

ESSENTIAL ELEMENTS AND RISKS IN  
BANKABLE FEASIBILITY STUDIES FOR MINING TRANSACTIONS<sup>1</sup>

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March 2001

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<sup>1</sup> The authors wish to thank the following individuals and firms for their assistance and cooperation in preparing this paper: James Gilbert, N.M. Rothschild & Sons, Washington office; Thomas L. Hughes, N.M. Rothschild & Sons, Denver office; Behre Dolbear & Company, Inc., Denver Office; Pincock Allen & Holt, Denver, Colorado; Nancy J. Wolverson, Independent Geologist, and Independent Mining Consultants.

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## **I. INTRODUCTION**

As large international mining firms search for new prospects to increase their ore reserves and to develop into new mining operations, earn-in arrangements are increasingly popular. Earn-in arrangements match the innovative and flexible talents of the smaller, exploration-oriented “junior” firms to locate raw mineral exploration targets, with the technical expertise and ability to raise development capital of the “major” mining firms. In a well-constructed agreement, the major is able to maximize its exploration efforts on identified exploration prospects rather than on canvassing for more elusive “greenfield” or “grassroots” targets. The junior, which locates, acquires ownership interests and conducts preliminary exploration of the prospect, typically grants the principal operating interest to the major, contingent upon its meeting certain exploration, payment and development conditions. The junior may also retain substantial direct and indirect economic benefits, both in terms of the ability to promote the property and its stock and in the potential bonanza returns derived from stock price increases and project cash flows obtained through the major proceeding with development.

Largely due to the unfavorable mining regulatory environment in the United States, both the juniors and the majors have moved offshore. The form of deals, including earn-in arrangements, has accompanied the export of the actual exploration efforts. Earn-in arrangements are thus becoming common in most areas of the world, including China, the territories of the former Soviet Union, Africa, Latin America and Southeast Asia.

This paper focuses on one extremely important aspect of those deals—the vesting condition that is often imposed by the junior that the major produce a so-called “bankable feasibility study.” It further examines the changing paradigms of the mining industry as the major companies have reduced their grassroots in-house exploration staffs and have focused on the exploration-driven junior companies to locate new grassroots prospects.

## **II. OVERVIEW OF EXPLORATION AND PROPERTY ACQUISITIONS**

Mining companies must constantly find, locate, and develop ore bodies to replace those depleted through operations or shuttered due to high costs. Major mining companies are continuously presented with a large number of geologically interesting mineral deposits for consideration. With limited financial and management resources, each operating company must rank the potential projects in terms of its potential to increase the value to the company and, in turn, the value to the shareholders. While the numbers vary, a reasonable assumption is that only about ten of every one hundred exploration targets are deemed worthy of the commitment of the financial, geological and management resources for detailed exploration by a major mining company. Of those ten, often only one is eventually developed into a mine.<sup>2</sup> And of those, only a handful in any given century is worthy of consideration as world-class deposits.

At one time, most large international mining houses had extensive exploration departments staffed by large numbers of both permanent and contract geologists. Since the mid-eighties, however, most of the large mining houses have substantially reduced their in-house

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<sup>2</sup> George H. K. Schenck, *Methods of Investment Analysis for the Minerals Industry*, FINANCE FOR THE MINERALS INDUSTRY 77, 78 (C. Richard Tinsley et al. eds., 1985).

geology staffs and have focused on more selective resource investigations or even to the acquisition of existing operations to immediately increase reserves while saving overhead costs. As increased consolidation in the mining business continues, the era of the large geology staffs will continue to disappear, probably never to return.<sup>3</sup>

At the same time that the large houses have downsized their exploration departments, many of those former employees have formed small, highly focused exploration firms, assuming the role of the initial identification and packaging of the basic exploration targets. These small, so-called “junior” mining companies initially locate an extremely high percentage of mineral properties.<sup>4</sup> These companies typically are relatively thinly capitalized, are exploration driven, and tend to focus on the identification of exploration target areas with relatively low entry and land holding costs.<sup>5</sup> The junior company often undertakes a basic exploration program designed to assemble an attractive sales package that it can present as an interesting target both to the major and to the junior’s shareholders.<sup>6</sup>

Mining houses use a variety of devices to acquire the necessary rights from junior mining companies to conduct the second tier exploration and to further evaluate the development potential of an orebody. The most common devices are the option agreement, the lease, and the Rocky Mountain Mineral Law Foundation Form 5 Model Joint Venture or more recently, the Rocky Mountain Mineral Law Foundation Limited Liability Company format, or some combination thereof. The type of device often depends on the position of the underlying property owner; the parties’ desires regarding allocation of final, post-operation ownership and land use (whether for actual mining or for collateral uses such as tailings or waste dumps); as well as other deal dependent factors such as the parties’ underlying philosophies and strategies and the country in which the prospect is located.

Form 5 and its counterpart Rocky Mountain Limited Liability Company deals are well known and widely used for earn-in agreements by mining lawyers. These forms, although favored by major mining companies, are often not well suited to the small rights holder who does not have sufficient capital to meet the contributions required by a venture partner in developing a property. Nevertheless, the major and junior companies often use such forms.<sup>7</sup>

In the last decade, to seek additional protections from a loss of their interest in a project that has been presented to a major, juniors have begun to insist on additional conditions to protect their interests, principally because of the risk of dilution and to provide additional assurances that they will be able to raise the capital to maintain their interest. The additional conditions may include a requirement that the earner make a production decision (thus making it

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<sup>3</sup> C. Richard Tinsley, *Preface to Financial Requirements of the Minerals Industry*, FINANCE FOR THE MINERALS INDUSTRY 3, 3 (C. Richard Tinsley et al. eds., 1985).

<sup>4</sup> George Caraghiaur, *Financing of the Small, Independent Mining Enterprise*, in FINANCE FOR THE MINERALS INDUSTRY 65, 65 (C. Richard Tinsley et al. eds., 1985).

<sup>5</sup> *See id.* at 67.

<sup>6</sup> *See id.* at 69.

<sup>7</sup> *See* John F. Welborn & Sasha A. Karpov, *Addressing the Conflicting Concerns of Participants in a Mining Project*, in MINING AGREEMENTS III pt. 7, pts. 7-1 to -2 (Rocky Mountain Mineral Law Foundation ed., 1991).

easier for the junior to raise money), provide development financing (eliminating the need to raise money), and most importantly for purposes of this paper, provide a feasibility study, a bankable feasibility study, a positive feasibility study, or some variation thereof.<sup>8</sup>

### **III. FEASIBILITY STUDY DEFINITIONS, STANDARDS AND CRITERIA—BASIC ECONOMIC EVALUATIONS TO “BANKABLE” DOCUMENTS**

There are at least three principal types of resource, or “feasibility” studies that mining companies often undertake in making a decision to develop a project.<sup>9</sup> The studies vary in the depth of inquiry and reliability of the geological and cost data and evaluations included, although the content is often similar.

#### **A. Economic Evaluation and Pre-Feasibility**

The first and least technically reliable study is the simple “economic evaluation”, or a project based on a reasonable level of drilling and limited testwork and engineering design.<sup>10</sup> The scoping study is a preliminary evaluation of a mining project based on a reasonable level of drilling and limited testwork and engineering design. Because the estimates do not have a high degree of reliability, their use is mainly in defining the additional study parameters and assisting in the decision to continue with more detailed studies. The economic study’s reliability does not typically exceed +/- 30 to 50%,<sup>11</sup> therefore it is unlikely that a company would use it as the basis for the economic decision to build a mine.<sup>12</sup>

The next, more reliable, study is commonly referred to as the “pre-feasibility study”.<sup>13</sup> This study increases the degree of reliability of the estimates and conclusions in the study,

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<sup>8</sup> See *id.* at pts. 7-3 to -5.

<sup>9</sup> While it would be extremely unusual for a mining company to forego all studies, a mining company may undertake only certain types of the studies, depending on the confidence in the orebody, the size of the project, etc. It would be unusual for a company to undertake all three types.

<sup>10</sup> A core function of these studies is to determine whether a "resource" even exists. "Resource" is a broad term, defined by the United States Bureau of Mines and the United States Geological Survey to mean "[a] concentration of naturally occurring solid, liquid, or gaseous material in or on the Earth's crust in such form and amount that economic extraction of a commodity from the concentration is currently or potentially feasible." United States Bureau of Mines & United States Geological Survey, *Principles of a Resource/Reserve Classification for Minerals*, GEOLOGICAL SURVEY CIRCULAR 831 (1980). The Society of Mining Engineers qualifies this language saying, "[l]ocation, grade, quality, and quantity are known or estimated from specific geological evidence. To reflect varying degrees of geological certainty, resources can be subdivided into measured, indicated, and inferred." SOCIETY OF MINING ENGINEERS, WORKING PARTY #79 REPORT: A GUIDE FOR REPORTING EXPLORATION INFORMATION, RESOURCES AND RESERVES 379 (1991). It should be noted that these definitions have not been formally adopted nor coordinated with SEC standards. In this regard, a great deal of attention needs to be given to the definitions used in defining the resource. The most conservative is the "Proven/Probable" reserves classification. See Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations (Industry Guide 7), 1933 Act Release No. 6949, 6 Fed. Sec. L. Rep. (CCH) & 72, 439 (Aug. 13, 1992).

<sup>11</sup> INDEPENDENT MINING CONSULTANTS, INC., OUTLINE FOR FEASIBILITY STUDIES (1993).

<sup>12</sup> See PINCOCK ALLEN & HOLT, INFORMATION BULLETIN 2000-1 (2000).

<sup>13</sup> Note in this regard that the current draft of Form 5A defines "Pre-Feasibility Study" and includes it in its terms. ROCKY MOUNTAIN MINERAL LAW FOUNDATION, MODEL FORM 5A: EXPLORATION, DEVELOPMENT AND MINING OPERATIONS AGREEMENT (1996). See also Jack F. McOuat, Preliminary Feasibility Studies Lecture, Presented to The Canadian Institute of Mining and Metallurgy, Mineral Economics Symposium (Jan. 27, 1991).

typically to +/- 20 to 30%.<sup>14</sup> This level of study differs from the feasibility study only in a few significant areas, such as the reliability of the capital and operating costs estimates, the degree of engineering that has been applied to the various parameters and the extent of the testing.

## **B. Feasibility Studies**

The most formal and reliable study is the feasibility study. This study requires application of Society of Mining Engineers ("SME") standards, actual vendor quotations for the capital and operating cost parameters, and detailed analysis of the testing and engineering. Such a study will often provide a reliability of +/- 10 to 20%.<sup>15</sup> Simply put, the feasibility study is a formal technical report that is used by the company to determine whether the proposed project is capable of being developed at a sufficient return to justify the capital and managerial resources that must be committed to the project.<sup>16</sup>

Most major mining engineering firms have their own definitions for what constitutes a feasibility study or have a list of criteria to be included in a feasibility study.<sup>17</sup> Generally, those include a definitive technical analysis of the basic geology, operations, and economics of constructing and operating a mine.<sup>18</sup>

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<sup>14</sup> INDEPENDENT MINING CONSULTANTS, INC., OUTLINE FOR FEASIBILITY STUDIES (1993); Memorandum from Ed Samuelli to R. Craig Johnson 1 (Oct. 14, 1993) (on file with author).

<sup>15</sup> See PINCOCK ALLEN & HOLT, INFORMATION BULLETIN 2000-1, (2000); Memorandum from Jim Gilbert, N.M. Rothschild & Sons, Washington office, to R. Craig Johnson 1 (Mar. 5, 2001) (on file with author).

<sup>16</sup> See generally PINCOCK ALLEN & HOLT, INFORMATION BULLETIN 2000-1, (2000) (explaining what full feasibility study encompasses).

Importantly, the various deal documents may add additional qualifiers to the "feasibility" term, including "bankable" feasibility study, "positive" feasibility study, or even "positive bankable" feasibility study. Generally, the "positive" feasibility study is one that recommends development of the mine under the basic assumptions and base case financial parameters used in the study.

<sup>17</sup> See, e.g., INDEPENDENT MINING CONSULTANTS, INC., OUTLINE FOR FEASIBILITY STUDIES 2 (1993) (providing abbreviated outline of what bankable feasibility study normally entails).

<sup>18</sup> Although the exact emphasis the study places on any particular area may differ slightly, most feasibility studies cover several principal areas that are described generally below for a precious metals project.

(a) Geology and Resource Calculations. This section primarily identifies the amount of geological reserves and demonstrates the scientific and technical credibility of the predictions. It includes the following:

- (i) the basic geology of the site and the area;
- (ii) an extensive examination of the drilling program;
- (iii) assaying and sample preparation, including methodology;
- (iv) the mineralized occurrence and distribution;
- (v) the geological resource estimate, resource conclusions, and modeling; and
- (vi) the exploration potential for the project.

(b) Mining Analysis. This section analyzes the following:

- (i) the ore reserve estimates including the reserve parameters and cutoff grades;

To synthesize the various differences between the technical definitions, and to provide standards for agreements requiring such studies, legal definitions of a feasibility study have been developed.<sup>19</sup> The legal definitions are generally more generic in nature than the technical engineering definitions. Such mismatches can have serious consequences, particularly where the feasibility study is a vesting condition and may require the person preparing the feasibility study to revise its own criteria to at least match the legal definition. Simply referring to a feasibility study prepared by an independent mining engineering firm does not adequately resolve the issue due to the differences in technical standards used by the various engineering firms. The definitions attempt to avoid reference to a third party standard and particularly when used for vesting conditions, emphasize the fact that the party incurring the expenditure should in general

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- (ii) the mine design parameters;
  - (iii) the production schedules, grade control and locations of the dumps and stockpiles; and
  - (iv) if appropriate, the analysis of contract mining.
- (c) Metallurgy. This section provides detailed physical and chemical analysis of the metallurgy of the ore.
  - (d) Process Plant. This section provides a detailed analysis of the design criteria for the processing plant.
  - (e) Infrastructure. This section includes detailed analysis of the various infrastructures needed for the mining operation, including power, process water, potable water, communications, storage, supply, etc.
  - (f) Management. This section deals with the management organizational structure, the various occupational health and safety issues, the services supplied by contractors, etc.
  - (g) Legal/Environmental Aspects. This section analyzes the title to the property, the surface, the various covenants and insurance issues, the environmental parameters and costs, and the various cultural and social issues concerning the construction and operation, as well as the other environmental impacts.
  - (h) Taxation/Royalties. This section analyzes the various governmental costs including taxation, import/export duties, and other governmental direct or indirect costs and any private royalties.
  - (i) Capital Costs and Project Implementation. This section provides an in-depth analysis of the capital items including pre-construction, construction, equipping, and capital replacement predictions.
  - (j) Operating Costs. This section estimates the operating costs and identifies the procedures used to estimate operating costs.
  - (k) Financial. This section analyzes the basic project economics and this assumes a commodity price and likely contains various Net Present Value calculations and Discounted Cash Flow Return On Investment (DCFROI) and Internal Rate of Return analyses.
  - (l) Summary and Recommendations. This section provides the basic recommendations as to the Project.

*See PINCOCK ALLEN & HOLT, INFORMATION BULLETIN 2000-1 (2000).*

<sup>19</sup> The following is but one example of the many definitions currently in use in precious metals deals:

“Feasibility Study” shall mean a report of the commercial and technical feasibility of mining and producing gold in significant quantities. Such study shall include, in reasonable detail, an estimate of ore reserves; description of the suggested methods of breaking, haulage and extraction; description of proposed processing and waste disposal; an economic evaluation including an estimate of the capital expenditure requirements and operating costs and a comparative analysis of the effect of various assumptions, financing costs, operating costs and taxation; and an estimate of operating levels, environmental costs, shutdown and reclamation costs.

This definition of "feasibility study" is derived from confidential agreements on file with the author.

be accorded greater discretion in defining the scope of the study. Other views may differ.<sup>20</sup>

### **C. The Bankability Concept**

The term “bankable” feasibility study initially seems to have an added ring of veracity over the more mundane phrase “feasibility study”. Adding “bankability”, after all, seems to imply that the study is like money a party can take to the bank. Unfortunately, the term is misleading. As will be shown below, a lender would rarely accept a study prepared by a borrower or the borrower’s consultants as the basis for financing a project.<sup>21</sup> At the very least, the knowledgeable lender, experienced in lending to mineral projects, will require that its own consultants and internal research departments review the study. The lender often then requires the parties to augment the study as support for the lending request. One can argue in good faith, then, that there really is no such thing as a “bankable feasibility study” except after the selected financing lender prepares or approves one.<sup>22</sup> In short, it would be far less misleading if the term were “Bank-Approved” Feasibility Study.

In this regard, the standards set by such reputable engineering firms as Pincock, Allen & Holt, Behre Dolbear, MRDI, Davy McKee and others for a “feasibility study” should establish sufficient quality and technical standards to produce the desired level of reliability.<sup>23</sup> Parties need a certain level of technical standards and reliability, not the vagueness implicit in the term “bankable”. In view of the fact that there are variations in the content depending on which mining or engineering firm is preparing the study, the parties and their lawyers should clearly establish the required content and professional standard. Certainly, the new Rocky Mountain Mineral Law Foundation Form 5A attempts to provide these standards for the Pre-Feasibility Study. The principal caution is that many majors only reluctantly undertake a Pre-Feasibility study, regarding them as optional, and instead proceed directly to a feasibility study.

Other than in a very general and inarticulate sense, the addition of the term “bankable” really does not yield a more technically sound document or a higher degree of professional reliability. Further, the “bankable” concept is founded on obtaining non-recourse financing, which not every project will seek. If the parties do not desire such financing, the term probably adds nothing and may even confuse the standard that is intended. The term more than likely injects a wholly subjective standard into an otherwise technical document and may cause the parties to use the document subjectively rather than objectively.

Additionally, and more insidiously, a party may use the “bankable” standard to imply that the major must not only achieve an expected level of technical soundness in the study but also that major will obtain outside financing. Although this roughly meets the junior’s objective to

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<sup>20</sup> See, e.g., the definition and standards for a “Pre-Feasibility Study, contained in the current draft of Form 5A, which contemplates that a “feasibility contractor” be selected to produce the report.

<sup>21</sup> Bernard J. Guarnera, Technical Flaws in Bankable Documents, Lecture at the Financing of Mining Properties Conference (July 27, 1994).

<sup>22</sup> *Id.*

<sup>23</sup> See, e.g., PINCOCK ALLEN & HOLT, INFORMATION BULLETIN 2000-1 (2000) (stating that “[t]he feasibility study is of sufficient detail and accuracy to be used for positive ‘go’ decisions and financing purposes. This and only this, is considered the ‘bankable document.’ Cost estimates are equal to [plus or minus] 20 percent accuracy or better.”).

minimize the equity contribution required for maintaining its participation, this usage is detrimental and dangerous for both parties. For the junior, it shrouds one of the junior's most significant decisions, that of financing, in ambiguous terms. The term can be construed as not requiring any financing at all, particularly the way the typical legal definitions are used.<sup>24</sup> Further, the term fails to deal with the type and amount of financing, whether the junior can obtain funds from internal sources on a less expensive basis, the level of parent support required of both parties, and other important fundamentals of the debt load and lending terms required of the project and participants.

If the objective of requiring the major to fund the project is truly the intent of the junior, the junior should clearly state that objective and establish its basic parameters, including requiring a financing plan that is reasonably acceptable to the junior as a condition of making a development decision. The major is often willing to either provide financing through its own sources, or to arrange financing. In this regard, the savvy junior will seek to piggyback on the major's credit rating to achieve a lower financing rate and lowered costs in arranging the project financing. Similarly, the savvy major will attempt to force the junior to obtain its own financing or to impose a surcharge on the junior for utilizing its credit. The major thus will seek to equalize the risks and seeks compensation for letting the junior use its better credit, to the detriment of the junior.

#### **IV. THE FEASIBILITY STUDY CONDITION FOR VESTING OF PROPERTY RIGHTS**

Parties use the feasibility study to vest property rights in two ways. The first approach, which may be termed, "Conditional Vesting", is less common, but more important. This approach requires a party to produce a feasibility study, or some variation thereof, as a condition of earning any interest or as a condition of retaining any interest. The second approach, "Additional Interests", requires a party to produce the feasibility study as a condition of earning a greater interest.

The Conditional Vesting approach is by far most dangerous to the earn-in company when it must produce a "bankable" feasibility study because of the inherent ambiguity of the term as shown previously and due to the lack of common standards. As noted, a document is not truly "bankable" until a lender accepts it for project financing purposes, using criteria unique to the lender, thus risking that the vesting will be dependent upon factors beyond the earn-in party's control. Difficult disputes over when a study is complete for vesting purposes can occur because technical experts disagree as to what constitutes a feasibility study, despite the general legal definitions referenced above. Well-drafted definitions of the feasibility study can prevent some of these problems and using certain "content" criteria plus providing considerable discretion to the party earning in should reduce the problems of when vesting will occur. Even if the terms are clear, however, using the production of a study as a condition to achieve vesting can lead a

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<sup>24</sup> The normal legal definition requires a "bankable" feasibility study to be one that "is prepared in such depth and detail as would be normally acceptable to lending institutions in the United States". Note that this does not require that this particular project be acceptable by a potential lender, or that this particular study meet a lender's criteria, but only requires that it meet some "reasonable banker" standard. This naturally forms a difficult problem of proof for both the party seeking to challenge the study as not being "bankable", and the party defending the study.

party to produce a study not for purposes of maximizing a property's development potential but to achieve that vesting, thus at best obfuscating the intended purpose of the study and at worst, causing certain critical factors to be overlooked.

The condition can also pose trouble for the junior. If the major has invested significant resources in the venture, the major may be willing to pursue litigation to defend its belief that it has met the vesting condition. Due to the different economic situations of the companies, the junior's legal defense budget could quickly overburden its financial resources. On the other hand, if the major decides the entire project is too marginal and merely walks away, the junior could also suffer because other majors may take a suspicious view of a project that another well-known major has dropped. Finally, the delivery of a study that is adequate for vesting but fails to maximize the full potential of the resource may tend to be destructive of both the deal and the relationship due to the unmet expectations of the junior and the resulting dilution suffered when the project continues.

Where the production of a feasibility study is used to vest Additional Interests, the risk is not as large for either party. In this case, the major usually has already acquired a majority interest in the project. For the major, the Additional Interest approach is acceptable particularly if the negotiation includes the ability to recapture part of the costs out of production. For the junior, it is also acceptable because the junior avoids the high capital costs for the production of the study by incurring only an incremental loss in the economics of the project. Often, the marketability of the junior's shares resulting from the major's producing the feasibility study has, at least in the short run, more than offset the value of the reduced interest. This offset has enabled the junior to conserve cash that the major would otherwise require it to contribute pro rata, allows the junior to reinvest in other exploration projects, and decreased the likelihood that the junior will challenge the adequacy of the study. Because the major invests the majority of the capital, the incentive based system that has been created by having additional rights will assure the junior that the major will perform the study to maximize development of the project. As the capital markets have deteriorated and appetite of equity or lending investors for mineral projects has significantly diminished in the past few years, however, the junior has not been as able to readily raise cash on the strength of a feasibility study for a project. Indeed, in recent times it seems like nothing can be done to spark investor interest.

#### **A. The Differing Expectations and Concerns of the Parties**

In analyzing the vesting requirement, one should understand the often radically different expectations of the parties. Implicit throughout this paper is the mismatch in size and financial strength, as well as the basic orientation of the two parties. The junior is often exploration and promotion oriented. The major is often more development and operations oriented.

##### **1. Capital, Carrying and Dilution Concerns**

The junior usually insists on the feasibility study requirement because of its perceived favorable financial effects to the junior. With a feasibility study in hand, the junior traditionally has been more likely to arrange financing for its share of the project costs. Absent that financing, the junior risks suffering dilution as the contributions are required for development. The junior is often forced to watch the investment and potential return shrink with each new cash

call, resulting in eventual conversion from a working interest to a non-working interest in the form of a royalty. However, in the recent capital/debt markets, that has not been the case.

The feasibility study requirement has been, in effect, a form of carried interest, allowing the junior to escape funding project costs until the junior achieves a reasonable chance of obtaining external funding based on the project's strength, rather than the strength of its own balance sheet. If the junior finds the results of the feasibility study unattractive, the junior has the option of not contributing. If it is attractive, until the last few years, the junior has been able to raise capital on a good project.

## **2. Vesting and Development Concerns**

The junior is also torn between fully exploring a property and preserving the exploration "pizzazz" essential in remarketing a project. Often, due to exploration budget constraints, the major will not fully explore the property if the early stage exploration does not produce attractive results. Large mining houses have reviewed and dropped numerous properties after which, another mining house has picked up the property and undertaken further exploration resulting in a discovery. Dropping the property can be to the benefit of the junior, provided the timing is right. If vesting occurs too soon, or if the major has thoroughly explored the property, the junior loses the ability to remarket the project. Although the junior has traditionally been willing to trade the lost marketing opportunities for the stock promotion potential attendant with attracting a large major player to the project, that attraction lasts only so long and again, has not been of much value in recent years. If the major does not proceed to a development decision in a relatively short time, the junior is delayed in its ability to remarket the project and to promote the stock by announcement of drilling results, feasibility study completion, or a production decision. The tradeoff for the junior's loss of remarketing potential comes from the major's decision to actually place the property into production.

Thus, juniors often use the feasibility study vesting requirement, along with increasingly burdensome exploration commitments, as a way of balancing competing interests and forcing the major to drop the property if it is not truly interested in development at a fairly early stage.

## **3. Warehousing of Projects**

The junior is also legitimately concerned about the major "warehousing" the project. A major may warehouse a project where the production decision is delayed due to reasons such as a drop in commodity prices, internal budget constraints, higher priority projects, etc. While warehousing may make sense for the major, the situation becomes difficult for the junior, particularly when the parties share maintenance of the property in proportion to their interests after vesting. Under that situation, the junior can be slowly bled to death while waiting for the major to make a decision to proceed. A well drafted agreement should address these concerns by providing the ability of the junior to force a production decision, or transfer of the property to another entity which ranks development of the project as a higher priority, except where the delay is due to commodity prices or regulatory situations beyond the control of either party. In the situation where the delay is due to low commodity prices or other situations beyond the control of the parties, warehousing may be acceptable and the parties should probably have some

type of carried interest provision to protect the junior.<sup>25</sup> Often, the junior has attempted to solve this concern by requiring that the bankable feasibility study be a “positive” study—a shorthand way of saying that a development decision must be reached. Careful drafting is needed in such a situation, however, or the junior may well find that a development decision has been made, but only on some higher metals price than currently exists and as a result, warehousing is the result anyway.

#### **4. Re-openers and Other Issues**

Another, more machiavellian possibility is that one or both parties may actually intend to inject subjective criteria as a reopener ploy. If a junior during initial negotiation is unable to effect the desired deal, it may tend to make the vesting standard sufficiently vague to provide later leverage in renegotiating on more favorable terms. Because the major’s principal focus during negotiations is often on the short term annual exploration budget rather than the long term commitments and given the relatively small chance of success of any particular project, the effect of having a vague vesting standard seems remote and inconsequential.

When the vesting condition becomes important, it is often at a time when the major has invested substantial sums of money only to find that the sufficient ambiguity in the vesting condition makes litigation possible. A true feasibility study can run well in excess of US\$20 million. With notable exceptions, most major mining houses are litigation risk averse and tend to settle potential disputes with the junior. Those settlements rarely result in a reduction of the economic benefits to the junior and often result in a favorable buy-out or provide additional economic incentives.

### **B. Background on Project Financing Requirements**

#### **1. Mining Company Requirements**

Because the feasibility study is key to seeking outside financing and is one of the

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<sup>25</sup> Typical venture agreements often include additional obligations on the part of the new entrant that arise post-vesting. These additional obligations may include continuance of property maintenance requirements, continued exploration work commitments, the requirement that the new entrant make a production decision within some certain time frame, and upon a production decision, the providing of a carried interest option for the junior until production has commenced. Thus, adding a carry as a condition of warehousing a project would not be unusual. One method is for the major to make a nonrecourse loan in favor of the junior. The junior repays the loan through a pledge of the interest and some form of priority of payback. This payback can require that the junior to assign up to 90% of its proceeds until the principal and imputed interest on the loan is fully repaid. The carried interest formula has many variations, however. For example the junior can repurchase its interest on a one time basis at a substantial premium over the capital investment, such as 150% of the capital otherwise attributed to its share. By deferring the buyback option until production has commenced, the junior gains the ability to raise sufficient capital to repurchase the interest because the production uncertainty has been resolved by the original go-forward capital invested by the other party. Ideally, for the party wishing to exercise the buyback option, the timing should match not only the time the parties commence production but also the time the parties meet the various completion tests or their equivalent for non-recourse financing. At that point, the risk has been largely removed, or at least more clearly quantified, and the debt financing to support the buyback can be obtained more easily and at less cost. Other formulas no doubt exist as well. See, e.g., Britton White, Jr., *Alternatives for Handling Nonconsent in Joint Mining Operations*, in *MINING AGREEMENTS* pt. 6., pt. 6-12 (Rocky Mountain Mineral Law Foundation ed., 1979).

principal reasons for the junior's insistence on this as a vesting condition, further elaboration of the financing issue is warranted.

Once a decision based on the feasibility study is made to construct a mine (or, a so-called "positive" feasibility study), a separate critical decision will be to determine the manner in which the project will be financed. A company may elect to finance the project from equity, from general balance sheet debt, from non-recourse debt, or from some combination. This decision is not, however, within the realm of the feasibility study, but is dependent upon the separate and distinct financing plan that will need to be developed by the investor. For various reasons mining companies rarely finance projects solely through equity. The use of debt increases return on investment, from the project and facilitates risk diversity allowing the companies to undertake multiple projects thereby minimizing harm in the event of project failure.<sup>26</sup> In short, virtually all mining projects will have some degree of debt financing, either direct or indirect.

## 2. Financial Institution Requirements

First and foremost, it should be noted that the feasibility study is not a substitute for the financing plan. Each is used for a distinct purpose, although there is a tendency of some companies to not recognize the difference. The failure to address the need for a financing plan at the outset of the negotiations perhaps leads to fundamental difficulties in the expectations of the parties in resolving the feasibility study issue. Secondly, for projects financed solely by internal sources, a company may have a much higher degree of confidence in its own internal analysis compared to what a third party lender would require and therefore the feasibility study standards may differ. Thirdly, debt financing for 100% of the capital involved in the project is never available and contribution of equity from the participants to some level will be required.<sup>27</sup> Obviously, the greater the financial contribution by the sponsors as compared to that of the lenders will offset an otherwise weaker feasibility study. Finally, the level of parent support and the financial and technical strength of the borrower will impact the degree of confidence required by the bank in the technical aspects of the project. A \$70 million project fully supported by a borrower with \$1 billion in net assets results in the lender viewing the feasibility study with a much a lower importance.

In recent years, non-recourse project financing has become the standard.<sup>28</sup> In this type of debt financing, the lenders look solely to the project to support the debt once certain physical and economic completion tests have been met. Because the lenders will bear the full project risk post-completion, the scope of technical review and other project aspects receive the highest level of scrutiny by lenders. The "bankable" feasibility study concept is perhaps most correctly

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<sup>26</sup> See C. Richard Tinsley, *Project Finance Supports and Structuring*, in FINANCE FOR THE MINERALS INDUSTRY 512, 549 (C. Richard Tinsley et al. eds., 1985).

<sup>27</sup> See *id.*

<sup>28</sup> A 1985 cite referring to non-recourse financing as quite rare illustrates the rapid expansion of recourse funding. See Grover R. Castle, *Project Financing - Guidelines for the Commercial Banker*, in FINANCE FOR THE MINERALS INDUSTRY 559, 561 (C. Richard Tinsley et al. eds., 1985). This article, however, provides a good explanation of non-recourse financing. It should also be noted that non-recourse financing is a misnomer and the term should more properly be referred to as "limited-recourse" financing, given that there is full recourse prior to completion. Nevertheless, this paper will use the term non-recourse as used in the trade.

applied in the non-recourse context.<sup>29</sup>

In addition to the normal financing issues, enhanced risk factors may attach to a particular project, including the accessibility of the project; the country in which the project is located, including the political climate, the mining laws, the stability, etc.; the reputation of the company itself and its success in this area in the past; and other risk factors such as the uniqueness of the orebody, the type of process, and whether the technology is proven or innovative such as bio-leaching.<sup>30</sup>

In analyzing the feasibility study requirement in the context of financing, it must be kept in mind that lenders care little for the ultimate profitability of the project. Their interest in the project is basically to determine whether it will generate both sufficient cash flow to repay the loan and sufficient coverage in excess of that cash flow to provide insulation against unexpected downturn in either technical or price performance.<sup>31</sup> Thus, the lenders' decision whether a feasibility study is "bankable" depends highly upon their view of the separate project economics in the context of the generation of cash for loan repayments.<sup>32</sup>

Because the lenders' concerns are not limited to the technical issues in the study, what constitutes an acceptable, or "bankable" feasibility study for purposes of securing a particular loan depends in large measure how well the other factors are addressed, such as what level and what quality of parent support is provided. Because of the interdependence with other factors, none of which are commonly addressed at the time of execution of the earn-in deal, the "bankability" concept is dependent upon many subjective non-technical factors developed after the fact. Thus, requiring a "bankable" document is a poor basis for allocating property rights.<sup>33</sup>

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<sup>29</sup> *Id.* A comment should also be made concerning another aspect of third party financing—deals which are essentially non-recourse in various aspects but partially recourse in other specific aspects. In most cases, parties base the partial recourse aspect on an assured price for the commodities, one of the least predictable economic elements of the project. Although parties can estimate capital and operating costs with great certainty, determine project financing costs by the offering rates, and determine ore reserves with a fairly high level of scientific precision, parties are unable to predict accurately or control the selling price. This inability is often the highest risk of the project. Partial recourse aspects often attempt to shift the risk of pricing, at least in part, to the project participants.

<sup>30</sup> See Bernard J. Guarnera, Technical Flaws in Bankable Documents Lecture at the Financing of Mining Properties Conference (July 27, 1994).

<sup>31</sup> See Hans W. Schreiber, *The Role of the Independent Consulting Firm in Project Financing*, FINANCE FOR THE MINERALS INDUSTRY 488, at 490 (C. Richard Tinsley et al. eds., 1985).

<sup>32</sup> See Bernard J. Guarnera, Technical Flaws in Bankable Documents, Lecture at the Financing of Mining Properties Conference (July 27, 1994).

<sup>33</sup> In the context of using the feasibility study for property vesting, one related issue that should be considered but is often ignored in the drafting of the condition is whether the company that is required to produce the study intends to produce it with its own internal staff, or whether the study will be produced by an independent consultant. In this regard the current draft of Form 5A contemplates a "Pre-feasibility Contractor" to be employed to produce the study, unless the parties jointly agree otherwise. See ROCKY MOUNTAIN MINERAL LAW FOUNDATION, MODEL FORM 5A: EXPLORATION, DEVELOPMENT AND MINING OPERATIONS AGREEMENT (1996).

**C. Secondary Usefulness of a Feasibility Study or Bankable Feasibility Study in Allocation of Property Rights**

Even though a feasibility study or a bankable feasibility study may prove inadequate for vesting of property rights, these studies still have some extremely valuable uses in earn-in agreements. A feasibility study can be used: (1) to signal the end of the exploration period; (2) as a trigger for end of a carry; (3) as an increased interest provision; (4) as part of the decision to seek financing; and (5) as a trigger for buyback rights.

**1. Feasibility Studies as the End of the Exploration Period**

One of the feasibility study's least innocuous uses is to signal the end of the exploration period. The production of a formal feasibility study is one of the best means to differentiate the exploration period from subsequent stages. Once the study is produced, the participants can then decide whether to proceed with development of the project or to place the project on hold. The participants may, however, elect to engage in further exploration after completion of the feasibility study in an attempt to improve the economics of the project before making a development decision. Thus, the end of the exploration period may also include an extension approved by the participants.<sup>34</sup>

**2. As a Trigger for the End of the Carry**

Once the major delivers a feasibility study, the junior is far better able to arrange outside financing to keep pace with the major and avoid dilution. If the parties decide not to immediately undertake development, the financing will be more difficult. For this reason, many deals require production of a "positive" feasibility study. Because the real issue is the appropriate point at which the carry should end for the junior, placing the burden on the major to produce a "positive" feasibility study is neither fair nor necessary. Rather, both parties should eliminate the "positive" requirement and address the real concern: At what time and by what means will the junior obtain financing to proportionately fund its share. The parties can separate these issues and create a deal that provides that the major will carry the junior until a production decision is made and who bears the maintenance and opportunity costs for warehoused projects, rather than hiding the carry requirement in a vesting condition consisting of the production of a technical document.

**3. Partially, as an Increased Interest Provision**

As noted previously, a party can also use feasibility studies as a condition for increasing the share of one party -- the Additional Interest concept -- rather than for the initial vesting of property rights. Parties find this use of a feasibility study more acceptable than its use for original vesting because there is less likelihood of a forfeiture. Although parties may find this use appropriate under the right circumstances, they should carefully consider the projected

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<sup>34</sup> The end of the exploration period, however, should not mean commencement of the development period. The development period really does not commence until the parties make a production decision. Often, gaps occur between completion of the exploration stage marked by the production of a feasibility study and the production decision. During this gap, parties do little, if anything, on the property except for meeting title requirements and other obligations necessary to maintain the property in good standing.

benefits and diminution of interests by running a financial analysis of the condition before suggesting or accepting the same.

#### **4. As Part of the Decision to Seek Financing**

While the primary purpose of the feasibility study is to aid in making the investment decision and not to determine the optimal financial plan, the feasibility study clearly is critical in making the financing decision as it concerns the operation's overall financing plan. Once the parties understand and establish the basic economics of the project in the feasibility study they can develop the financing plan. While in the last ten years or so, non-recourse, or partial recourse, financing has become popular, ventures are already showing significant interest in equity-based project financing both from the lenders directly<sup>35</sup> and from the in-country equity markets in Latin America. This is but one illustration that financing mechanisms change constantly. The feasibility study only begins the financial plan; it is not the financial plan itself.

#### **5. As a Trigger for Buyback Rights**

Some deals include a buyback, or "clawback," right of the original rights holder. Under this strategy, the original holder has the option to repurchase a percentage it lost by reason of the dilution or nonconsent operation. In essence, this is a variation on the previously commonplace non-consent operations, which even now appear in documents used to resolve the parties difference about whether to proceed to production. Once the junior has the feasibility study, the junior can decide whether the project's economics are sufficient to justify seeking additional equity capital to repurchase a portion of the share previously lost, to remain with the existing working interest, or to dilute to a nonworking interest. While the buyback should compensate the major for its investment risk, it is also a fair way to allow the junior to participate.

#### **D. Resolving Conflicts**

Ideally, parties can avoid conflicts over feasibility studies by negotiating solutions within the contract. To resolve whether the study that the party produced meets the feasibility study or bankable feasibility study requirements, parties may also enlist the experience of technically qualified arbitrators experienced in this particular field of mining.<sup>36</sup> When all other settlement avenues fail, the parties may find themselves in court. Judicial disputes over feasibility studies will more than likely center around forfeiture issues. Courts normally abhor forfeitures. In a very limited number of cases, however, courts will enforce them.<sup>37</sup> These cases are important in

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<sup>35</sup> The International Finance Corporation has taken significant equity positions in numerous mining projects around the world. See INTERNATIONAL FINANCE CORPORATION, INVESTING IN OIL, GAS, AND MINING (1994); INTERNATIONAL FINANCE CORPORATION, ANNUAL REPORT 1995 (1995).

<sup>36</sup> See Michael S. McCarthy, Donald A. Burkhardt, & Frederic K. Conover, II, *Dispute Resolution Provisions in Mining Agreements*, in MINING AGREEMENTS III pt. 12 (Rocky Mountain Mineral Law Foundation, ed. 1991).

<sup>37</sup> See, e.g., *George v. Jones*, 95 N.W.2d 609, 616 (Neb. 1959) (stating courts abhor forfeitures and will not enforce them unless facts supporting forfeiture are clearly and plainly within provisions of law or lease); see also 6 SAMUEL WILLISTON, WILLISTON ON CONTRACTS' 887AA (1962) (stating "[a]lthough courts of equity abhor forfeitures, they will enforce conditions subsequent involving termination of mineral rights where the facts in the case bring such action clearly and plainly within the provisions of the law or the lease, as the case may be"); Annotation *Implied Obligation of Purchaser or Lessee to Conduct Search for, or to Develop or Work Premises for, Minerals Other than Oil and Gas*, 76

the way they impact the major's obligation to perform a bankable feasibility study.

## V. VIEWS ON THE FUTURE

There has been a paradigm shift in the mining industry. Stock prices of junior exploration companies are on a five-year decline.<sup>38</sup> Exploration expenditures have dried up to point of being half of what they were just three years ago.<sup>39</sup> Majors have and will continue to jettison their greenfields exploration departments in favor of acquiring exploration targets from juniors. The pool of geologists available to conduct exploration, upon which both majors and juniors rely, is aging with over 70% of geologists in the United States now over the age of 42.<sup>40</sup> These current trends will impact juniors because under the current economic climate, there is little appetite in the debt or equity markets for mineral exploration projects; hence, there is little money for the juniors to conduct greenfields exploration or to borrow, and therefore participate, proportionately in development and avoid dilution. These trends will also impact the majors, although the effects may be delayed, because the majors now rely very heavily on the juniors for exploration targets. As depletion of existing mining projects continues, having the replacement orebodies "in the pipeline" will be significantly and adversely impacted in the absence of a reversal of the trend to eliminate in-house grassroots exploration departments or having a viable group of exploration driven juniors.

What do these trends mean for the future of the industry? Majors and juniors must alter the structure of their typical exploration, development and financing agreements in order to ensure that both can continue to survive, and even thrive, in economic climates such as now exist. First, majors must reward juniors for finding and presenting good projects to majors. Juniors simply cannot survive on Form 5 type earn-in agreements that often result in nothing more than a royalty interest. Secondly, majors must have stronger commitments from juniors to concentrate on meeting the major's particular exploration needs in order that the major may continue to maintain its long-term viability.

Alternate agreements are already in play. One such example of an alternate major/junior relationship is the private placement structure whereby the major purchases stock in the junior and the junior then uses the proceeds of the stock sale to conduct exploration on a particular target.<sup>41</sup> Usually, with the private placement structure, the major may still obtain a Form 5 arrangement to earn an additional interest by conducting further exploration. The private placement structure has drawbacks, however, including the overhang of a control block of stock

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A.L.R. 2d 721, 739 (1961) (stating that forfeiture applies where lessee or purchaser clearly did not fulfill implied obligation with respect to development or mining of premises).

<sup>38</sup> *Five Year Trading Range*, AMERICAN MINES HANDBOOK, 307 (Diane Giancola ed. 2001). The authors selected five typical junior exploration companies traded on Canadian exchanges and examined their stock prices from 1995 to 1999.

<sup>39</sup> See D.R. Wilburn, *Nonfuel Mineral Exploration 1999*, U.S. Geological Survey (providing information from Metals Economics Group—survey results of 153 companies in 1991, 161 in 1992, 137 in 1993, 151 in 1994, 154 in 1995, 223 in 1996, 279 in 1997, 182 in 1998, and 132 in 1999).

<sup>40</sup> See American Geological Institute: *Number of Geologists by Employment Sector and Age*, 1993 (visited Feb. 13, 2001) <<http://www.agiweb.org/career/geoage.html>>.

<sup>41</sup> See *Billiton in Australian Venture with Equinox*, MINING JOURNAL, 45 (Jan. 19, 2001) (announcing private placement stock transaction).

that can depress the ability of the junior to raise future public equity, the possibility of insider trading complications, other securities law issues such as anti-takeover remedies,<sup>42</sup> and the structures are not tax efficient.

Thus, if the junior explorationists are to survive, the trend must be away from the typical Form 5 deal and towards a modification of the relationship that ensures the juniors are compensated for the risk they incur.

While there will no doubt be additional mechanisms, within the current Form 5 structure, the addition of a few elements could help ensure the junior's viability and compensate for the risks incurred. First, there should be a success fee, where the major provides junior with a cash reward if an exploration target meets certain criteria. One obvious and appropriate criteria for the success reward is at the point where the decision has been made to undertake development of a mine. If the major decides to develop the target into a mine, the major should pay the junior a success fee. The amount of the success fee should be negotiated by the parties when the earn-in agreement is made. One alternative that has been followed in a few cases is to have a success fee in the area of 5-10% of the capital development cost, payable either as a lump sum or as a fixed series of payment through the development period. The junior could, obviously, use that fee any way it deems appropriate, including reinvestment in the project to match contributions of the major. Strong consideration should be given to progressive success fees for multiple successful projects brought to the same major. Stronger consideration should be to substitute the success fee for the typical net smelter royalty interest.<sup>43</sup> The reason for this is that the typical net smelter royalty interest, while providing for a more "certainty" of payment in an operational project than net profits interest royalties,<sup>44</sup> neither compensates the junior until after production has commenced nor gives the junior bonanza protection for a highly successful project. As mentioned previously, a junior is hard pressed to live on net smelter return royalty payments alone.

Secondly, the junior should have the same ability to fund its proportional share of the venture, if it is able to do so, just as in the current Form 5 relationship. If the junior can get the funds, it should have the right to use the funds for this purpose.

Thirdly, and notwithstanding the possibility of dilution, the junior should have a higher non-dilutive equity or "equity-like" interest in the project. From an economic standpoint, it should matter very little to the junior if it has a higher equity interest or a well-constructed net profits interest that produces a benefit equivalent to the dividends that would be received from a

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<sup>42</sup> See, e.g., Nev. Rev. Stat. §§ 78.379, .3791 (1999) (voting rights of those acquiring controlling interest subject to stockholder approval; Nev. Rev. Stat. §§ 78.438 - .444 (1999) (requiring board approval, stockholder approval, or minimum compensation requirements for acquisitions of property by direct or indirect owner of 10% of voting power).

<sup>43</sup> Under the typical "net smelter" royalty, the royalty holder obtains a percentage, generally 3-5%, of the net smelter returns of the applicable metal, regardless of the profitability of the operation or the price of the metal.

<sup>44</sup> Under the typical "net profits" royalty, the royalty holder obtains a percentage, generally 10-15%, of the net proceeds from the operation. Unlike the net smelter return, operating costs and amortization are deducted and the price of the metal and profitability of the operations are key to the payout.

successful project.<sup>45</sup> Whether the junior holds a well-drafted net profits interest or an equity-based carried, or non-dilutive, interest,<sup>46</sup> essentially, this ensures that the junior has an investment interest in the project and gives the junior “bonanza” protection if the project turns out to be a far greater success than either party contemplated at the time of the agreement.

The carried interest mechanism was used quite commonly in junior/major deals prior to the advent of Form 5. Under this mechanism, the major is required to provide operational funding for the non-dilutive share of the junior. Upon the commencement of production, the junior’s share of the production is allocated on a disproportional basis to the major at some implicit rate -- typically between 150-200% of the funds outlaid, to repay the major for the carry.<sup>47</sup>

The major gains substantial benefit from such arrangements because it continues to enjoy cost and management benefits of not maintaining in-house grass-roots exploration programs, it develops working relationships with juniors that promote consistent exploration and development decisions, and it maintains the flexibility of using different juniors. In addition, this structure eliminates the need for juniors to “pump up” a project because juniors have incentives to invest more of their own money on improving quality and quantity of information through drilling and focus on new exploration areas.

One additional benefit to parties is that there is less importance from a “deal” standpoint for a bankable feasibility study. Rather, the emphasis on the need for a bankable feasibility study is placed where it should be placed, namely, to seek lender financing, rather than as a shorthand way to vest title or to avoid the potential of a dilution. In other words, the feasibility study is returned to its true purpose—an objective evaluation of the target’s potential.

## **VI. RECOMMENDATIONS AND DRAFTING SUGGESTIONS**

Mining companies, both junior and major, face many pitfalls when entering into earn-in agreements. While not every uncertainty can be avoided, provisions that are more than likely to trigger a dispute due to ambiguity or subjectivity should be avoided, particularly where those provisions relate to the fundamental allocation of rights. Overemphasis on feasibility studies, bankable or not, as a key element in vesting conditions in earn-in agreements will involve such hazards. This is not to say that a feasibility study has no role whatsoever in an earn-in agreement, only that it should be well defined and used with caution and used only in those areas described above. Neither the feasibility study nor the more subjective “bankable” feasibility study should be used for the purpose of conditional vesting of property rights.

In the areas where the feasibility study requirement should be used, to avoid a dispute over a feasibility study the definition should be agreeable to both parties and be as clear as

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<sup>45</sup> There may, however, be some significant tax differences, particularly if the equity interest is held in a limited liability corporation where there is tax partnership treatment of the equity holders.

<sup>46</sup> The junior should have the potential of staying involved on a pro rata basis, if they are able.

<sup>47</sup> The wise junior will, however, generally insist on only a certain portion of the production being subject to the carried interest repayment -- such as 85%, to ensure that the junior obtains at least some cash flow from the operation.

possible, setting forth the generally understood mining engineering criteria. The term “bankable” feasibility study should not be used. The term “bankability” serves no substantive purpose other than to inject uncertainty into an agreement through the introduction of subjective third party standards. In reality, there is no predicting what a “bankable” feasibility study is until it is finally accepted by a third party lender. Therefore parties should at all costs avoid using this as an element of conditional vesting of rights.

The interests of both parties would be better served if the major’s share of the project vests after an agreed upon amount of exploration or expenditure occurs and the junior’s concerns were satisfied by innovative techniques designed to match risk with reward. The issue of financing should be addressed at the outset and provisions relating to that issue should be separated from the feasibility study issue. A section dealing with the development of a financing plan should thus be included in the earn-in agreement

The major needs to understand the concerns of the junior, which are until the junior can raise equity and non-recourse financing, it has very legitimate concerns about the threat of dilution. As discussed above, these problems can be solved with solutions such as carried interest provisions, success fees, higher equity or equity equivalent mechanisms, etc., making a bankable or other feasibility study unnecessary as a vesting requirement.

In sum, for vesting property rights under earn-in agreements, the bankable feasibility study is not an oasis. It is, rather, a mirage with serious problems, due both to the subjectivity of the standard and the tendency to use the requirement as a convenient “catch-all” for a variety of important substantive matters such as requiring a guarantee of project financing, credit utilization, and/or renegotiating leverage, all of which are best dealt with directly.

The pitfalls surrounding the use of bankable feasibility studies have and will continue to cause parties to seek alternate structures for their exploration, development, and financing agreements. With the changing industry, one alternate approach that is attractive to both parties is the success investment interest whereby the junior receives a reward for its success, a dilution-protected interest in its developed properties, and the major receives concentrated investment in its particular exploration targets. New ideas such as this will do much to carry the partners of the industry through the current trends and ensure viability into the future.