

# Chapter 5

## MARKETING FUNDAMENTALS THAT WORK FOR THE SMALL MINER

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### INTRODUCTION

The marketing aspects of a new precious metals property is often not considered until the mine actually begins production. At this point in time it is often too late or too expensive to change the mine's final product and not enough time to do an effective marketing program.

### MINE PRODUCT

The rule for determining the mine's final product: The higher the gold and silver content, the greater return of metal at the lowest post-mining cost.

Dore Bullion: Most advantageous

Advantages:

- Highest return of metal.
- Lowest refining cost per ounce of gold and silver.
- Very compact and easy to ship in small quantities.
- Easy to assay.
- Assays between mine and refiner are comparable.
- Melt losses are very small at the refiner.
- Outturn of gold and silver 20-30 days for quick cash flow.
- Gold/silver refiners can return or purchase metal soon after arrival at a nominal financing cost.

### GOLD DORE BULLION REFINING TERMS

| <u>Gold Content%</u> | <u>Treatment Charge/oz</u> | <u>Payable Gold %</u> | <u>Payable Silver</u> |
|----------------------|----------------------------|-----------------------|-----------------------|
| 80-90+               | \$0.70-.90                 | 99.9-99.8             | 96-98                 |
| 70-80                | .60-.70                    | 99.8                  | 96-98                 |
| 30-70                | .50-.60                    | 99.7                  | 96-98                 |
| 10-30                | .30-.50                    | 99.4                  | 96-98                 |

Figure 1:

Above assumes balance of dore metal silver with minor impurities ie., copper under 5%. Minimum charges per lot: \$175-275. Some have assay charges \$50-60 per small lot. Metal advances vary with refiner.

### SILVER DORE BULLION REFINING TERMS

| <u>000's Ounces/Lot</u> | <u>Silver Content%</u> | <u>Treatment Charge/oz</u> | <u>Payable Silver%</u> | <u>Payable Gold%</u> |
|-------------------------|------------------------|----------------------------|------------------------|----------------------|
| 5                       | 90-98                  | \$0.22-.35                 | 98                     | 97-98                |
| 5 - 15                  | 70-90                  | \$0.20-.30                 | 97.5                   | 97-98                |
| 18+                     | 50-70                  | \$0.18                     | 96.5                   | 97-98                |

Figure 2:

Above assumes balance is gold, copper. Refiners have a low tolerance for Ni, Se above 5%, As, Bi, Al<sub>2</sub>O<sub>3</sub>, Sb, Cd.

Minimum charges same as Figure 1. Metal advances vary with refiner.

Figure 3 is a list of the more prominent refiners who tend to offer a wide variety of services. The large refiners can recommend a representative to witness the melting and weighing process if desired. The Royal Canadian Mint will not permit witnessing and rely exclusively on their own assays. All others will return a sample to the mine.

LIST OF PROMINENT REFINERS

| <u>USA</u>           | <u>Location</u>    |
|----------------------|--------------------|
| Handy & Harman       | N. Attleboro, MA   |
| Englehard West       | Anaheim, CA.       |
| Johnson Matthey Ref. | Salt Lake City, UT |
| Pease & Curren       | Providence, R.I.   |
| Leach & Garner Ref.  | N. Attleboro, MA   |

CANADA

|                       |                  |
|-----------------------|------------------|
| Royal Canadian Mint   | Vanier, Ont.     |
| CCR-Canadian Copper   | Montreal, Quebec |
| De Gussa              | Richmond, B.C.   |
| Johnson Matthey Ltd.  | Toronto, Ont.    |
| Inco (Platinum Group) | Toronto, Ont.    |

Figure 3:

Above are the largest refining companies. Smaller refiners have been omitted. European refiners have been omitted as it is usually too costly as ship and refining costs are higher due to the weakness of the dollar.

SHIPPING DORE BULLIONU.S. Mail

Dore bullion can be sent by first-class mail in 50-75 lb parcels at the lowest cost. Many post offices have a maximum value per shipment of \$100,000-125,000. They insure up to \$25,000 but excess coverage is available from insurers.

Air-Freight-Armored Truck

Bullion shipped as valuable cargo will save one to two days over parcel post, but an armored truck is necessary to get it to the airport. Some refiners rely entirely on armored truck.

Placer Gold

This product can be shipped as is to refiners, but it is best to melt it to a dore bullion to upgrade the purity.

Loaded Carbon, Precipitates

Most refiners accept this material provided the precious metal content is high i.e., 100-200 ounces per ton. However, the cost can be high, \$5 to \$10 or more per ounce because they have to do the melting and preliminary fire-refining. Mercury in the material can be a serious problem.

It is best to strip or burn the carbon reducing it to metallic dore or melt precipitates on site.

Concentrate

This is the least desirable product. It is bulky, hard to ship, difficult to assay, and has the highest refining cost per ounce of gold (\$30-60).

Smelters pay/return from 91 to 98% for gold and 94 - 95% for silver. The losses due to weight loss, assays, and assay methods can range from one half to three percent in addition to the returnable metal deduction.

GOLD CONCENTRATE TERMS

| 000's Tons<br>Annual Output | Treatment<br>Charge/Ton | Ref.<br>Gold/Oz | Charges<br>Silv/Oz |
|-----------------------------|-------------------------|-----------------|--------------------|
| 1-3                         | \$150-250               | \$5.00          | \$0.35-50          |
| 3-5                         | 125-150                 | 5.00            | 0.35-50            |
| 5-10                        | 90-125                  | 5.00            | 0.35-50            |
| 10+                         | 60-90                   | 5.00            | 0.35-50            |

Figure 4:

Smelters charge for assaying and sampling on lots under 100 tons. These can vary from \$75-150. There are also minimum lot sizes accepted. Penalties can be expected for As, Sb. High mercury is unacceptable.

Figure 5 is a list of smelters that routinely take gold-bearing concentrates. Terms can vary considerably along with the transportation costs. The closest smelter may not be the best choice when the comparisons are made. Containerized shipping is expensive but it does eliminate in-transit losses. High-grade material is often shipped in bags or drums.

GOLD CONCENTRATE  
SMELTERS

| <u>SMELTERS</u>         | <u>Office<br/>Location</u> |
|-------------------------|----------------------------|
| Asarco                  | Ore Depart., NY            |
| Cominco                 | Trail, B.C.                |
| Noranda                 | Noranda, Quebec            |
| Nippon Mining           | Tokyo, Japan               |
| Dowa Mining             | Tokyo, Japan               |
| Mitsubishi              | Tokyo, Japan               |
| Metallurgie Hoboken     |                            |
| Overpelt                | Hoboken, Belgium           |
| Norddeutsche Affinerie  | Hamburg, W.Germany         |
| Korea Mining & Smelting | Seoul, Korea               |

The major disadvantage of concentrates is the smelting time, which varies from 90 to 135 days after arrival. Bulk shipments have to be accumulated.

MARKETING THE MINE PRODUCT

The choices:

- Sell to a merchant who arranges everything, including sales.
- Have an agency agreement with a merchant who arranges everything on your behalf, for a fee.
- Sell direct to a refiner who prices automatically and deducts charges from the proceeds.
- Toll refine, and sell the metal separately to a gold broker/merchant of your choice, using a pricing method suited to your needs.

Before an alternative can be considered, market information has to be obtained by offering the material to refiners or smelters on a direct basis.

In making such an offer to smelters-refiners the following information is required:

- A sample of dore or other mine product.
- Complete assay/analysis for all elements totalling 100%.
- Amount per shipment and frequency of shipment.

Dealing Direct with a Refiner-Smelter

Refiners can offer the following services:

- Purchase the contained returnable metals.
- Toll the material into saleable bars, if desired.
- Arrange transportation of concentrates and dore bullion.
- Insure the material while in transit.
- Arrange for early outturn of gold/silver (at a nominal cost).
- Some sell metal forward.

Once the refiner has given you an indication of terms and you have the other related costs of getting it to their plant, you can compare one refiner against another. Then you can do a little negotiating to improve terms.

Offer your material to a number of refiners/smelters. The mine should try to do its own thing first smelt-refine and sell its own metal or receive early metal outturn with each segment of the business priced out separately. However, there is a point at which it is undesirable to do this, at about 20,000 ounces a year.

Comparing Smelter-Refiner Terms - NSR:

To decide which refiner is best, all costs related to smelting-refining, transportation, insurance, early gold return costs and the time-value of the payment date from the smelter have to be calculated to obtain the net smelter return (NSR).

Don't be overawed by very low treatment charges or high metal return. The NSR is the only figure that counts.

For the finer points of doing these financial comparisons, you will have to attend session five, "Financial Considerations for Negotiating the Gold Sales Contract."

Gold Leasing - Early Gold Return Option:

To overcome the time lag between shipment arrival and gold outturn for payment, gold can be leased about three to five days after arrival at the refinery as follows:

- From the refiner at a cost per ounce (15-30 cents per ounce).
- From a gold broker usually at a competitive cost 1.0 to 2.0% a year.

For mines producing under 20,000 ounces a year, it is probably less trouble to obtain early gold return direct from the refiner.

Advantages of Dealing Direct with Smelters/Refiners

- The mine maintains control over assaying and sampling by talking directly to the refiner about assay/sampling technique.
- Unusual losses can be dealt with on a one-on-one basis.
- Refiners can give advice as to the methods of refining dore at the mine for a cleaner product.
- A relationship can be built up between refiner and mine.

Dealing with Merchants/Gold Brokers and Consultants

As previously discussed, know your smelting and refining alternatives before you enter any discussions with a merchant.

If your output is small and the merchants offer is very competitive, insist on having a direct line of communication between the mine and smelter-refiner.

Don't over emphasize a merchant who also is an investment banker house. There is practically no connection between the metal traders and investment bankers.

Obtain financial data from the merchant on his company (annual reports, etc.). If the merchant is small, insist on dealing through irrevocable letter of credit backed by a bank line of credit.

Merchant-brokers can play a useful role for the small miner provided the miner knows how to utilize their services.

For a sizable private trader, insist upon a bank letter of support in lieu of financial data. In this respect, take nothing for granted.

You will be approached by brokers willing to pay cash for gold, at a 3% or so discount. Avoid these, as there is never any need to sell gold at a discount.

Before you utilize a consultants expertise, find out how much he has sold and check references. Insist on dealing direct with smelters-refiners with the consultant's assistance.

Agency Agreements with Merchants

Merchants will approach the mining company to represent you for a fee for marketing mine production. You have to know the market before any contracts are signed with smelters or refiners.

There is a lot of concentrate swapping, where a merchant offers your material to a smelter at high treatment charges while asking for an offsetting discount on his purchased material from the same smelter. This tends to happen when large amounts of material is to be produced, ie., 10,000 tons of concentrates or more per year.

CONCLUSIONS

Marketing dore, concentrates, precipitates or placer gold, can be approached in a logical manner to obtain the lowest cost, highest net smelter return to the mine.

Talk to other miners about their marketing strategy, but in the end, you will have to solicit smelters and refiners.

Make contacts, obtain terms, do an accurate comparison with the assistance of your accountant and, by all means, listen to the advice of refiners and smelters. You can rely on their transportation people for the lowest cost shipping alternatives.

In the end, you will find that your own research will give you ideas to improve your marketing scheme as the refiners, gold brokers can give good advice as to what others are doing and how it can be applied to your situation.