part......of the first part ha......hereunto set.................hand....and seal....the day and year first above written.

Signed Sealed and Delivered in	....SEAL
the Presence of	....SEAL
	....SEAL
....	....SEAL
....	....SEAL

MINING LEASE

THIS INDENTURE, Made this..........................day of....................
...................................., in the year of our Lord one thousand nine hundred and.., between.....................................,
of.., lessor, and...
of.., lessee;

WITNESSETH:

That the said lessor, for and in consideration of the royalties hereinafter reserved, and the covenants and agreements hereinafter expressed, and by the said lessee to be kept and performed,.....................
granted, demised, and let, and by these presents...................grant, demise and let, unto the said lessee, all the following described mine

and mining property, situated in..mining district, county of...................................of...................................to-wit:

(Insert description of property.)

Together with the appurtenances to have and to hold unto the said lessee for the term of..from the date hereof, expiring at noon on the ....day of.................................... 191......, unless sooner forfeited or determined through the violation of any covenant hereinafter against the said tenant.................................... reserved.

And in consideration of the said demise the said lessee does covenant and agree with the said lessor, as follows, to-wit:

To enter upon said mine or premises and work the same mine fashion, in manner necessary to good and economical mining, so as to take out the greatest amount of ore possible, with due regard to the development and preservation of the said premises as a workable mine, and to the special covenants hereinafter reserved.

(Here insert Special Conditions and Agreements of Lease, Work to be Done, etc.)

WORKING BOND

A lease and option, also known as a working bond, is perhaps one of the most usual and preferable forms of sales. At the end of the mining lease just outlined, and just preceding the final paragraph, proceed as follows: And in consideration of the foregoing lease and the expenditures to be made thereunder and the well and faithful keeping of the covenants thereof, the said lessee shall have the right to purchase the said premises, together with all improvements, etc., for the sum of..Dollars ($..........................), to be distributed in the following payments: On or before the............ day of...................................191.... the sum of... to be paid (designate manner and place of payment), and on or before the............day of...................................191...., the sum of.......................... .... (Here insert conditions of payment.)

Time being of the essence of this contract as to such payments, and upon the tender of such payments the lessor will execute, acknowledge and deliver at his own cost, good and sufficient deeds to the lessee, or such person or company as the lessee shall nominate, conveying the said premises clear of incumbrance. (Arrangements are generally made placing deeds to the property in escrow with some bank or responsible parties to whom payments are made when due under the agreement and who delivers the deeds to the purchaser when payments are completed.)

The forfeiture, surrender or termination of the above lease for any cause shall render the option void and the above mentioned payments may not thereafter be tendered.

It is expressly agreed and understood that this Agreement shall be considered as an option to purchase only, and not as obligating the said lessee to purchase said property.

In witness whereof, etc.

To be signed, witnessed, sealed and acknowledged before a Notary or other proper commissioner to meet the requirements of the state or country in which the property is situated.

Provisions for recording should also be observed.

ESCROW AGREEMENT

The enclosed deed of the........................lode is hereby placed in the ....Bank of..in escrow. If A. B. shall place or caused to be placed to the credit of C. D. and E. F., in said......................................Bank of.. on or before...19........, the full sum of ....Dollars, then and in that case, the said bank is hereby authorized to deliver the enclosed deed to A. B., or his order. In case the said A. B. shall not place, or cause to be placed, to the credit of said C. D. and E. F. in said bank, the full sum of..Dollars, on or before ....19........, then the said bank is hereby authorized to deliver the inclosed deed to the said C. D. and E. F., or their joint order.

(Signed) C. D.
E. F.
A. B.