

Direct Sales Comparison Approach to Mineral Property Value

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The direct sales comparison approach to fair market value (FMV) is the process in which market value is derived by analyzing transactions of similar properties and comparing those properties to the subject property. A major assumption of the sales comparison approach is that FMV of a property is directly related to the transaction prices of comparable and competitive properties. Comparative sales analysis focuses on similarities and differences among property transactions that affect value. Factors affecting value of transactions include differences in property rights appraised, the motivations of buyers and sellers, financing terms, market conditions at the time of sale, size, location, physical features and economic characteristics. This approach to value is primarily based on the principle of substitution, which holds that the value of a property tends to be set by the price that would be paid to acquire a substitute property of similar utility and desirability within a reasonable amount of time. Various examples of comparable sales will be presented.

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Abstract

The direct sales comparison approach to fair market value (FMV) is the process in which market value is derived by analyzing transactions of similar properties and comparing those properties to the subject property. A major assumption of the sales comparison approach is that FMV of a property is directly related to the transaction prices of comparable and competitive properties. Comparative sales analysis focuses on similarities and differences among property transactions that affect value. Factors affecting value of transactions include differences in property rights appraised, the motivations of buyers and sellers, financing terms, market conditions at the time of sale, size, location, physical features and economic characteristics. This approach to value is primarily based on the principle of substitution, which holds that the value of a property tends to be set by the price that would be paid to acquire a substitute property of similar utility and desirability within a reasonable amount of time. Various examples of comparable sales will be presented.

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“If the appraisal of an active pit or quarry is at issue, and the appraiser is told that local law permits appraisal only by reference to sales comparison, *the appraiser should refuse the assignment*”, Robert H. Paschall, in *Appraisal of Construction Rocks*. Refusing the appraisal engagement would certainly not be in any client’s or minerals appraiser’s interest and very few localities are of such a parochial mindset. That is not to say that the direct comparable sales approach to value will not work, because it would depend entirely on the appraisal being contemplated.

“Gaul est divisi in partes tres”. So went my first lesson in Latin and so goes this presentation. The first part of this presentation will address the basic aspects of how the direct sales comparison approach to value would be expected to work in relation to a mineral property. Much of the literature dealing with mineral property valuation is directed toward the eminent domain, condemnation, area and not to the ordinary course of business selling, buying and leasing of mineral properties or bank and private lending or investment in mineral properties. In my experience, the parties involved in buying, selling and lending to mineral properties always want an income approach to value so they can estimate what kind of cash flows will be available for capital, operating and debt expenses.

The courts, however, seem to concern themselves with many noneconomic and purely legal issues about properties and have a heavy reliance on precedent in comparison to the market model of not quite continuous change of methods and practices. The second part of this presentation will introduce the legal issues associated with the direct sales comparison approach to value in eminent domain actions which minerals appraisers find themselves from time to time. Another reason for this approach is that other than appraisers, almost no one else would ever willingly read the Yellow Book and this may be their only exposure to developing an understanding of why it is important for a property owner to have both a qualified and competent attorney and a Certified Mineral Appraiser.

The third part of this presentation will introduce one example of what I would consider to be a very bad choice of comparable sales for a small scale operating placer gold operation at the time of forced shutdown and taking. Property identifications have been changed to protect owner confidentiality and appraiser identification has been changed to protect the . . . ? Proper action by attorneys and appraisers can get access to the total comparable sales that were considered by an agency through discovery and they can be analyzed appropriately.

Perhaps the most important point to be made in this presentation is that simply because a transaction occurred does not make it a “comparable sale”! Firstly, it *must* be an open market, arms-length, voluntary sale and, secondly, as the court noted in *United States v. 190.71 Acres of Land*, 300 F.2d 52 (7th Cir. 02/14/1962), “the Government appears to concede that proof of comparability must be made before other sales can be employed for the purpose of determining compensation of the property to be taken”. In other words, there must be a high degree of similarity between the subject property and the sale that it is being compared to. There is no presumption of similarity, it is the appraiser’s task to clearly and convincingly prove this similarity in the report if a sale is to be a credible comparable. This important point will be repeated in each section of this presentation.

The direct sales comparison approach to fair market value is the process in which a market value is derived by analyzing the market for transactions of similar properties and comparing those properties to the subject property. A major assumption of the direct sales comparison approach is that fair market value of a property is directly related to the transaction prices of comparable and competitive properties. Comparative sales analysis focuses on similarities and differences among property transactions that affect value. Factors

affecting value of transactions include differences in property rights appraised, the motivations of buyers and sellers, financing terms, market conditions at the time of sale (the comparative number of buyers, sellers, and lenders), size, location, physical features, and if the properties produce income, economic characteristics. Ideally, elements of comparison are tested against market evidence to estimate which elements are sensitive to change and how they affect value.

This approach to value is primarily based on the principle of substitution, which holds that the value of a property tends to be set by the price that would be paid to acquire a substitute property of similar utility and desirability within a reasonable amount of time. This principle implies that the reliability of the direct sales comparison approach is diminished if substituted properties are not available in the market. The general explanation of the direct sales comparison approach to value has been largely adapted from *The Appraisal of Real Estate*, 13th Edition.

Applicability and Limitations

The direct sales comparison approach is applicable to all types of real property interests when there are sufficient recent and reliable transactions to indicate value patterns or trends in the market. For property types that are bought and sold regularly, the direct sales comparison approach often provides a supportable indication of fair market value. When a market is weak or thin and the number of reliable transactions is insufficient, the applicability of direct sales comparison approach may be limited. The direct sales comparison approach is rarely applied to some special-purpose properties, such as mineral properties, because few similar properties may be sold in a given market, even one that is geographically broad.

Generally, the direct sales comparison approach has broad applicability and is persuasive when sufficient and reliable property and transaction data are available. It usually provides the primary indication of fair market value in appraisals of properties such as single family residences which are not typically purchased for their income producing characteristics.

However, buyers of investment quality income producing properties typically concentrate on a property's economic characteristics, often focusing on the rate of return for an investment made in anticipation of future cash flows. Buyers of owner-operated properties also concentrate on a property's economic characteristics. They tend to focus more on the actual level of returns, and the size of the anticipated future cash flows, instead of the rate of return. Thoroughly analyzing comparable sales of income-producing properties can be difficult

because information about the economic factors influencing buyer's decisions to purchase, as well as seller's decisions to part with the property, is not generally available from public records or interviews with buyers and sellers.

To ensure reliability of value conclusions derived by applying the direct sales comparison approach, the appraiser must be able to verify the market data obtained and fully understand the behavioral characteristics of the buyers and sellers involved in property transactions. Caution should be exercised when sales data are provided by someone who is not a direct party to the transaction. Incorrect conclusions may result if an appraiser relies on such data without considering the motivations of the actual parties to the transactions. Errors can also result if an appraiser cannot obtain sufficient information about the buyer's and seller's opinion concerning the anticipated income and expense schedules, or potential changes in use or property operations are not appropriately considered.

The direct sales comparison approach to value includes any recent sale of the subject property. This situation generally allows for an easier analysis of the more important elements of comparison since the physical and ownership characteristics may be virtually identical.

Mineral Property Markets and Structure

In general there are four types of markets which have a bearing on the analysis of income-producing mineral properties: auction markets, dealer markets, brokered markets and direct search markets, going from most organized and efficient to least organized and efficient.

The most integrated market is a continuous auction market for truly fungible goods in which all buyers and sellers converge at one place to bid on or offer to sell a good. The New York Stock Exchange is an example of an auction market. The main advantage of a continuous auction market is that participants can quickly and easily arrive at prices and quantities for these directly interchangeable goods. However, continuous auction markets, as opposed to periodic auctions in the real property environment, require very heavy and frequent trading to cover the expense of maintaining the market. If an appraiser is analyzing the sales or mergers of relatively large mineral producing companies the publicly traded share markets are an excellent source of readily available and reliable information.

Another highly integrated market is the dealer market. In this market the dealers specialize in various fungible commodities, purchase assets for their own inventory, and sell goods for a profit from their inventory. Dealers, unlike brokers, typically buy and sell commodity assets

for their own accounts. The dealer's profit margin is the bid-asked spread, the difference between the price at which the dealer buys for and sells from his inventory. The metals derived from mineral resources and the over-the-counter (OTC) securities markets are examples of a dealer markets. If an appraiser is analyzing the sales or mergers of rather small mineral producing companies with a relatively larger amount of shareholders than a family corporation the OTC share markets is a fair to good source of available and fairly reliable information. If an appraiser is appraising a metallic mineral producing property, such as gold and silver, the dealer, or commodity, markets are generally the most reliable source for current, historic, and future price information. A dealer market is also an excellent source of information for the appraiser needing price information for mining and mineral processing machinery and equipment.

In markets where trading in a good is sufficiently active, brokers can find it profitable to offer search services to buyers and sellers. A good example of a brokered market is real estate, where economies of scale in searches for available single family residences and some of the smaller and more actively traded commercial properties and searching for prospective buyers make it worthwhile for participants to pay brokers to conduct property searches for them. Real estate brokers in given geographic and property type markets develop generally reliable specialized knowledge about these markets and can be of assistance to appraisers of these types of properties.

The least organized market, and the one in which almost all mineral property transactions occur, is a direct search market. In a direct search market individual buyers and sellers must seek each other out directly. Mineral property markets are characterized by sporadic participation and relatively high-priced and nonstandard real properties. Because of the paucity of total transactions and the specialized property needs of purchasers, such as mineral resource size, type of mineral commodity, and type of mining knowledge and skill required, it does not pay most brokers or brokerage firms to seek profits by specializing in such a geographically and mineral commodity diverse market. Many transactions in the diverse mineral property markets are not actually sales, but are individually negotiated mining leases with a type of owner financing in the form of a mineral production royalty.

Because of this direct search type of market it is often difficult for a mineral property appraiser to acquire a sufficient amount of potentially comparable transactions and to verify any data other than a sales price noted in a quit claim deed. Mineral property buyers and sellers are

notorious for not wanting to provide any type of detailed information about their property or their operating incomes and expenses.

Open Market Transaction Criteria

The material in this section is largely adopted from **J. Eaton**, *Real Estate Valuation In Litigation second edition* (2d, ed. 1995).

Before a mineral property can be considered a comparable property, an appraiser must ensure that it was actually sold, not leased, and that the sale was an open market transaction. For appraisal purposes, an open market transaction is also known as an arms length transaction. If the following questions can be answered affirmatively, the sale property meets the criteria for an open market, arms-length transaction.

Did the sale convey unencumbered fee simple title or its equivalent? A negative answer to this question may not necessarily eliminate a sale as a potential comparable. For instance, if only a leased fee estate was conveyed, it may be possible to adjust the sale price of the property to reflect the impact of the leasehold interest. The sale of an unpatented mining claim located on the public domain does not transfer fee title because the United States retains the fee interest. However, the sale of an unpatented mining claim evidenced by a proper conveyance transfers all the mineral estate and necessary legal property rights to explore, develop and mine.

Were both the buyer and seller typically motivated? A negative answer to this question eliminates all forms of forced sales and sales in which the price paid for the property was affected by a personal relationship between the parties. It is not uncommon to find sales of mineral properties as part of bankruptcy filings by individuals or firms. These types of transactions are better characterized as opportunistic transactions in which neither buyer nor seller is typically motivated. Mineral properties are typically bought and sold in very sparse markets, i.e. markets in which buyers or sellers are few to none at any given time. For the appraiser, sparse market activity in mineral properties can raise questions about motivation.

Were both parties well informed or well advised and acting in what they considered to be their own best interest? Not uncommonly, mineral properties are sold from a probate estate by persons who have little to no knowledge about a mineral property. The bulk of mineral property transactions tend to occur at a point in time when neither the seller nor the buyer has any great knowledge concerning the quantity and quality of the mineral resource. Mineral property information is oftentimes a closely guarded secret among buyers and

sellers and, therefore, the appraiser may not be able to fully determine a definite answer to this question.

Was the property exposed in the open market for a reasonable length of time? Exposure of mineral properties to the open market is not generally accomplished in the same manner as conventional real estate such as single-family residences and small commercial properties. Sales typically occur in a direct search market and oftentimes a potential buyer (seller) will approach all owners (potential buyers) of specific types of mineral property to inquire as to its availability for sale (purchase).

Was payment made in cash or its equivalent? Just as in more conventional real estate transactions, seldom is a mineral property purchased for cash. Unlike the more conventional real estate sales there is not an active group of lenders willing to provide buyers with relatively uniform and easy to obtain mortgages or trust deeds. Most commonly, the seller is paid through a mineral production royalty which may or may not be associated with a fixed price. Payment of a purchase through a mineral production royalty is a form of installment sale. If it has an agreed upon final price it may be possible to estimate a cash equivalent value. Estimating cash equivalency, using conventional annuity payment discounting of a mineral production royalty presents problems when there is no production history or comparable royalty payment streams. And, appraisers must remember that a royalty interest is not the equivalent of a fee simple sale of conventional real estate.

Was financing, if any, on terms generally available in the community at the time of sale and typical for the type of property in its locale? This question is directly related to the one immediately above in that a mineral production royalty is a very common method of financing mineral property sales. The main complicating factor is that there is not really any standardized form of mineral property royalty, as in the petroleum field, for the solid minerals. However, financed mineral property transactions involving the same commodity, often have very similar terms and conditions. Alternate forms of financing may therefore be analyzed in the same manner as a mortgage loan for more conventional real estate.

Did the price represent normal consideration for the property sold unaffected by special financing and/or terms, services, fees, costs, or other credits incurred in the transaction? This can be a difficult question to provide a clear yes or no answer to in mineral properties. Often a mineral property transaction will involve certain types of work and/or expenditures to be made as part of the terms and conditions of the agreement. As in the

immediately above question, these special types of costs and credits may be more or less typical for certain types of mineral properties, but they may prove to be very difficult to translate into a cash equivalent value.

Prior Sales of Subject Property

Perhaps the single best indicator of fair market value for a producing mineral property is a reasonably recent, arms length sale of the subject property. Verification would be required to ensure that the property interest sold is the same as that being appraised. Adjustments may have to be made for any mineral resource, mineral product pricing and quantity, or other conditions that may have changed since the date of sale. This situation is more common for undeveloped or non-producing mineral properties. But the most recent sale may still be on the order of two or more years in age and require significant market condition adjustments. A prior sale of the subject property is unusual for producing mineral properties.

Elements of Comparison

Each and every mineral deposit of a given commodity is a truly unique occurrence in relation to its particular geographical controls, its inherent physical and chemical properties, the quantity of valuable mineral or rock that it contains, its applicable extraction and processing methods, and its geographic location with respect to the markets for its products. In order to effectively utilize the direct comparison approach to value the sales of properties being compared should take place in a relatively large, active, and open market in which there is a relatively high level of actual arms length sales transactions. The mineral properties being bought and sold in this market place also must have an abundance of directly comparable qualities for which relatively simple and objective adjustments can be made in order to take minor property differences into account.

Finding an adequate amount of reliable and verifiable market data to properly support adjustments to potentially comparable mineral properties can be difficult due to the normally small number of transactions occurring in a relative narrow time frame or geographically constrained market area. Most mineral property buyers and sellers will not willingly share the detailed property data required to make reliable adjustments and knowledgeable consultants or agents may be prevented from disclosing data about a mineral property because of strict confidentiality agreements. Many sales of mineral deposits used for possible comparison will normally require at least as much research and on-site examination as the subject mineral property to accurately identify, measure, and account for any difference that may affect value.

Truly comparable mineral deposits must have similar mine lives at similar production rates with similar product mixes and market areas. Effective age and condition of the machinery and equipment of any potential comparables must be equivalent as well as equipment maintenance, rebuilding, and replacement schedules. Buyers and sellers must be carefully interviewed to determine their motivations and actual knowledge of the most important mineral property and mineral product market conditions.

The Appraisal of Real Estate notes that elements of comparison are the characteristics of properties and transactions that cause the prices paid for real estate to vary. This widely accepted textbook also notes that there are ten basic elements of comparison that should be considered in direct comparable sales analysis. A brief discussion of some of the most probable elements of comparison involved in mineral property transactions include, but are not limited to, the following items: geographic location; physical characteristics (geology, mineral resources or reserves,); real property rights conveyed; economic characteristics (operating expenses, lease/royalty provisions, mineral product mix); use (zoning); permitting status, market conditions (date of sale); conditions of sale; financing terms; non-realty components of value (plant, machinery, and equipment), and; expenditures made immediately after purchase. Many of these common elements of comparison are interrelated with each other and do not lend themselves to independent analysis.

Most real estate texts boldly state that no particular location is inherently desirable or undesirable. This may be true for much conventional real estate, but it is definitely not the case for mineral properties. Mineral properties are absolutely location-dependent because a valuable mineral deposit is physically located in a particular place and any mineral production from it must also occur at that exact location. Location, in conjunction with the physical characteristics of a property, may be the most important items in looking for similarities among mineral properties. Location is also important when comparing two or more properties containing the same kind of mineral deposit because the location, and its inherent physical characteristics, may have a large influence on accessibility, mining and processing methods, operating costs, and distance to market for its mineral product.

Geographical location factors affecting value include the following: determines political boundaries, physical and legal accessibility, climatic conditions, distance to market for mineral products, distance and availability of supplies, transportation routes and modes of transport, water supply availability, quality and quantity.

Geographic location determines the availability of utilities such as electricity, natural gas, water service, and sewer connections. Geographic location also determines whether a mineral deposit is within or near a governmentally specified mineral resource zone, other known mineral resource area, wilderness, or other environmentally sensitive area which can affect allowable mining processing activities.

The physical characteristics of a mineral property are the primary determinant of its economic characteristics. The details of the geology of a mineral property are of primary importance because the local geology determines the types of mineral deposits that can occur, the quality of grade of these mineral deposits, their ultimate size and physical and economic limits, and the most appropriate mining and mineral processing methods for a given mineralogical composition. A property's physical and mineral deposit characteristics are largely determined by the local geology. Local geology determines the following items: basic rock types present on the property such as intrusive, volcanic, sedimentary, or metamorphic; whether the rocks are relatively hard or soft, loosely agglomerated or well cemented, and general abrasiveness; heavy mineral placer deposits; the three dimensional size, shape, and attitude of the mineral deposit and its relative degree of economic continuity and uniformity.

Rock types and mineral deposit types determine geomechanical rock properties and geo-technical mine design parameters along with the quantity and quality (grade) of the mineral resources; any mineral product or waste stream contaminants; general mine-ability and process-ability of the mineral deposit; overburden and waste to ore ratios and mining dilution amounts; groundwater quantity and quality; topographic relief; stream flow patterns and amounts, and; elevation effects on equipment efficiency and local weather conditions.

Another part of the property's physical characteristics concerns the man-made improvements to the mineral property. Are the mine and plant capacities (nameplate and actual) coordinated and without any significant under or over sizing? Are the fixed and mobile machinery, equipment, and buildings appropriate for the mineral deposit type, size, and production rate? What are the condition, effective age, suitability, availability, and utilization of the plant and equipment? Are there depreciation and/or obsolescence issues involved with the mine and plant design and layout or the plant's machinery and equipment? Are there abnormal breakdowns, repair and maintenance schedules due to mineral deposit qualities or lack of appropriate maintenance? Are improvements to the real estate (access or haul roads, mineral stockpile, concentrate, and

waste areas, tailings impoundments, equipment and parts storage, and buildings) well located, of quality construction and materials, and well maintained?

An exact description of the real property rights involved in any potentially comparable sale is quite important because mineral title and ownership aspects of potentially comparable sales include: fee simple absolute with a single person/entity as owner and operator, partial/joint ownership and/or operation of the property; fractional interests within a larger mineral property; severed surface and subsurface mineral rights; mineral/mining lease or only a license with a private entity or a governmental agency; unpatented lode mining; unpatented placer mining claims; association placer claims; unpatented mill sites adjacent to or elsewhere located; water rights; easements, encumbrances, restrictive covenants, etc. on the property in favor of others.

Most of the economic characteristics of a mineral property are determined by its physical characteristics. Economic characteristics include all of the attributes of a property that affect its income and appraisers must take care not to attribute differences in real property rights conveyed or changes in market conditions to different economic characteristics (AI 2008). It can be difficult to isolate economic characteristics from physical characteristics and real property rights when less than the fee simple title is owned. Economic characteristics that typically affect a mineral property's income include operating expenses for mining and mineral processing, capital expenses associated with improvements to the property, mineral lease and royalty terms, mineral lease expiration and renewal dates and terms, and quality of management.

Economic characteristics in general can include: type of mining operation, capital and operating expenses and maintenance and replacement expenses; exploration, development and/or reclamation expenses; lease terms, royalty rates, and other mineral interests, expiration dates, renewal or purchase options, expense recovery clauses; mining and processing related permit fees, expiration dates, and renewal options; environmental assessment reports or environmental impact studies costs and time frames; feasibility study expenses and time; environmental and reclamation requirement expenses and timing; property, severance taxes, or unpatented mining claim fees; current or potential lawsuits involving the property, obsolescence and depreciation issues of mine design, mined land support, and processing, on-site or off-site processing or custom processing and/or smelting/refining; type of mining and processing determine lowest cut-off grade/quality; responsible ownership and competent management.

Any difference in the current use or highest and best use of a potential comparable and the subject property must be addressed. The appraiser must recognize the difference and determine if the sale is an appropriate comparable and, if so, whether an adjustment is required, or if an adjustment can even be made. Many mineral properties have been purchased by speculators or agents for mining companies without specifically addressing any mineral rights which would suggest unequal knowledge on the parts of sellers and buyers. Items commonly associated with highest and best use that should be examined include: then current zoning, probability of zoning change; non-conforming use limited to current owner or run with the land; zoning/permit requirements such as setbacks from property lines/streets, maximum slopes and depths, buffer zone land, view-shed/noise screening, hours of operation, noise dust limits, vehicle size and/or frequency of travel restrictions, special assessment for road damage; highest and best use at time of sale; environmental/reclamation requirements at time of sale; location within a mineral resource zone, wilderness study area, or other special land classification area.

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Market conditions at the time of sale of a potentially comparable mineral property refer to the general stability of the market at that time for mineral products/properties of that nature. Price structures such as spot or market, contract, negotiated, or administered; forward or contracted delivery prices and quantities; general mineral product prices, quantities, and specifications; internal consumption or open market sales; special government or private project uses and prices; national, regional, and local economic conditions; demographics, growth and expected changes; interest and discount rates and mineral project related capital availability; existing/contemplated mining regulations, legislation, and/or significant court decisions. The date of sale of a comparable mineral property can be very important due to the often extreme volatility of certain mineral prices, especially metallic

minerals that are sold in international markets and also experience active trading in commodity futures markets.

Conditions of sale refer to the general motivations and expectations of mineral property buyers and sellers and include: Arm's length or related person/entity transaction; vending a property in to a company by an officer, employee, or consultant; property owner-operator, investor, or speculator transaction, junior to senior mining company transaction or vice-versa; captive mine to independent or vice-versa; relative equality of knowledge and/or bargaining power; sale to or by an existing competitor or new entrant; distress on part of seller or necessity on part of buyer; back-in agreement by a larger producer, expectations of production methods and rates and new mineral product/market development; estimated mine life; contract mining/processing agreements or equipment purchase/maintenance agreements; forward/contract delivery sales; mineral product labor, supplies, or royalty escalation adjustment factors and contract clauses.

There is no typical structure for mineral property purchases in the entire industry. All cash, all finance (recourse/nonrecourse), all stock/shares (free trading, restricted, stock option), normal bank loans, royalty, working capital, or profits mineral interest financing, work commitments, installment contract, or other combination of these methods; loan mortgage or lien on property; mineral commodity hedging requirement. Non-realty components of a transaction may include: plant, machinery, and equipment; water rights; assemblage of assets for related income producing activities; and assumption of debt or other liabilities.

Expenditures made immediately after purchase may include: joint venture capital contribution; deferred maintenance, rebuilding, refurbishing, or replacement expenses; land or mineral surveys; work commitments, exploration, development, bankable feasibility study, financing commitments; performance/surety bond payments for environmental/reclamation. The total sale price and terms and conditions of the comparable sale also need to be analyzed in order to determine how the sale price was allocated among the various components of value contained in the total mineral property sale.

To the best of this appraiser's knowledge there is no true market place for mineral properties of any kind anywhere in the world. The reason for this is that each and every mineral property is a very specialized property that normally has very few fungible and truly directly comparable characteristics beyond the fact that it is naturally occurring and contains a specific mineral commodity. What market does exist is characterized by buyers and sellers with very specialized knowledge,

interests, and requirements that limit their search for acceptable transactions to a very limited number of potential participants. And, most mineral property buyers and sellers do not rely on the direct sales comparison approach to value that is typically a difficult approach to use in estimating the fair market value of a property that is primarily valuable because of what it contains, a mineable and marketable mineral resource, rather than what can be built on it.

The Yellow Book on Comparable Sales

The material for this second part of this presentation is primarily from the Interagency Land Acquisition Conference's *Uniform Appraisal Standards for Federal Land Acquisitions*, 2000 edition. This document is more familiarly referred to as the Yellow Book and has been officially adopted by or closely followed by many state and lower level condemning authorities. Section headings and footnote references have been used in this paper to allow for easier reference to the Yellow Book itself or other personal research. A bound copy of the Yellow Book can be purchased from The Appraisal Institute or it can be downloaded in HTML or PDF format from <http://www.usdoj.gov/enrd/land-ack/>. Litigation for other purposes, marital and business dissolutions, land and contract disputes, and a host of other legal actions may or may not be governed by other specific state appraisal rules or regulations.

Perhaps the most important point to be made in this presentation is that simply because a transaction occurred does not make it a "comparable sale"! Firstly, it *must* be an open market, arms-length, voluntary sale and, secondly, as the court noted in *United States v. 190.71 Acres of Land*, 300 F.2d 52 (7th Cir. 02/14/1962), "the Government appears to concede that proof of comparability must be made before other sales can be employed for the purpose of determining compensation of the property to be taken". In other words, there must be a high degree of similarity between the subject property and the sale that it is being compared to. There is no presumption of similarity, it is the appraiser's task to clearly and convincingly prove this similarity in the report if a sale is to be a credible comparable.

A-17. Value Estimate by the Sales Comparison Approach. Since any recent and unforced sale of the property under appraisal can be the best evidence of its value,⁶² any such sale is treated as a *comparable sale* in this approach to value. It shall be analyzed like any other comparable sale and given appropriate weight by the appraiser in concluding a final estimate of value of the property. As noted in Section A-13e of these Standards, an unsupported claim that a sale of the subject property

was a *forced* sale or not indicative of its value is unacceptable.

All comparable sales used shall be confirmed by the buyer, seller, broker or other person having knowledge of the price, terms, and conditions of sale.⁶³ When a comparable sale is of questionable nature and/or admissibility (e. g., sales to a government entity) special care must be taken in the verification of the circumstances of the sale.⁶⁴ A narrative comparative analysis of each comparable sale shall be made explaining how the sale relates to the property under appraisal in respect to those features which have an effect on market value.

In selecting the comparable sales to be used in valuing a given property, it is fundamental that all sales have the same economic highest and best use as the property under appraisal and that the greatest weight be given to the properties most comparable to the property under appraisal. In this regard, appraisers must recognize that, when valuing a property with a highest and best use for some form of development that will require rezoning or extensive permitting, sales of similar properties may require extensive analysis and adjustment before they can be deemed economically comparable. The analysis and adjustment of such sales is discussed in Section D-9 of these Standards.

Each appraisal must contain a sufficient description of the comparable sales used so that it is possible for the reader to understand the conclusions drawn by the appraiser from the comparable sales data. Photographs of the comparable sales are valuable visual aids that indicate the comparability of the property recently sold with the property under appraisal. Such photographs must accompany each appraisal report not only to aid the reviewing appraiser but also for the agency's records and for later use in possible condemnation trials. In addition to the identification of the property, every photograph should show the date taken and the name of the person taking the photograph.

The preferred method of adjusting comparable sales is through the use of quantitative adjustments whenever adequate market data exists to support them: "[q]uantitative adjustments are developed as either dollar or percentage amounts. Factors that cannot be quantified are dealt with in qualitative analysis."⁶⁵ Only when adequate market data does not exist with which to support quantitative adjustments should the appraiser resort to qualitative adjustments (i. e., inferior, superior).⁶⁶ Appraisers must bear in mind that quantitative and qualitative adjustments are not mutually exclusive methodologies. Because one factor of adjustment cannot be quantified by market data does not mean that all

adjustments to a sale property must be qualitative. All factors that can be quantified should be adjusted accordingly. When quantitative and qualitative adjustments are both used in the adjustment process, all quantitative adjustments should be made first.⁶⁷ When using quantitative adjustments, appraisers must recognize that not all factors are suitable for percentage adjustments. Percentage and dollar adjustments may, and often should, be combined.⁶⁸ Each item of adjustment must carefully be analyzed to determine whether a percentage or dollar adjustment is appropriate.

When appraisers must resort to qualitative adjustments, they must recognize that this form of comparative analysis will often require more extensive discussion of the appraiser's reasoning. This methodology may also require the presentation of a greater number of comparable sales. It is essential, of course, that the appraiser specifically state whether each comparable sale is generally either overall superior or inferior to the property under appraisal. To develop a valid indication of value of the property under appraisal by the use of qualitative analysis, it is essential that the comparable sales utilized include both sales that are overall superior and overall inferior to the property being appraised. If this is not done, the appraiser will have merely demonstrated that the property is worth more than a certain amount (if all of the sales are inferior to the subject property) or less than a certain amount (if all of the sales are superior to the subject property).

In developing a final value estimate by the sales comparison approach, the appraiser shall explain the comparative weight given to each comparable sale, no matter whether quantitative or qualitative adjustments, or a combination thereof, are used. A comparative adjustment chart, or graph, is recommended and may assist the appraiser in explaining his or her analysis in this regard.

Documentation of each comparable sale shall include the name of the buyer and seller, date of sale, legal description,⁶⁹ type of sale instrument, document recording information, price, terms of sale, location, zoning, present use, highest and best use, and a brief physical description of the property. A plot plan, or sketch, of each comparable property should be included, not only to facilitate the reader's understanding of the relationship between the sale property and the subject property, but also to locate the sale property in the field. This information may be summarized for each sale on a *comparable sales form* and included in this section or in the addenda of the report. As noted, a photograph of each comparable sale shall also be included. A comparable sales map, showing the relative location of the comparable sales to the property under appraisal⁷⁰ shall

be included, either in this section or in the addenda of the report. Inclusion of a copy of the transfer document (e. g., deed, contract) in the report is neither required nor desirable, unless there is something in the document that is unusual or particularly revealing.

The definition of market value used in these Standards requires that the estimate of value be made in terms of cash or its equivalent.⁷¹ Therefore, the appraiser must make a diligent investigation to determine the financial terms of each comparable sale. When comparing the sale to the property being appraised, the appraiser shall analyze and make appropriate adjustments to any comparable sale that included favorable or unfavorable financing terms as of the date of sale. Such adjustment must reflect the difference between what the comparable sold for with the favorable or unfavorable financing and the price at which it would have sold for cash or its equivalent.

While cash equivalency of favorable or unfavorable financing can be estimated by discounting the contractual terms at current market or yield rates for the same type of property and loan term over the expected holding period of the property, the preferred method of estimating a proper cash equivalency adjustment is by the analysis of actual market data, if such data is available.

B-2. Market Value Criterion. Buildings and improvements,¹²³ timber, crops, sand, gravel, minerals, oil, and so forth, in or upon the property are to be considered to the extent that they enhance the market value of the property as a whole. The total value of the property shall not be estimated by adding the values of such separate items to the value of the land, and the fact that the various items are in separate ownerships does not alter this rule. It must be remembered that it is the market value of the entire property that is the standard of valuation, and not the total of the money values of the separate items. This subject is discussed in greater detail in Section B-13 of these Standards. The mere possibility of the existence of minerals, oil, or gas is not sufficient to affect market value. Such a possibility can be given consideration only when there is sufficient probability of the presence of mineral, oil, or gas as to affect market value and when that probability would be given weight by a prudent person in bargaining.

B-4. Sales Comparison Approach to Value. Arms length transactions in lands in the vicinity of and comparable to the land under appraisal,¹⁴⁴ reasonably near the time of acquisition, are the best evidence of market value,¹⁴⁵ but not to the extent of exclusion of other relevant evidence of value.¹⁴⁶ Such transactions are commonly referred to as comparable

sales, and the process of forming an opinion of the property's market value through comparison of such sales transactions with the subject property is known as the sales comparison approach to value. Too often it has been found in appraisal reports that, under the circumstances of the case, the most reliable approach to value has been over-shadowed by the time, attention, and detail given to other less reliable approaches to value.

Comparison of sales transactions to the subject property being appraised is the essence of the sales comparison approach to value. The basic elements of comparison to be considered are recognized as: Property rights conveyed; Financing terms; Conditions of sale; Market conditions (historically referred to as a *time* or *date* of sale adjustment); Location; Physical characteristics; Economic characteristics; Use and zoning; Non-realty components of value included in the sale property¹⁴⁷, which are seen to be about the same as previously discussed.

Accepting the truism that all three of the usual approaches to value are based on market data interpretation, the federal courts recognize that the sales comparison approach is normally the best evidence. Adjustments made to comparable sales are often developed by the use of techniques from the income capitalization and cost approaches to value and, conversely, factors used in the income capitalization and cost approaches are often derived from comparative market data.

The important role of the sales comparison approach to value in appraisals for federal land acquisitions is illustrated by the Supreme Court's statement that: "Where private property is taken for public use, and there is a market price prevailing at the time and place of the taking, that price is just compensation."¹⁴⁸ Or, as put by the 10th Circuit: "The best evidence of such value is like and comparable sales within a reasonable time preceding the condemnation."¹⁴⁹ The sales comparison approach normally should be stressed and care should be taken that it does not get lost among other evidence concerning what the courts often view as less reliable approaches to value. Because it is the most easily understood approach to value, it often develops the most acceptable and convincing evidence of the market value of the property to both the courts and the parties to the transaction.

It is imperative to verify sales amounts and to ascertain whether terms and conditions of a sale were conventional and under open competitive market conditions. This requires interviews and discussions with the seller, buyer, the closing agency, or the broker handling the transaction and the verification of recordation, which is

the only avenue of verification not based upon statements of persons other than the appraiser. Verification must be accomplished by competent and reliable personnel, and if the case goes into condemnation, the sale must be personally verified by the appraiser who will testify.

The extent of sales verification will vary with the circumstances of each sale, including the specific parties involved in the sale and the importance and weight ultimately given to the sale in the final estimate of value. Sales must be evaluated under two criteria: the weight, if any, to be given them by the appraiser in arriving at an estimate of market value of the property under appraisal, and the admissibility of such sale if the acquisition must be by condemnation. Although the criteria for these evaluations are similar, they are not identical, and the result of one evaluation does not necessarily dictate the result of the other. For instance, a sale that is found to be inadmissible does not necessarily have to be entirely excluded from the appraiser's consideration in deriving an estimate of market value (e.g., see discussion of "offers" in Section B-16 of these Standards). Nor is a sale which the appraiser concluded should be given no weight necessarily inadmissible. The criteria for the evaluation of sales for purposes of admissibility will be discussed below. Sections A-17, and D-9 discuss the criteria and required verification process for various categories of sales to determine the weight, if any, these sales should be given by the appraiser.

However, in determining when to consider, and if so how much weight to give sales in their appraisals, appraisers should recognize that the criteria established for the admissibility of sales by the federal courts were established for legitimate and persuasive reasons. Therefore, one of the factors that should be considered in the selection and weighing of comparables sales is their admissibility.

Forced sales, i.e., sales made under some form of legal (as distinguished from economic) compulsion, are generally not admissible in a condemnation trial.¹⁵⁰ "A forced sale is one which has no probative value whatever and therefore must be excluded from evidence."¹⁵¹ The phrase 'forced sale' is used in the law of condemnation to describe a sale of property which is inadmissible as evidence of value because elements of compulsion so affected the seller that the sale could not be said to be fairly representative of market value at the time made. This conception of a forced or compulsive sale includes force or compulsion as a result of some kind of legal process."¹⁵² It has been held that a comparable sale was not under compulsion, coercion or compromise, such as to be inadmissible in evidence, if the witness testifies or if it is otherwise shown, that the public records do not

disclose that the sale was at foreclosure, under deed of trust securing an indebtedness, at execution or attachment, at auction, under the pressure of the exercise of the power of eminent domain, or under other coercion sui generis. Other types of legal compulsion generally disclosed by public records.¹⁵³ The motivation behind other transactions can be shown, but only as affecting the weight that should be afforded a sale, not as to its admissibility.¹⁵⁴

Sales to a condemning authority are often inadmissible. (See Section B-18, "Price paid by government entity for similar property.") The reasons for excluding sales to a condemning authority are not applicable, however, to sales by a condemning authority. Sales between members of a family or closely related business entities are not arms-length transactions, and since they may involve other factors than market value considerations, such sales are generally inadmissible. Sales involving the exchange of property are generally not admissible because they are considered unreliable indicators of market value and introduce too many collateral issues. As has been explained:

If evidence of an exchange is to be considered as proof of present valuation, the values of such exchanged lands obviously must be proved by the same standards as attends proof of value of the property being condemned. Then it becomes the task of the trial judge to determine ordinarily whether such collateral issues would be so confusing or so lengthy as to cause him to rule out any effort to prove value of the condemned tract in such a fashion.¹⁵⁵

Sales that include personal property (e.g., the sale of a farm that includes the farm equipment and/ or livestock), are likewise considered inadmissible, unless they can accurately be adjusted to reflect only the real property transaction. Distress sales and sales with typical financing terms are of questionable reliability and should be used only with great care. If want of available market data necessitates reference to such a sale or sales, it is important that proper adjustments be made.

Sales after the date of acquisition are not per se inadmissible (contrary to popular belief) and with appropriate caution and restraint may be utilized by the appraiser if they meet the usual standards of comparability and are not otherwise incompetent as evidence of value.¹⁵⁶ Sales transacted on or before the date of acquisition are the preferred support for an appraisal and if such sales are available and adequate, there is little justification for using post-acquisition sales. Use of post-acquisition sales should be avoided where they reflect artificially inflated or depressed values resulting from the acquisition itself or from the

government's project,¹⁵⁷ or if they significantly post-date the acquisition date.

A binding and unconditional contract of sale, even where title has yet to be conveyed, is generally competent admissible evidence of value and may be utilized by the appraiser as a comparable sale.¹⁵⁸ However, it is essential that the contract be *binding and unconditional*. Mere offers and unexercised options, by contrast, are inadmissible as evidence of value and, therefore, the appraiser should give little or no weight to such options, except to the extent that they may set limits of value.¹⁵⁹ See Section B-16.

The consideration and weight accorded to sales of other lands is determined by the reliability of the data collected and verified and by the application of the three tests of proximity (in time, in location, and in physical and economic similarity). But, the appraiser should thoroughly investigate sales that were considered though not relied upon as direct comparables in reaching a final estimate of market value. Such research material should be retained in the appraiser's file. When the comparability, thus admissibility, of a sale is disputed in the course of a valuation trial, it is a well-recognized principle of law that the determination of admissibility rests within the sound discretion of the presiding judge, whose ruling is subject to review only for abuse of discretion.¹⁶⁰ Retention of all data considered by the appraiser in concluding a value estimate will insure that adequate market data will be available for presentation to a trier of fact if the acquisition has to be accomplished by condemnation.

B-5. Prior Sales of the Identical Property. Prior sales of the same property, reasonably recent and not forced, are extremely probative evidence of market value.¹⁶¹ Accordingly, the appraiser has an obligation to determine what the owner paid for the property. Adjustments for changes in market conditions may have to be made, or the prior sale may have been made under circumstances that render it irrelevant to the determination of the market value as of the date of valuation, but each appraisal report must include a statement with respect to the consideration accorded to the immediate past sale of the property under appraisal.

The admission into evidence of a sale of the property being acquired is extremely pertinent, and thus courts have sustained such admissions even when a considerable period of time has elapsed between the sale and the date of valuation.¹⁶² Not only must the appraisal report include the latest sale of the property (regardless of when it was made) with whatever statement is deemed relevant to the value as of the effective date of appraisal and any adjustments made to reflect current value, but

these Standards also require the reporting of all sales of the subject property within 10 years of the date of valuation. (See Section A-13e.)

B-18. Price Paid by a Governmental Entity for Similar Property. Based upon a variety of reasons, e.g., that such payments are in the nature of compromise to avoid the expense and uncertainty of litigation and so are not fair indications of market value, that such evidence complicates the record, confuses the issue, is misleading, and, especially in condemnation cases, raises collateral issues as to the conditions under which such sales were made, the historical view of the various federal courts has been that the sum paid for similar land by an agency having condemnation authority, even if condemnation proceedings have not begun, was inadmissible.²⁷⁹ However, an exception to this rule is recognized in cases of voluntary sales, or where the fact that the parties were condemnor and condemnee either was not known or had no influence because the sale was not in connection with or in anticipation of condemnation proceedings.²⁸⁰

“[T]he recent trend has been in favor of granting the trial court broad discretion in determining the admissibility of sales . . .”.²⁸¹ “The theory of admissibility is that although evidence of a purchase by the condemnor of property similar to that involved in a condemnation proceedings is less persuasive on the issue of market value than evidence of a purchase by a stranger, there is no reason in principle why such evidence should not be admitted provided the purchase by the condemnor was made without compulsion; in short, it is held that objection to this type of evidence goes to its weight, not to its competency.”²⁸² As explained by the Sixth Circuit: “The possibility that the condemnation itself may have influenced the price the Government paid for the [comparable]property may well disclose the presence of artificially inflated values in the sale price of that property. Nevertheless, this is merely a possibility which cannot be determined through use of a general exclusionary rule prior to trial.”²⁸³

While sales to government entities should be viewed as *suspect* from the outset, they cannot, and should not, be rejected by appraisers as invalid comparable sales out of hand, especially in those situations wherein a paucity of private sales are available for use in the sales comparison approach to value. However, because “the person who offers evidence of other transactions must establish preliminarily that the purchase was made ‘without compulsion, coercion, or compromise,’ ”²⁸⁴ appraisers must use extreme care in their verifications of sales to government entities if they are going to rely upon them as comparable sales. Since there can be a multitude of motivations for a government entity to acquire lands at a price other than market value, Section D-9 of these

Standards sets out the verification procedures appraisers must employ in verifying the circumstances surrounding a sale to a government entity to ensure that it meets the criteria of market value, or can be accurately be adjusted to reflect market value.

D-9. Comparable Sales Requiring Extraordinary Verification and Treatment. As has been previously noted in these Standards,³⁹² the federal courts have traditionally held that, in general, sales to a governmental entity were inadmissible, but the recent trend has been to admit them with the view that such evidence goes to its weight, not its admissibility. The following discussion, however, relates not to the admissibility of such evidence, but to the question of whether sales to the government should be used by appraisers in conducting appraisals for federal land acquisition purposes and, if so, the degree of weight placed on those sales by appraisers.

As has been noted, “government is a different type of player, not constrained to follow market economic rules;”³⁹³ thus, sales to the government should be immediately viewed by appraisers as *suspect*. When appraisals for federal land acquisitions are conducted, sales to the government should not be used as comparable sales unless there is such a paucity of private market data as to make a reliable estimate of market value impossible without the use of government purchases. However, the types of transactions conducted and lands acquired by governments are often unique. For instance, in the acquisition of lands for conservation or preservation, the acquired lands are often located in remote areas, are of extraordinary size, have little economic utility or value, and are located in areas of little market activity. To develop a reliable and supportable estimate of market value in these situations, appraisers may be forced to consider sales to the government in the sales comparison approach to value.

However, in situations when an appraiser is forced to consider sales to the government as comparables, there are certain steps that the appraiser must take before a sale to the government can be qualified as a valid comparable sale. Comprehensive and documented verification of government transactions is essential, and “[a] ppraisers have a special responsibility to scrutinize the comparability of all data used in a valuation assignment. They must fully understand the concept of comparability and should avoid comparing properties with different highest and best uses, limiting their search for comparables, or selecting inappropriate factors for comparison.”³⁹⁴ “When nonmarket conditions of sale are detected in a transaction, the sale can be used as a comparable but only with great care. The circumstances

of the sale must be thoroughly researched before an adjustment is made, and the conditions must be adequately disclosed in the appraisal.”³⁹⁵

The type and amount of information available to an appraiser about a sale to the government will vary, depending on the acquiring agency’s land acquisition documentation requirements. Small governmental entities, such as local service districts, may make some of their land acquisitions without written appraisals, appraisal reviews, or written records of negotiations. State and federal agencies, on the other hand, usually make their acquisitions in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (or comparable state statutes), which requires extensive documentation of land acquisitions, including formal documented appraisals, written appraisal reviews, and written records of the negotiating process.

The availability of sales documentation for appraiser inspection and analysis will also vary from agency to agency, depending on the agency’s public disclosure policy and the applicable laws on access to government documents. The following is written under the presumption that the sales to be verified by the appraiser have been fully documented and that all documentation is available for the appraiser’s inspection. It is recognized that in many instances, this will not be the case. However, when documentation is not available for the appraiser’s inspection, the appraiser should report such fact and the impact of such unavailability on the reliability of the transaction as a valid comparable sale.

First, the appraiser should review the legislation which authorized and/or mandated the government’s acquisition. By this review, the appraiser should verify that the legislation provided that the property would be acquired at market value. Legislation that mandates acquisition at a price other than market value, or provides for acquisition at a price unaffected by particular market forces (e.g., disregard of the influence of the Endangered Species Act), may not result in a valid comparable sale representative of market value. Likewise, legislation that allows the acquiring agency to deviate from the market value measure if it finds it in the public interest to do so will often not result in a price representative of market value. The appraiser should next contact the acquiring agency and ask to inspect the appraisal upon which the acquisition was based, the agency review of that appraisal, the negotiator’s report (or file) in conjunction with the acquisition, and the agency’s acquisition file.

Examination of the agency’s appraisal, should include:

Determination that the government's acquisition was a *total acquisition* of the landowner's property, as opposed to a partial acquisition wherein the acquisition cost may be a measure of the difference between the value of the whole property before and after the government's acquisition, or a measure of the value of the parcel acquired plus damages to the remainder parcel, rather than an indication of the value of the property acquired.

Determination that the sale was for the fee simple interest in the property, or an interest similar to the interest being appraised. Sales that are for something less than that the fee simple interest in an entire property (e.g., partial acquisitions, easement acquisitions) may not be valid comparable sales.

A review of the appraiser's estimate of highest and best use. The highest and best use upon which the value estimate was estimated must be an *economic* highest and best use. That highest and best use must be the same as, or highly similar to, the highest and best use of the property under appraisal before the government acquisition can be considered a reliable comparable sale. A value estimate based on a highest and best use of *sale to the government*, conservation, or any use that contemplates taking the property out of economic productivity in perpetuity is not a valid highest and best use upon which to estimate market value.

A review of the appraiser's final estimate of value. Determine whether the price paid for the property was equivalent to its appraised value. If not, determine whether the price paid was within the range of values indicated by the appraiser's comparable sales in the sales comparison approach and/or whether the price paid was within the range of the indicated value of the property by the different approaches to value developed by the appraiser.

A review of the sales used by the government's appraiser in estimating value. If the sales relied on by the appraiser were substantially influenced by non-market factors (e.g., political pressure), they would be invalid indicators of market value, thus any value conclusion reached based on such sales may, likewise, be invalid.

A review of any breakdown of value that the appraiser may have included in the appraisal report, such as different unit values for different land types included in the sale property, or the contributory value of improvements.

A review of the agency's appraisal review should next be undertaken, with particular note being made of any technical or factual errors reported by the review appraiser. A review of the negotiator's report and the agency's acquisition file regarding the process of negotiation between the agency and the property owner should also be conducted. Any suggestion that the property would be condemned if agreement cannot be reached should be noted. Likewise, any indication that the property owner has accepted the price paid with the understanding that the agency will support (or, at least not oppose) the property owner's attempt to take a tax write-off for a donation for some amount in excess of the actual price paid should be noted. Either of these circumstances may suggest a price below market value. Any suggestion that a property owner may have threatened to damage the property for the government's intended use (e.g., cutting the timber from land slated for acquisition as a park) if the owner's asking price was not paid can result in a price in excess of market value. Sales involving the exchange of property are generally unreliable for use as comparable sales.³⁹⁶

A determination should be made whether the property owner or the owner's representative submitted an appraisal or any meaningful market data to the agency that may have supported a value higher than the government's appraisal and the agency's subsequent determination to pay more than its appraisal. If so, the submitted material should be reviewed and analyzed.

A reading should be conducted of any correspondence from the property owner's political representatives, and the agency's response thereto, to determine whether there may have been undue non-market pressure to consummate a sale at something other than market value. A reading should also be conducted of any newspaper clippings that may be in the file, to determine whether there was an undue amount of public pressure on the agency or the property owner to consummate a quick sale. Such public pressure can result in a price that is above or below the market value of the property.

A reading of the conveyance and closing documents will reveal the exact estate conveyed to the government. It should be confirmed that the estate conveyed is the same estate that was appraised by the government's appraiser. Care should be taken here because, during negotiations, some agencies have a practice of allowing the property owner to retain some rights in the property after acquisition not contemplated by the government's appraiser (e.g., a life estate in the property, or an estate for years, at zero or nominal rent, the right to continue to

grow crops on the land, or use it for grazing, or, in some instances a physical reduction in the land area acquired).

If the estate acquired was only an easement, the sale is not a valid comparable either as an indication of fee simple value, or of the value of an easement. If only an easement is being acquired from the property under appraisal, the measure of value should not be based on the price paid for similar easements, but rather upon the usual before and after appraisal method.³⁹⁷

A reading and analysis should be undertaken of any documents produced by the agency or others, in an attempt to justify payment in excess of the approved appraisal. Legitimate reasons that a price in excess of an agency's approved appraisal may still represent a valid indication of market value might include: The appraisal is outdated in a rapidly appreciating market; The proposed price remains within the range of values indicated by the comparables developed by the appraiser; The proposed price remains within the range of values indicated by the different approaches to value developed by the appraiser; Factual information about the property, the appraisal, or the comparables used by the appraiser, came to light after the appraisal and review that revealed errors in the appraisal that could be mechanically corrected.

Legitimate reasons that a government entity could justify a price in excess of its approved appraisal, but would eliminate the transaction as a valid comparable sale, at least without adjustment, might include: The price in excess of market value is warranted due to costs and risks inherent in a condemnation trial; The threat of imminent destruction of the property for the government's intended use existed; The cost of project delay caused by the failure to acquire the property offsets the price paid in excess of its market value; The administrator of the public agency found it to be in the *public interest* to pay in excess of market value; The price in excess of market value is justified because the tract being acquired is a *key* tract, or the last tract to be acquired, for the government's project; The economy of land management of a consolidated ownership by the government outweighs the price in excess of market value paid for the tract.

Once the forgoing investigation and analysis have been completed, the appraiser should personally verify the sale with the purchaser *and* the seller, or their representatives. In conducting this verification, the appraiser should clear up any questions that may have arisen as a result of earlier research. It is recognized that an agency's appraisal does not represent the only

reasonable estimate of market value, but if the government paid more for the property than its approved appraisal, the appraiser should determine the justification used by the government to do so and whether such justification was based on valid market considerations or whether the justification was non-market related and, therefore, invalidates the price paid as an indication of market value.

In this same context, there is another category of sales that needs careful verification if the sales are going to be used as comparables. Occasionally, a government project will be created and acquisition will be authorized, but adequate funds for the entire acquisition project will not be appropriated. When the government project involves conservation/preservation lands, environmental organizations will sometimes acquire lands within the project area for the sole purpose of transferring those lands, often at the organization's cost, to the government when funding becomes available. Sales to environmental organizations under such circumstances, like direct sales to the government, are suspect as reliable comparable sales, because the purchaser's motivation was not economically driven by typical market forces.

Sales made under such circumstances may well be project-influenced.³⁹⁸ At times these environmental organizations are working so closely with the government agency administering the project³⁹⁹ that, from a practical standpoint (although not from a legal one), they essentially become an agent for the government. Also, the sellers of such land have been known to take (or attempt to take) a tax write-off for a contribution to the environmental organization and claim a value of the property sold in excess of the actual selling price. Because of these complications, appraisers should avoid using such sales as comparables. If a paucity of market data in the private market makes their use necessary, extreme care must be taken in the verification of such sales. The appraiser should determine whether the sale was based on a competent appraisal that estimated the market value of the property for its economic highest and best use, whether there were any tax-write offs taken, and whether the purchase was impacted by the pendency of the government's project. If the purchase price was not based on the market value of the property for its economic highest and best use, the sale will normally have to be discarded as a comparable. The same is true if tax write-offs were involved or if project influence was present, although it is sometimes possible to make adjustments to the sale for these factors. If, subsequent to the sale, the property has been transferred by the environmental group to the government, the fact and circumstances of the transfer must be reported.

A third category of sales that must be verified and treated with great care consists of those sales used in the appraisal of a property that has a highest and best use for some form of development that will require the procurement of rezoning or a land use permit. Sales of such property in the private market will generally take the form of initial options or *contingency sales*, the contingency being the purchaser's ability to procure the necessary rezoning or permitting to develop the property to its highest and best use. If the rezoning or permitting is denied, the contingency is not met and the sale does not close. Or, if an option is used and rezoning and/or permitting is not available, the option is not exercised. Therefore, when consummated, such sales do not represent the price at which a property would have sold if a purchaser had to procure a rezoning or permits after the date of closing. Instead, such sales represent the price of a property with zoning or permitting for development to its highest and best use in place. All of the risks, time delays, and costs associated with a rezoning or permitting have been removed from the transaction.

Therefore, such sales are typically not comparable to the property being appraised for federal acquisition purposes. Generally, properties under appraisal for government acquisition purposes that have a highest and best use requiring a rezone and/or permits to be developed to their highest and best use do not have the zoning or permitting in place. Thus, on the theoretical date of the sale's closing (i.e., the effective date of valuation), the purchaser must assume the risks, time delay, and costs of procuring the rezone and/or permitting. Properties seldom sell in such a condition in the private market; thus, there are few truly comparable sales available for the appraiser's use in developing a value for the property under appraisal by the sales comparison approach.

Given this fact, appraisers must often resort to using sales which already have, on the date of consummation, their needed zoning/permitting in place. Under these circumstances, it is essential that the appraiser adjust the sales to reflect the differences in the regulatory environments of both the sales at the time of closing and the property under appraisal as of the effective date of the appraisal. Such adjustments must account for the risks inherent in the procurement of a rezoning or permitting, including the possibility that the regulatory agency may deny such a request, or place conditions on it.⁴⁰⁰ The time delays encountered in procurement of the rezoning and/or permitting and the costs associated with their procurement must also be considered. In certain circumstances, a purchaser may require an entrepreneurial profit in addition to an adjustment for risk.

Appraisers cannot merely assume that such a rezoning/permit is in place for the property under appraisal, or assume that such a rezone/permit will be granted. They must appraise the property only in light of the probability of the obtaining the rezone/permit. If appraisers use sales of properties with zoning/permitting in place at the time of sale, they must explain in the sales comparison approach to value how they accounted for the regulatory environmental differences between these sales and the subject property and how they quantified the adjustment(s) for this factor, based as much as possible on market evidence.

D-11. Valuation of Mineral Properties. The appraisal of properties containing valuable minerals is a complex, specialized subject. As a result, appraisers must have specialized training and experience to properly understand and apply the proper methodologies established for estimating the market value of these properties.

In the development of an appraisal concerning mineral properties, it is particularly important to understand the unit rule.⁴⁰⁸ The courts have recognized that property must be valued as a whole for federal acquisition purposes, with due consideration of all of the components that make up its value. Its constituent parts are considered only in light of how they enhance or diminish the value of the whole, with care being exercised to avoid so-called *cumulative* or summation appraisals.⁴⁰⁹ "In the case of land that is underlaid with marketable minerals, . . . the existence of those minerals is a factor of value to be considered in determining the market value of the property, but the landowner is not entitled to have the surface value of the land and the value of underlying minerals aggregated to determine market value."⁴¹⁰

Accordingly, it is improper for an appraiser to estimate the value of the surface of the property, add to it a valuation of the minerals, as estimated by a separate minerals expert, and thereby conclude a total market value for the property. Not only does this procedure result in a forbidden summation appraisal, it also results in no one individual being able to testify as to the market value of the property as a whole, if the case goes to trial. For these reasons, when consultants' reports are used in the valuation of mineral property, appraisers must strictly adhere to the requirements of Section D-4 of these Standards relating to the use of consultants' reports.

Highest and best use analysis is another critical element in the development of a reliable mineral property appraisal. Such a report must contain a well supported and documented market analysis that clearly establishes

whether or not there is adequate market demand for the minerals located on the property. The market analysis should provide the underpinning for the appraiser's conclusions regarding the marketability, price, and competition for the mineral commodity found on the property. It is critical that the appraiser adequately address the question of the market for the minerals found on the property because it has been ruled that an expert must "make a showing of some sort of market, poor or good, great or small, for the commodity in question before the quantity and price of the commodity or substance may be presented to the jury to be used as a factor in the expert's opinion testimony."⁴¹¹

Clearly, if no market exists for the commodity, then the expensive and time-consuming determination of the quantity and quality of the minerals on the property is unnecessary. If a market exists for a mineral, then a supportable determination must be made concerning both the legal permissibility of extracting the mineral and the physical characteristics of the minerals located on the property. Interpretation of permitting and other environmental requirements may necessitate the assistance of a consultant with specialized knowledge and experience in the area. Also, studies regarding the physical characteristics of the minerals are usually conducted by specialists (usually geologists and/or mining engineers) who make determinations concerning such important factors as the location, quantity, and quality of the mineral deposit, and any variations in the quality that might be found on the property. Additional determinations may be required regarding such factors as the accessibility of the mineral and problems and costs of extraction. This information then provides the basis for estimating the value of the property using the sales comparison and income approaches to value. However, before the adoption of these studies, it is the professional responsibility⁴¹² of the appraiser to thoroughly review and understand the reports prepared by other experts and adopt them only if the analysis and conclusions were prepared according to appropriate standards, are sound, and are adequately supported.

Another aspect of highest and best use analysis of mineral property that must be borne in mind is the *consistent use theory*. Under this concept, the "land cannot be valued on the basis of one use while the improvements [or minerals] are valued on the basis of another."⁴¹³ For example, it is improper "to value a property for agricultural purposes and then add a substantial value increment for gravel deposits under the surface of the land. If the gravel is mined, the land, in all probability, will have no value for agricultural purposes during or after the mining operation."⁴¹⁴ However, if the mineral deposit were oil, a concurrent use of the surface

for grazing purposes would not, in most instances, be a violation of the consistent use theory.

As in the valuation of other property for federal acquisition purposes, if adequate sales data is available, the sales comparison approach is usually considered the best evidence of value.⁴¹⁵ While it is recognized that each property containing valuable mineral deposits is unique, the same may be said, to some degree, of all real estate. However, "[e]lements of sales of quite distant properties, even those with different mineral content, may be comparable in an economic or market sense when due allowance is made for variables."⁴¹⁶ Therefore, it is unacceptable for an appraiser preparing an appraisal under these Standards to simply state that there are no comparable sales transactions without providing adequate support for the conclusion.

In order to properly develop a sales comparison approach to value for a mineral bearing property, the appraiser needs to understand the level of information available concerning the mineralization found on the subject property. It is then important to identify comparable sales that had similar levels of information concerning mineralization available at the time of sale. The variables which must be given close attention include rights conveyed, conditions of sale, the presence of multiple ores on the same property, access for extraction purposes, topography and cover (stripping ratios), transportation availability and cost, and distance to smelters or refineries. All of these factors may require adjustment.⁴¹⁷ The verification of data concerning the comparable sales is a critical component of this analysis, and the assistance of experts in identifying all necessary areas of enquiry during the verification process may be required.

Also important in the sales comparison approach is the selection of the appropriate unit of comparison. Such selection should generally mirror that unit of comparison used by participants in the market and, as such, will generally result in the tightest bracket of value for the subject property. "However, arriving at a valuation by multiplying an assumed quantity of mineral reserves by a unit price is almost universally disapproved by the courts."⁴¹⁸

The income capitalization approach to value is also a valid means for estimating the market value of mineral properties, but should never be used exclusively if comparable sales are available for use in the sales comparison approach. The income capitalization approach can be especially applicable when the property under appraisal is already being mined, and thus the historical income stream from the property is available

for analysis. In applying the income capitalization approach, appraisers must take care to consider only the income that the property itself will produce – not income produced from the business enterprise conducted on the property (i.e., the business of mining).⁴¹⁹ An appraiser who is not thoroughly experienced in the appraisal of mineral properties should not attempt to employ the income capitalization approach. Even when used by an appraiser experienced in this field, this appraisal approach can be highly speculative, and great care must be exercised in its use. As one court cautioned:

Great care must be taken, or such valuations can reach wonderland proportions. It is necessary to take into consideration manifold and varied factors, like future supply and demand, economic conditions, estimates of mineral recoverability, the value of currency, changes in the marketplace, and technological advances. Many of these factors are impossible to predict with reasonable accuracy.⁴²⁰

In developing an estimate of value by the income capitalization approach for a mineral property, it is generally recognized that the most appropriate method of capitalization is yield capitalization, most notably discounted cash flow (DCF) analysis. The income that may be capitalized is the royalty income, and not the income or profit generated by the business of mining and selling the mineral. For this reason, the income capitalization approach, when applied to mineral properties, is sometimes referred to as the *royalty income approach*.

DCF analysis has been recognized by the courts as an appropriate method of valuation to be employed in the valuation of mineral properties.⁴²¹ In conducting DCF analysis, the appraiser must avoid estimating a property-specific investment value to a particular owner instead of estimating the market value of the property if it were placed for sale on the open market. Like application of the development approach to value, DCF analysis in the valuation of mineral properties can be highly complex.⁴²² As it relates to mineral properties, it often involves the creation of a detailed mining plan for the property. The essential ingredients in this approach are (a) the royalty rate, (b) the unit sale price of the mineral to which the royalty rate is applied (e.g., \$20 per ton), (c) the projected annual amount of mineral production (e.g., 100,000 tons per year) (with the product of these three ingredients yielding the annual income), (d) the projected number of years of production and the year when the production will begin, and (e) the proper capitalization, or discount, rate.

In developing an estimated income stream, the proper royalty rate can be derived from comparable mineral

lease transactions, and the mineral unit price to which the royalty rate is applied may be derived from appropriate market transactions. The annual amount of production and the number of years of production are more difficult (and speculative) to estimate, and require as a minimum not only physical tests of the property to determine the quantity and quality of the mineral present, but also market studies to determine the volume and duration of the demand for the mineral in the subject property. Production levels estimates should be supported by documentation regarding production levels achieved in similar operations. Production levels should also be consistent with the mining plan's labor and equipment estimates. Numerous other factors may have to be considered, as for example, the amount of overburden, the method of mining (e.g., surface or deep mining), the requirements of permitting and applicable reclamation laws, the hauling distance to market, competition from other sites, the size and timing of the investment needed to construct any necessary access or processing plant, and so on.

The size and timing of the investment needed, or capital costs, will include expenditures for services, construction and equipment related to mine development, pre-production, and production. Among the factors to be considered in this portion of the analysis are preliminary studies, such as exploration, environmental and engineering studies required to define the location and nature of the resource sufficiently to support the mining plan and ensure compliance with all applicable governmental permitting and land use regulations. The engineering costs related to the mining operation design must include contractors' fees and management. Other elements to be considered include site preparation costs, costs of facilities and improvements (including off-site improvements, such as rail or road facilities), and mining equipment and pre-production costs (including all of the costs required to bring the extraction process to full production, including the costs of *time-lag* and permitting).⁴²³

Operating costs are the expenditures incurred during the ongoing extraction process. These cost elements include labor, materials, supplies, utility costs, payroll overhead, management, indirect costs, and contingencies. Also, appropriate deductions for all relevant taxes associated with the operation must be made. As in the development approach, the estimation of an appropriate level of entrepreneurial profit is a critical element in the DCF analysis of any mineral property, and is a factor that should be supported by direct market data whenever possible.

One of the most critical factors in the application of DCF analysis is the selection of the discount rate. Attempts have been made to apply various statistical techniques to mineral valuations⁴²⁴ to account for the extraordinary high risks associated with such operations. However, the application of various statistical techniques is not a substitute for discount rate selection derived from and supported by direct market data,⁴²⁵ which is the preferred and most widely accepted approach.⁴²⁶

Yellow Book Footnotes

62. See Section B-5 of these Standards.

63. These Standards require that sales verification be conducted by competent and reliable personnel, and if the case goes into condemnation, the sale must be personally verified by the appraiser who will testify. However, appraisers should recognize that some agencies may require in their appraisal contracts that initial verification be made by the appraiser who will sign the appraisal report.

64. For a description of the verification process required by these Standards for such sales see Section D-9.

65. *The Appraisal of Real Estate*, 11th ed. (Chicago: Appraisal Institute, 1996), 414.

66. The decision whether to use quantitative or qualitative adjustments should be based on the question of availability of data to support quantitative adjustments. Using qualitative adjustments for the purpose of obscuring the appraiser's complete reasoning and analysis from opposing parties in litigation is an unacceptable practice and, in the view of the Department of Justice, is contrary to the intent of Rule 26(a)(2)(B) of the Federal Rules of Civil Procedure.

67. *The Appraisal of Real Estate*, 11th ed. (Chicago: Appraisal Institute, 1996), 440.

68. For instance, a percentage adjustment for market conditions (time) may be appropriate, but an adjustment for the fact that the property under appraisal is 300' from a sewer connection and all of the comparable sales are connected to sewer should often be made in a lump sum dollar amount to reflect the cost to cure the subject property's comparative deficiency. If a percentage adjustment were applied to the price per unit (e. g., per acre, per sq. ft.) of each comparable, the adjustment to each of the comparables would vary, depending on the price per unit of the comparable, and might have no relationship to the cost to cure subject's deficiency.

69. This may be abbreviated if lengthy, or reference may be made to a tax parcel number.

70. It is important that the locations of the comparable sales and the subject property are shown on the same map so that a reader of the report, not familiar with the area, can understand the relative proximity of the properties and locate them in the field.

71. See Section B-2 of these Standards.

144. This would include a prior sale of the land under appraisal, which could very well be the most comparable of all the comparable sales. See Section B-5, "Prior sales of the identical property," for fuller discussion of this point.

145. E. g., *El Paso Natural Gas Co. v. Federal Energy Regulatory Commission*, 96 F. 3d 1460, 1464 (D. C. Cir. 1996); *United States v. 819.98 Acres of Land*, 78 F. 3d 1468, 1471 (10th Cir. 1996); *United States v. 24.48 Acres of Land*, 812 F. 2d 216, 218 (5th Cir. 1987); *Nemmers v. City of Dubuque*, 764 F. 2d 502, 505 (8th Cir. 1985); *United States v. 103.38 Acres of Land*, 660 F. 2d 208, 211 (6th Cir. 1981); *United States v. 100 Acres of Land, Etc., Marin Cty., Cal.*, 468 F. 2d 1261, 1265 (9th Cir. 1972), cert. denied, 414 U. S. 822 (1973); *United States v. Upper Potomac Properties Corp.*, 448 F. 2d 913, 918 (4th Cir. 1971); *United States v. 344.85 Acres of Land*, 384 F. 2d 789, 791-792 (7th Cir. 1967); *United States v. 60.14 Acres of Land*, 362 F. 2d 660, 665 (3rd Cir. 1966).

146. *El Paso Natural Gas Co. v. Federal Energy Regulatory Commission*, 96 F. 3d 1460, 1464 (D. C. Cir. 1996); *United States v. 819.98 Acres of Land*, 78 F. 3d 1468, 1471 (10th Cir. 1996); *Servalli v. United States*, 845 F. 2d 1571, 1575 (Fed. Cir.1988); *United States v. 421.89 Acres of Land*, 465 F. 2d 336, 338-339 (8th Cir. 1972); *United States v. Upper Potomac Properties Corp.*, 448 F. 2d 913, 917 (4th Cir. 1971); *United States v. 344.85 Acres of Land*, 384 F. 2d 789, 792 (7th Cir. 1967).

147. For a general discussion of these elements of comparison see, *The Appraisal of Real Estate*, 11th ed. (Chicago: Appraisal Institute, 1996), 403-414.

148. *United States v. New River Collieries*, 262 U. S. 341, 344 (1923).

149. *Owego Corporation v. United States*, 295 F. 2d 461, 463 (10th Cir. 1961).

150. *United States v. Certain Land in Fort Worth, Texas*, 414 F. 2d 1029, 1031-32 (5th Cir. 1969); District of

Columbia Redevelopment Land Agency v. 61 Parcels of Land, 235 F. 2d 865, 865-66 (D. C. Cir. 1956); *Hickey v. United States*, 208 F. 2d 269, 275 (3rd Cir. 1953), cert. denied, 347 U. S. 919(1954); *United States v. 5139.5 Acres of Land*, 200 F. 2d 659, 661 (4th Cir. 1952); *Baetjer v. United States*, 143 F. 2d 391, 397 (1st Cir.), cert. denied, 323 U. S. 772.

151. *Hickey v. United States*, 208 F. 2d 269, 275 (3rd Cir. 1953), cert. denied, 347 U. S. 919 (1954).

152. *Ibid.*

153. *United States v. Certain Land in Fort Worth, Texas*, 414 F. 2d 1029, 1031-1032 (5th Cir. 1969) ; *District of Columbia Redevelopment Land Agency v. 61 Parcels of Land*, 235 F. 2d 865, 865-866 (D. C. Cir. 1956).

154. *United States v. 6, 162.78 Acres of Land*, 680 F. 2d 396, 399 (5th Cir. 1982); *United States v. Certain Land in Fort Worth, Texas*, 414 F. 2d 1029, 1032 (5th Cir. 1969); *District of Columbia Redevelopment Land Agency v. 61 Parcels of Land*, 235 F. 2d 865, 866 (D. C. Cir. 1956); *United States v. Katz*, 213 F. 2d 799, 800 (1st Cir. 1954); *United States v. 5139.5 Acres of Land*, 200 F. 2d 659, 661 (4th Cir. 1952).

155. *United States v. Leavell & Ponder, Inc.*, 286 F. 2d 398, 406 (5th Cir. 1961), cert. denied, 366 U. S. 944.

156. *United States v. 68.94 Acres of Land*, 918 F. 2d 389, 398 (3rd Cir. 1990); *United States v. 0.161 Acres of Land*, 837 F. 2d 1036, 1044 (11th Cir. 1988); *United States v. 312.50 Acres of Land*, 812 F. 2d 156, 157 n. 3 (4th Cir. 1987); *United States v. 428.02 Acres of Land*, 687 F. 2d 266, 270 (8th Cir. 1982); *United States v. 320.0 Acres of Land*, 605 F. 2d 762, 799-803 (5th Cir. 1979); *United States v. 691.81 Acres of Land*, 443 F. 2d 461, 462 (6th Cir. 1971); *United States v. 63.04 Acres of Land*, 245 F. 2d 140, 144 (2nd Cir. 1957).

157. *Ibid.* But in the case of a partial acquisition where offsetting of benefits or damages are involved, post-acquisition sales could be particularly relevant in valuing the remainder. For example, they may also be particularly useful when the measure of damages is the difference between the market value before and after imposition of an easement. *United States v. 1129.75 Acres of Land*, 473 F. 2d 996, 999 (8th Cir. 1973).

158. *United States v. 312.50 Acres of Land*, 812 F. 2d 156, 157 (4th Cir. 1987); *United States v. 428.02 Acres of Land*, 687

159. *United States v. 0.59 Acres of Land*, 109 F. 3rd 1493, 1495-1496 (9th Cir. 1997); *United States v. 10,031.98 Acres of Land*, 850 F. 2d 634, 637 (10th Cir.

1988); *United States v. 158.24 Acres of Land*, 696 F. 2d 559, 565 (8th Cir. 1982); *United States v. Certain Land in Fort Worth, Texas*, 414 F. 2d 1029, 1032 (5th Cir. 1969).

160. E. g., *United States v. 819.98 Acres of Land*, 78 F. 3d 1468, 1471 (10th Cir. 1996); *United States v. 1,129.75 Acres of Land*, 473 F. 2d 996, 998 (8th Cir. 1973); *United States v. 100 Acres of Land*, 468 F. 2d 1261, 1265 (9th Cir. 1972), cert. denied, 414 U. S. 822 (1973); *United States v. Certain Land in Fort Worth, Texas*, 414 F. 2d 1029, 1031, (5th Cir. 1969); *United States v. 60.14 Acres of Land*, 362 F. 2d 660, 668-669 (3rd Cir. 1966); *Bailey v. United States*, 325 F. 2d 571, 572 (1st Cir. 1963).

161. *United States v. 428.02 Acres of Land*, 687 F. 2d 266, 271 (8th Cir. 1982); *Surfside of Brevard, Inc. v. United States*, 414 F. 2d 915, 917 (5th Cir. 1969); A prior sale of the same property is not, as a matter of law, entitled to greater weight than sales of comparable property; the relative importance of the two being dependent upon the facts in the particular case. *Hickey v. United States*, 208 F. 2d 269, 273 (3rd Cir. 1953), cert. denied, 347 U. S. 919 (1954).

162. *United States v. 428.02 Acres of Land*, 687 F. 2d 266, 271 (8th Cir. 1982); *Carlstrom v. United States*, 275 F. 2d 802, 809 (9th Cir. 1960); *Dickinson v. United States*, 154 F. 2d 642,643 (4th Cir. 1946) (sale six years prior to date of valuation held properly admitted); *United States v. Bechtold Co.*, 129 F. 2d 473, 479 (8th Cir. 1942) (sale fourteen years prior to date of value properly admitted). In *Bechtold* the court stated (p. 479): "The fact the purchase was made some fourteen years before the date of taking the property went to the weight of the evidence, rather than to its admissibility."

279. *United States v. 10.48 Acres of Land*, 621 F. 2d 338, 339 (9th Cir. 1980); *United States v. 0.59 Acres of Land*, 109 F.3d 1493, 1498 (9th Cir. 1997); *United States v. 46,672.96 Acres of Land*, 521 F. 2d 13, 17 (10th Cir. 1975); *Transwestern Pipeline Co. v. O'Brien*, 418 F. 2d 15, 17-18 (5th Cir. 1969); *Slattery Co. v. United States*, 231 F. 2d 37, 40-41 (5th Cir. 1956); *Evans v. United States*, 326 F. 2d 827, 831 (8th Cir. 1964); *Hickey v. United States*, 208 F. 2d 269, 275 (3rd Cir. 1953), cert. denied 347 U. S. 919 (1954); *United States v. 13,255.53 Acres of Land*, 158 F. 2d 874, 877 (3rd Cir. 1946).

280. *United States v. 10.48 Acres of Land*, 621 F. 2d 338, 339-340 (9th Cir. 1980).

281. *United States v. 264.80 Acres of Land*, 360 F. Supp. 1381, 1382 (D. N. D. 1973).

282. *Nash v. D. C. Redevelopment Land Agency*, 395 F. 2d 571, 576 (D. C. Cir. 1967).
283. *United States v. 691.81 Acres of Land*, 443 F. 2d 461, 462-463 (6th Cir. 1971).
284. *Nash v. D. C. Redevelopment Land Agency*, 395 F. 2d 571, 575 (D. C. Cir. 1967).
392. See Section B-18 of these Standards.
393. *The Appraisal of Real Estate*, 11th ed. (Chicago: Appraisal Institute, 1996), 27.
394. *Ibid.*, 171.
395. *Ibid.*, 410.
396. See Section B-4 of these Standards.
397. See Section B-20 of these Standards.
398. See Section B-10 of these Standards.
399. To the extent that the agency approves the organization's selection of an appraiser, assists in the development or provides the appraiser's instructions, and actually reviews the organization's appraisal before an offer to purchase is made.
400. See Section D-6 of these Standards in this regard.
408. See Section B-13 of these Standards for a discussion of the legal basis for the unit rule.
409. *United States v. 91.90 Acres of Land*, 586 F. 2d 79, 87 (8th Cir. 1978), cert. denied, 441 U. S. 944 (1979).
410. *Ibid.*
411. *United States v. Land in Dry Bed of Rosamond Lake*, 143 F. Supp. 314, 322 (S. D. Cal. 1956).
412. Guide Note 6, "Reliance on Reports or Information Prepared by Others," *Guide Notes to the Standards of Professional Appraisal Practice* (Appraisal Institute, 1991, amended 1/16/93). See also, Section D-4 of these Standards.
413. *The Dictionary of Real Estate Appraisal*, 3rd ed. (Chicago: Appraisal Institute, 1993), 72.
414. *J. D. Eaton, Real Estate Valuation in Litigation*, 2nd ed. (Chicago: Appraisal Institute, 1995), 59.
415. *Cloverport Sand & Gravel Co., Inc. v. U. S.*, 6 Cl. Ct. 178, 189 (1984).
416. *Foster v. U. S.*, 2 Cl. Ct. 426, 448 (1983).
417. For a general discussion of the application of the sales comparison approach, see Section A-17 of these Standards.
418. *Cloverport Sand & Gravel Co., Inc. v. U. S.*, 6 Cl. Ct. 178, 188 (1984).
419. *Ibid.*, 191.
420. *United States v. 47.14 Acres of Land*, 674 F. 2d 722, 726 (8th Cir. 1982).
421. *Whitney Benefits v. U. S.*, 18 Cl. Ct. 394, 408 (1989); *Foster v. U. S.*, 2 Cl. Ct. 426, 448-449 (1983).
422. See Sections A-15 and B-8 of these Standards for discussion of the development approach.
423. This factor can have a significant impact on the value of mineral property because the time lag between the effective date of an appraisal and the projected date upon which all studies have been completed, all permits issued, all construction completed, and an actual income stream can be generated may be extended.
424. e.g., probability weighted scenarios, Monte Carlo analysis, marketing uncertainty analysis, timing of development analysis.
425. For a discussion of market extraction of discount rates, see The American Society of Farm Managers and Rural Appraisers' course material for "Advanced Resource Appraisal" -A-34, pp. m-1 -m-21, (1998).
426. *United States v. Certain Interests in Property in Monterey County, Cal.*, 186 F. Supp. 167, 170 (N. D. Cal. 1960), aff'd, 308 F. 2d 595 (9th Cir. 1962). See also *United States v. Leavell & Ponder, Inc.*, 286 F. 2d 398, 407 (5th Cir. 1961), cert. denied, 366 U. S. 944; *United States v. 158.76 Acres of Land*, 298 F. 2d 559, 561 (2nd Cir. 1962).

Real World Comparable Sales Analysis

An introduction to how a comparable sales approach can go terribly awry when used inappropriately. The data that follows has hopefully been purged of items that would allow actual property or appraisal identification.

The subject property is comprised of eight (8) valid unpatented association placer mining claims containing

about 312 acres (m/l) with a proven/probable gold reserve of between 1.6 MBCY at 0.025 recoverable fine ounces of gold per BCY by the BLM validity examiner or about 1.3 MBCY at 0.015 recoverable fine ounces of gold per BCY by the property owners placer mining engineer. The property had been profitably producing from 1,600 to 3,800 ounces per year for the three years before forced shutdown. The expected mine life at an average production rate of 2,700 ounces per year would have been seven (7) to 15 years.

Analysis of Identified Mineral Property Transactions

This appraiser was supplied with market information on mineral property transactions compiled by the Government's contract appraiser, ORM. Over an eight year period, ORM had apparently conducted an extensive search for what was referred to as "comparable mineral property transactions". However, none of ORM's market transactions included local, to the subject, mining claims. Since the 1985 court injunction and NPS' subsequent regulatory practices effectively eliminated any market activity for local mining claims, there were no potentially comparable transactions from the local mining district which would be useful in a retrospective appraisal. Since there are no comparable sales from the local area can any of the identified transactions be a true comparable sale except for a prior sale of the subject property.

Placer gold properties are only similar to each other in that they contain some quantity of placer gold in the ground. The difficulties associated with any two placer gold properties having a high degree of similarity for which small and quantifiable adjustments can be made was demonstrated by the an older mining operation by Carrington as it moved upstream on Caribou Creek. It was noted that significantly different mining results were obtained from lower, middle, and upper Caribou Creek.

ORM's transactions lists contain both large public mining company transactions and significantly smaller private party transactions. Large public mining company transactions totaled 146 and ranged in age from 1985 through 1998. Private party transactions on the ORM list totaled 82 and ranged in age from 1976 through 1998. The Transactions List for private sales shows identified property sales and mining leases and is reproduced as Table 1 below and the number of transactions identified by year is summarized in the table.

Table 1 Summary of Transaction Dates and Number of Sales

Year	Public	Private	Year	Public	Private
1976	---	1	1988	2	2
1977	---	0	1989	4	2
1978	---	1	1990	11	3
1979	---	0	1991	8	8
			1992	13	10
1980	---	0			
1981	---	1	1993	22	8
1982	---	0	1994	27	2
1983	---	1	1995	19	11
1984	---	3	1996	16	9
			1997	20	6
1985	3	4			
1986	3	5	1998	10	3
1987	8	2	Total	146	82

As was discussed in the *Real Estate and Placer Gold Property Market Segments* section of the applicable appraisal report, large publicly traded international mining companies operate in a completely different market than the small scale property market segment. Moreover, interpreting transactions from financial statements addressing the going concern value of large, publicly held mining companies can result in distorted valuation of their mineral property assets. It is therefore inappropriate to rely on transactions involving publicly traded mining companies as a basis for estimating retrospective fair market value of small, closely held placer claims such as the subject property. All of the below transactions were apparently vetted for use by the NPS appraisal reviews in their ongoing condemnation actions against mining claim owners and operators in relation to the July 1985 case *Northern Alaska Environmental Center v. Hodel*.

In this appraiser's opinion the relevant time frame for analyzing potentially comparable transactions would end with the retrospective date of valuation, 31 January 1992. Transactions occurring after that date may be based on market information that would not have been available to

potential purchasers and sellers at that time. A transaction-by-transaction analysis of the 33 ORM identified sales from their Transaction List from 19 November 1976 through 21 December 1991, is presented below and is summarized in the Tables 2 and 3 at the end of this section of the presentation. Analysis has been confined to the available transactions records and/or notes to them.

Perhaps the most important point to be made in this presentation is that simply because a transaction occurred does not make it a "comparable sale"! Firstly, it *must* be an open market, arms-length, voluntary sale and, secondly, as the court noted in *United States v. 190.71 Acres of Land*, 300 F.2d 52 (7th Cir. 02/14/1962), "the Government appears to concede that proof of comparability must be made before other sales can be employed for the purpose of determining compensation of the property to be taken". In other words, there must be a high degree of similarity between the subject property and the sale that it is being compared to. There is no presumption of similarity, it is the appraiser's task to clearly and convincingly prove this similarity in the report if a sale is to be a credible comparable.

11/19/76 Transaction 1: Unknown Grantor to Unknown Grantee; Both grantor and grantee were listed as confidential; Nonlocal mining district; No original transfer documents were located in the records supplied to this appraiser; All information is from ORM appraisal report; apparently mined in early 1980's, but no quantities reported, was not in production on retrospective date of value, and apparently mined out; 8, 20 acre unpatented federal placer claims for 160 acres or about one-half the size of appraised property; grantor was selling off peripheral parcels of a larger property, sale may reflect less than normal consideration. Transaction predates date of value by 16 years.

06/05/78 Transaction 2: Blackacre to Whiteacre, Nonlocal mining district; Only quit claim deed without indicated sale price in records supplied to this appraiser; Quit claim deed shows "\$100.00 (one-hundred dollars) and other good and valuable consideration", but the ORM Transaction List indicates sale price of \$10,000; A Motion to Confirm Sale in October 1984 for a resale by Whiteacre to Blueacre of 45 of the claims indicates a price of \$54,000; Sale included buildings and miscellaneous mining equipment; 56 unpatented placer mining claims totaling about 1,120 acres, about 3.5 times size of subject; Apparently not a producing placer gold property at time of sale. Transaction predates date of value by 14 years.

06/01/81 Transaction 3: Blackacre to Whiteacre; Nonlocal mining district; Bill of sale dated 7 October

1980, the 1 June 1981 date was date of second payment with final payment due on 1 October 1981; No indication that sale was verified; 10, 20 acre mining claims totaling about 200 acres, about 64% of size of subject; Claims subsequently leased to Blueacre on 10 February 1986; Basically an installment sale with no explicit interest rate; Apparently not a producing placer gold property at time of sale. Transaction predates date of value by 12 years.

04/02/84 Transaction 4: Blackacre to Whiteacre Nonlocal recording district; "Grantors retained a first option, right of refusal to lease or purchase if Grantee chooses to do so at a fair market value of \$300.00 per acre;" uncertainty as to actual sale or only a purchase option; Date of sale on quit claim deed is 20 April 1984; Single page quit claim deed is only record available to this appraiser; 3, 40 acre association placer claims, 120 acres, about 40% size of subject; Apparently not a producing placer gold property at time of sale. Transaction predates date of value by eight years.

05/02/84 : Transaction 5: Nonlocal mining district; Blackacre to Whiteacre, subsidiary of Big Canadian Mining Corp; No original transfer documents were located in the records supplied to this appraiser; All information is from ORM appraisal report; 46, unpatented federal placer claims, 1,520 acres, about 4.8 times the size of subject; "The property was optioned 5 July 1983, then leased and purchase completed on 2 May 1984"; estimated value of transaction was \$3,303,285.97; ORM apparently valued the transaction according to executory payment obligations in an option agreement rather than a completed sale; property purchased by large scale placer mining company to add to its existing extensive land holdings; Large company buyer assembling an extensive land holding from smaller sellers could have had unequal bargaining power; Not representative sale of small placer gold producing property to a small owner-operator. Transaction predates date of value by eight years.

08/13/84 Transaction 6: Blackacre to Whiteacre; Nonlocal mining district; No original transfer documents were located in the records supplied to this appraiser; All information is from ORM appraisal report; 14, 20 acre unpatented federal placer claims, 280 acres, about 90% size of subject; Property was optioned 13 August 1984 and option was exercised on 17 September 1986, but agreed upon option price is not shown in report; ORM apparently valued the transaction according to executory payment obligations in an option agreement rather than a completed sale; property purchased by large scale placer mining company to add to its existing extensive holdings. Large company buyer assembling an extensive land holding from smaller sellers could have had unequal

bargaining power; Not representative sale of small placer gold producing property to a small owner-operator. Transaction predates sale by eight years.

10/01/84 Transaction 7: Blackacre to Whiteacre; Only single page quit claim deed available to this appraiser; No indication that sale was verified; No motivation for sale indicated; Apparently 2, 20 acre unpatented placer claims, 40 acres, about 13% size of subject; Note on deed indicates claims have no access; Apparently not a producing placer gold property at time of sale. Transaction predates date of value by about seven years.

04/15/85 Transaction 8: Blackacre to Whiteacre, et al as TIC; Only two page quit claim deed available to this appraiser; No indication sale(s) was verified; No motivation for sale is indicated even though there are three other quit claims deeds and this is the third quit claim deed to Whiteacre, the other is to et al; Whiteacre apparently purchased three 40 acre unpatented placer mining claims for prices ranging from \$10,000 to \$25,000; Listed sale date is for purchase of Claim #22 claim by trading it back to Blackacre in exchange for Claim #25 which they sold to Whiteacre 11 days previously; Whiteacre also retained a First Rights of Refusal for purchasing the Claim #25; Apparently not a producing placer gold property at time of sale. Transaction predates date of value by about seven years.

04/27/85 Transaction 9: Blackacre to Whiteacre, Nonlocal mining district; Only one page quit claim deed for Claim I available to this appraiser, All other information is from ORM appraisal report; Report indicates that this sale is for seven claims; Price is shown as \$7,000, but deed is too illegible to confirm; ORM report notes "neither party to the transaction could be located for verification", therefore, motivation for sale is unknown, but this transaction was apparently actually used as a comparable sale in two other appraisal reports; 7, 20 acre unpatented federal placer claims, 140 acres, about 45% size of subject; Apparently not a producing placer gold property at time of sale. Transaction predates date of value by about seven.

06/13/85 Transaction 10: Blackacre to Whiteacre, Nonlocal mining district; No indication sale was verified, therefore no motivation for sale; The Transaction List indicates that 21 claims are involved in this transaction, but the quit claim deed shows 56 claims; It is also not noted in the Transaction List that Blackacre apparently only owns a 1/2 undivided interest in the Claims 1 - 28 and Additional claims and a 3/4 undivided interest in the Additional Claims 1 - 14 and A - F claims, the remaining 1/4 interest in the Additional claims may still be held by Blueacre; It is also not noted on the Transaction List that Blackacre purchased a 1/2 interest in the Claims 1 - 28

claims approximately 2 years previously; Acreage is shown as 2,280 which is about 7.3 times the size of the subject; Apparently not a placer gold producing property at time of sale. Transaction predates date of value by about seven years.

07/22/85 Transaction 11: No original transfer documents were located in the records supplied to this appraiser and no other information available; Transaction List shows 1 patented claim, 18.57 acres, about 6% of size of Subject property; Transaction List shows sale price of \$22,282, actual price or calculated estimate. Transaction predates date of value by about seven years.

01/16/86 Transaction 12: Blackacre to Whiteacre; Nonlocal mining district; No original transfer documents were located in the records supplied to this appraiser; All information is from Alaska DOT Comparable Bare Land form and ORM appraisal report; 12 patented placer claims; Size is reported as 1,965 acres, about 6.3 times size of subject; ORM Transaction List shows calculated estimate of sale price of \$866,393 while Alaska DOT form shows \$1,160,000; Purchase motivation, "Whiteacre purchased this property with the intent of offering gold mining vacations and recreational opportunities to tourists". Obviously different highest and best use and transaction predates date of value by about six years.

02/21/86 Transaction 13: Blackacre (large mining company) to Whiteacre (individual), Location unknown; No indication of verification; No motivation for sale; Statutory quit claim deed appears to indicate that all 37 individual claims are patented (17 mineral surveys) while Transaction List shows 17 patented claims and 20 unpatented claims; Transaction List shows 872.4 acres, about 2.8 times size of subject; Deed does not disclose sale price, shown on List as \$991,688; Deed of Trust shows a principal amount of \$416,667.00 at 10% per annum; Apparently for lode gold mining; Claims are very close to large metropolitan area and could have other highest and best use. Transaction predates date of value by about six years.

04/18/86 Transaction 14: No original transfer documents were located in the records supplied to this appraiser and no other information is available. Transaction predates date of value by about six years.

05/27/86 Transaction 15: No original transfer documents were located in the records supplied to this appraiser and no other information is available. Transaction date predates date of value by about six years.

07/01/86 Transaction 16: Blackacre to Whiteacre, Nonlocal mining district; 1, patented mining claim of 17.025 acres, about 5.5% size of subject property; Property was subdivided for more conventional real estate development; All information State of Alaska DOT Comparable Bare Land form; Shows a deed of trust and note bearing interest at 11% with principal of \$28,000. Transaction date predates date of value by about six years.

03/06/87 Transaction 17: No original transfer documents were located in the records supplied to this appraiser and no other information is available. Transaction date predates date of value by about five years.

05/18/87 Transaction 18: Blackacre (individual) to Whiteacre (large mining company). Nonlocal mining district; 2 patented mining claims with 39.89 acres, about 12.8% size of subject; Grantee intends to use property as a location for entertaining prospector tour groups, different highest and best use; All information appears to be from State of Alaska DOT Comparable Bare Land form. Transaction date predates date of value by about five years.

05/17/88 Transaction 19: Blackacre (individual) to Whiteacre (company): Nonlocal mining district; Not a sale of mining claims; Default and Sale Deed of Trust Foreclosure for leasehold interest only in 11 unpatented mining claims; Price was for exact amount owed on the obligation; Apparently not a producing placer gold property at time of sale; Also has a deed of trust and installment note for leasehold and machinery and equipment for \$325,000 at 8% per annum. Transaction predates date of value by about four years.

08/31/88 Transaction 20: Apparently Blackacre to Whiteacre; No quit claim deed or other original sale documents; All information from Alaska DNR files; Verification; Alaska DOM Case File Abstract shows 2 August 1991 transfer date and purchaser's name as not-Whiteacre and sale price of \$2,000; Verification and motivation; 4, 40 acre unpatented claims, 160 acres, about one-half size of subject property; Handwritten note indicates claims used for 2 inch suction dredge with 8 inch sluice box recreational mining. Not same highest and best use and transaction predates date of value by about four years to about six months.

01/01/89 Transaction 21: No indication of seller or buyer: Both lessor and lessee were listed as confidential; Nonlocal mining district; Not a sale of mining claims, it is a mining lease; No original lease documents were located in the records supplied to this appraiser; All information is from ORM appraisal report; Apparently

mined in early 1980's prior to this owner's purchase, but no quantities reported; Property had drill indicated reserves at time of mining lease. Transaction date predates date of value by about three years.

12/08/89 Transaction 22: Blackacre to Whiteacre; Nonlocal area; Have quit claim deed with no price information and deed of trust for \$275,000, but no confirmation that this is total price; Promissory note not part of data package; Price shown in Transaction List is \$200,338, indicating a calculated estimate; Size is shown as 1,800 acres, about 5.8 times size of subject; Apparently not a placer gold producing property at time of sale. Transaction date predates date of value by about three years.

05/02/90 Transaction 23: No original transfer documents were located in the records supplied to this appraiser and no other information available; Transaction List indicates 14, 20 acre claims, 280 acres, about 90% size of subject property; Transaction Lists shows a sale price of \$91,129, indicating a calculated estimate. Apparently not a placer gold producing property at time of sale. Transaction date predates date of value by about 19 months.

07/03/90 Transaction 24: No original transfer documents were located in the records supplied to this appraiser. Handwritten notes in Transaction 26 data (see below) indicate that these 5 state claims were acquired for their lode minerals related to XYZ Lode Mine, a confirmed sale price of \$75,000; 5, 20 acre State of Alaska claims, 100 acres, about 32% of size of subject property. Not producing at date of transaction. Transaction date predates date of value by about 18 months.

09/14/90 Transaction 25: Both grantor and grantee listed as confidential; No original transfer documents were located in the records supplied to this appraiser; All other information is from ORM appraisal report; Price is reported as \$100,000, but no way to confirm; 7, 20 acre Alaska state claims, 140 acres, about 45% of size of subject property; Gold fineness 800-820, subject property is about 670 fine; Property has jewelry grade gold, subject does not; Owner mined in subject property area prior until 1985 court injunction; Apparently not a placer gold producing property at time of sale. Transaction date predates date of value by about 16 months.

01/12/91 Transaction 26: Blackacre (individual) to Whiteacre (mining company), Shown on mining company records as an option to purchase for \$75,000, \$100 option payment, handwritten notes indicate option exercised; 4, 40 acre State of Alaska claims purchased

for their lode minerals for Ryan Lode Mine; Transaction List does not indicate the 3.5% NSR royalty that continues on the property after the purchase, indicated option price is not total consideration. Apparently not producing at time of transaction, transaction date predates date of value by about one year.

03/19/91 Transaction 27: Blackacre to Whiteacre, et al, Nonlocal mining area area; One page quit claim deed; No indication that this sale was confirmed; No motivation for sale; Two State of Alaska claims, 80 acres, about 25% size of subject property; Apparently not a producing placer gold property at time of sale. Transaction date predates date of value by about nine months.

05/29/91 Transaction 28: This is actually two sales combined into one on the Transaction List.

05/29/91(1) Transaction 28 (1): Blackacre to Whiteacre 1 and Whiteacre 2, Nonlocal mining district; One page quit claim deed; No indication sale was confirmed; No motivation for sale; One State of Alaska claims, 40 acres, about 12.8% size of subject property; This sale and 05/29/91(2) below are shown in the Transaction List as a single transaction even though buyers are different; Apparently not a producing placer gold property at time of sale. Transaction date predates date of value by about eight months.

05/29/91(2) Transaction 28 (2): Blackacre to Whiteacre 3 and Whiteacre 4: Nonlocal mining district; One page quit claim deed; No indication sale was confirmed; No motivation for sale; One State of Alaska claims, 40 acres, about 12.8% size of subject property; This sale and 05/29/91(1) above are shown in the Transaction List as a single transaction even though buyers are different; Apparently not a producing placer gold property at time of sale. Transaction date predates date of value by about eight months.

06/05/91 Transaction 29: Blackacre 1 and 2 to Whiteacre, Nonlocal mining area; Statutory quit claim deed and deed of trust; Quit claim deed is silent as to sale price, deed of trust indicates promissory note for \$35,000, but there is no indication that sale was verified or that the note represents the total consideration; 1 federal unpatented placer claim, 20 acres, about 12.8% size of subject property; Apparently not a producing placer gold property at time of sale. Transaction date predates date of value by about seven months.

06/06/91 Transaction 30: Blackacre (U.S. Trustee) to Whiteacre Mining Company; Some records contained in data package; All other information is from ORM

appraisal report; Date of sale is as shown in Transaction List, 9 May 1991 in report body, and 30 June 1992 as "judges (sic) approval of sale"; From the report, "The record shows a deed of trust dated February 1977 for \$346,000 Trustor Blueacre, a second deed of trust for \$53,000 [no date shown] includes an additional 40 acre placer claim with Blueacre as Trustor . . . Finally, on 9 May 1991, the record shows a Chapter 7 bankruptcy estate sale, Blueacre, debtor . . . for a total of 460 acres more or less. The sale price is \$27,600 cash and the purchaser was Whiteacre Mining Company . . . owned by Blueacre's brother"; In addition to the above, apparently not a producing placer gold property at time of sale; Blueacre's two deeds of trust for \$25,500 and \$27,500 to Redacre carry an 18% interest rate. Transaction date predates date of value by about seven months.

10/18/91 Transaction 31: Blackacre, three joint tenants, to Whiteacre Land Bank; Handwritten notes, "Negotiated with claim holders and purchased "nuisance value" [non-economic motivation] of claims under implied threat of [USFS] validity exam, obviously not same highest and best use; Nuisance value was \$495,000; 171, 40 acre claims, 6,840 acres (shown as 6,500 on Transaction List), about 22 times as large as subject property; Not a producing placer gold property at time of sale. Transaction date predates date of value by about three months.

11/21/91 Transaction 32: A and B Blackacre to Whiteacre; Blackacre notifies Whiteacre of his deficiency (\$46,649.28) as contributing owner of 16 State of Alaska claims on 20 March 1990, and then on 21 November 1991, Blackacre quit claims for \$1,000, four of these co-owned claims to Whiteacre(?); Only a one-half undivided interest transferred(?); The dispute between Blackacre and Whiteacre is not mentioned in the Transaction List or in the report; Claim size, 160 acres, about 51% of size of subject property; Apparently not a producing placer gold property at time of sale. Transaction date predates date of value by about two months.

12/21/91 Transaction 33: Blackacre to Whiteacre Mortgage Investors.; Deed of trust to secure payment of a Confession of Judgment Without Action for \$43,038.40; Actually a sale(?); If actually a sale motivation is questionable; No indication of verification; 3, 20 acre lode claims, 1, 20 acre federal placer claim, 3, 40 acre State of Alaska claims, 200 acres, about 64% of subject size; Apparently not a producing placer gold property at time of sale. Transaction date predates date of value by about one month.

The above constitutes a summary analysis only of ORM's list of placer and lode gold property transactions occurring in Alaska in relation to the subject property. All of the above transactions were apparently vetted for use by the NPS in their ongoing condemnation actions against mining claim owners and operators in relation to the July 1985 case *Northern Alaska Environmental Center v. Hodel*. Following are salient comments on the potential comparability of the listed transactions:

1) None of ORM's transactions clearly identified a producing placer gold property at the transaction date. The operating and production history for many of the properties included on the transactions list is not disclosed. In this appraiser's professional opinion, identifying producing properties is probably the most important criterion in applying the market transactions approach to valuation of the subject property since it was producing gold at the time it was shut down by government order.

2) No original documentation was provided for fourteen of the transactions (Nos. 1, 5, 6, 11, 12, 14, 15, 16, 17, 18, 20, 21, 23, 25). An additional 11 of the listed transactions, at least, appear to have significant questions concerning transaction details, price, motivation, and basic verification issues. Without the threshold of basic information noted in almost all appraisal textbooks, including the Yellow Book, describing the transaction and its attributes, any meaningful analysis of comparability is precluded.

3) Twenty-eight (28) of the listed transactions are not comparable with the subject property according to a size criterion. The subject property is about 312 acres in size. In this appraiser's opinion a plus or minus 20% size variation would still bear a reasonable similarity as far as the quantity of potential resources or reserves that could be contained in a similar property. This indicates a lower size limit of about 250 acres and upper size limit of around 375 acres. Twenty-one (21) of the listed transactions had sizes of 200 acres or less and seven (7) of them had sizes greater than 500 acres.

4) Four of the transactions involved purchase of ground for assemblage of extensive land holdings by large mining firms which can involve significantly unequal bargaining power in relation to smaller mining claim owners (Nos., 5, 6, 24, 26). The comparability of these four transactions is therefore questionable on a motivational criterion.

5) The property interest which is the subject of conveyance is a fundamental criterion for applying the direct sales comparison approach to valuation. Only

those transactions involving a full conveyance of the mineral estate in unpatented placer mining claims should be considered comparable according to this criterion. One transaction listed as a sale was actually a mining lease (No. 21). An additional four of the listed transactions involved partial interests or only a leasehold interest (Nos., 10, 19, 26, 32). An additional seven of the transactions involved patented mining claims (Nos., 11, 12, 13, 14, 16, 17, 18), when the subject is only unpatented mining claims. Five of the transactions involved options to purchase or first refusal rights as of reported date of sale (Nos., 4, 5, 6, 8, 26).

6) Four of the listed transactions suggest purchaser motivation for tourist-oriented enterprises, recreational mining, or nuisance concerns (Nos., 12, 18, 20, 31). Three of the listed transactions were specifically for lode, not placer, minerals, as part of a land assemblage program (Nos., 24, 26, 33). Such purchaser motivations do not qualify as bona fide comparable sales with the subject property, which was being operated and was producing gold at the date of forced shutdown.

7) Three of the listed transactions were forced sales resulting from litigation or bankruptcy filings (Nos., 19, 30, 33). Forced sales are not voluntary, open-market transactions conducted without coercion such that the "willing seller willing buyer standard" valuation standard can be verified. They are not at all acceptable according to general appraisal practices as well as according to the Yellow Book.

According to the *Uniform Standards of Professional Appraisal Practice (USPAP)* and the *Uniform Appraisal Standards for Federal Land Acquisition (UASFLA)*, the Yellow Book, it is this minerals appraiser's opinion, that none of the transactions on ORM's list indicate sufficient similarity to the subject property in order to reasonably apply the direct sales comparison method of property valuation

Table 2 ORM/NPS Transactions List

Date	Lode	Placer	Oss Proven and Probable	Oss Resources	Oss Anecdotal	Acres	Sales Price	# Pat. Claims	# Unpat. Claims	# State Claims	\$/Oz	\$/Acre
11/19/76		X				160	75,000.00		8			468.75
06/05/78		X				1,120	10,000.00		56			8.93
06/01/81		X				200	10,000.00		10			50.00
04/02/84		X				120	36,000.00		3			300.00
05/02/84		X	70,603			1,520	3,306,285.97		46		46.83	2,175.19
10/01/84		X				40	500.00		2			12.50
08/13/84		X	31,542			280	325,000.00		14		10.30	1,160.71
04/15/85		X				40	10,000.00		1			250.00
04/27/85		X				140	7,000.00		7			50.00
06/13/85		X				2,280	19,000.00		21			8.33
07/22/85		X				18.57	22,281.60	1				1,200.00
01/16/86		X				1,965	866,393.00	12				440.91
02/21/86		X				872.40	991,393.00	17	20			1,136.71
04/18/86		X				31.71	63,410.00	1				2,000.00
05/27/86		X	N.A.			26	46,000.00		1		N.A.	1,769.23
07/01/86		X				17	35,000.00	1				2,055.80
03/06/87		X				17.15	37,730.00	1				2,200.00
05/18/87		X				39.89	50,000.00	1				1,253.45
05/17/88		X				440	69,559.44		11			158.09
08/31/88		X				160	2,000.00			4		12.50
01/01/89		X			14,500	280	252,593.28		14		17.42	902.12
12/08/89		X				1,800	200,337.50		8	22		111.30
05/02/90		X				280	91,129.00		14			325.46
07/03/90	X					100	75,000.00			5		750.00
09/14/90		X			30,000	140	100,000.00			7	3.30	714.29
01/12/91	X					160	75,100.00			4		469.38
03/19/91		X				80	20,000.00		2			250.00
05/29/91		X				80	2,000.00			2		25.00
06/05/91		X				20	35,000.00		1			1,750.00
06/06/91		X				460	27,600.00		16			60.00
10/18/91		X				6,500	495,000.00		177			76.15
11/25/91		X				160	1,000.00			4		6.25
12/21/91	X	X				200	43,038.40		4	3		215.19

Table 3 Summary Analysis of ORM/NPS Transactions

No	Date	Acres	Comments - Comparability Concerns
1	11/19/76	160	NC-NP Size, peripheral claim sale, age of sale
2	06/05/78	1,120	NC-NP Size, limited data, age of sale, price, verification
3	01/01/81	200	NC-NP Size, very limited data, age of sale and date
4	04/02/84	120	NC-NP Grantor retains right of first refusal - sale?
5	05/02/84	1,520	NC-NP Option to purchase, assemblage, size, bargaining power
6	08/13/84	280	NC-NP Option to purchase, assemblage, size, bargaining power
7	10/01/84	40	NC-NP Size, motivation for sale, questionable, access
8	04/15/85	40	NC-NP Single claim trade or option? Motivation
9	04/27/85	140	NC-NP Size, price, verification
10	06/13/85	2,280	NC-NP Size, price, partial interest
11	07/22/85	18	NC-NP Size, no original transaction records
12	01/16/86	1,965	NC-NP Size, patented, recreational tourist activities
13	02/21/86	872	NC-NP Size, patented claims, price
14	04/18/86	32	NC Size, no transaction documents available
15	05/27/86	26	NC Size
16	07/01/86	17	NC-NP Size, patented claims
17	03/06/87	17	NC Size, no transaction documents available
18	05/18/87	40	NC-NP Size, patented claims, recreational gold panning
19	05/17/88	440	NC-NP Size, leasehold interest, judicial action
20	08/31/88	160	NC-NP Size, 2" suction dredge, 8" sluice box recreational mining
21	01/01/89	280	NC-NP Not a sale, a mining lease
22	12/08/89	1,800	NC-NP Size, price, verification
23	05/02/90	280	Price, no transaction documents available
24	07/03/90	100	NC-NP Size, acquired for lode minerals
25	09/14/90	140	NC-NP Size, price, gold fineness
26	01/12/91	160	NC-NP Size, acquired for lode minerals
27	03/19/91	80	NC-NP Size, motivation, verification
28	05/29/91	80	NC-NP Size, actually two sales reported as one
29	06/05/91	20	NC-NP Size, price, motivation, verification
30	06/06/91	460	NC-NP Size, bankruptcy sale, brother was purchaser
31	10/18/91	6,500	NC-NP Size, nuisance value purchase
32	11/25/91	160	NC-NP Size, co-owner dispute, settlement, only one-half interest
33	12/21/91	200	NC-NP Size, settlement for judgment

NC: Probably not truly a comparable sale

NP: Not a placer gold producing property

Size: Size difference between transaction and subject may be too great

Table 4 Analysis of ORM/NPS Transactions

No	Date	Oper Status	Full Perf	Open Mkt	Full Conv	Sales Terms	Fully Verify	ORM Comp
1	11/19/76	NP	Unk	Unk	Unk	Unk	Unk	Yes
2	06/05/78	NP	Unk	Unk	Unk	Unk	Unk	No
3	01/01/81	NP	Unk	Unk	Unk	No	No	No
4	04/02/84	NP	Unk	Unk	No	Unk	Unk	No
5	05/02/84	NP	Yes	Unk	Unk	Yes	No	Yes
6	08/13/84	NP	Yes	Unk	Unk	Yes	No	Yes
7	10/01/84	NP	Unk	Unk	Yes	No	No	No
8	04/15/85	NP	Yes	Unk	Unk	No	No	No
9	04/27/85	NP	Yes	Unk	Yes	No	No	Yes
10	06/13/85	NP	Yes	Unk	No	Unk	Unk	No
11	07/22/85	NP	Unk	Unk	Unk	Unk	Unk	No
12	01/16/86	NP	Yes	Yes	Yes	Yes	Yes	Yes
13	02/21/86	NP	Unk	Unk	Unk	Unk	Unk	No
14	04/18/86	NP	Unk	Unk	Unk	Unk	Unk	No
15	05/27/86	Unk	Unk	Unk	Unk	Unk	Unk	No
16	07/01/86	NP	Yes	Yes	Yes	Yes	Yes	No
17	03/06/87	NP	Unk	Unk	Unk	Unk	Unk	Unk
18	05/18/87	NP	Yes	Yes	Yes	Yes	Yes	Yes
19	05/17/88	NP	Yes	No	No	Yes	Unk	No
20	08/31/88	NP	Unk	Unk	Unk	Unk	Unk	No
21	01/01/89	NP	Yes	Yes	No	Yes	Unk	Yes
22	12/08/89	NP	Yes	Yes	Yes	Unk	Unk	No
23	05/02/90	NP	Unk	Unk	Unk	Unk	Unk	No
24	07/03/90	NP	Yes	Unk	Yes	Yes	Yes	No
25	09/14/90	NP	Unk	Unk	Unk	Unk	Unk	No
26	01/12/91	NP	Unk	Unk	No	Unk	Unk	No
27	03/19/91	NP	Unk	Unk	Unk	Unk	Unk	No
28	05/29/91	NP	Yes	Unk	Yes	Unk	Unk	No
29	06/05/91	NP	Yes	Unk	Yes	Unk	Unk	No
30	06/06/91	NP	Yes	No	Yes	Yes	Unk	Yes
31	10/18/91	NP	Yes	No	No	Yes	Yes	Yes
32	11/25/91	NP	Yes	No	No	Unk	Unk	Yes
33	12/21/91	NP	Yes	No	Unk	Yes	Unk	No

Oper Status: Operating status of property on date of sale, P - Placer gold producing, NP - Not Producing
Full Perf: Was transaction fully performed through closing? Unk - Unknown
Open Mkt: Did transaction meet open market - arm's length criteria?
Full Conv: Did transaction convey the entire mineral right?
Sales Terms: Is all information about transaction terms, conditions, and reason for sale available?
Fully Verify: Do available records indicate verification of transaction?
ORM Comp: Was transaction used as a comparable sale in ORM reports?



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Mineral Business Appraisal is a Reno, Nevada, based mining-geology consulting firm specializing in valuation, appraisal, evaluation, due diligence and litigation related engagements of mineral properties and mining operations for mineral property owners, mining operators, attorneys, accountants, and investors. Mineral Business Appraisal's geological, valuation, appraisal, and mining consulting have been finding solutions to your questions about the value of mineral properties, mining rights, mining operations and interests, mining leases, and mineral production royalties for investment, equity and debt financing, taxation and litigation since 1986. Mineral Business Appraisal is independent and committed to providing you with practical, time, and cost effective resolution to your mineral property and mining operation concerns. Mineral Business Appraisal is your resource for solid mineral property and mining business solutions.

Mineral Business Appraisal's Principal Consultant, Michael R. Cartwright, is an exceptionally well qualified independent mineral property and mining business valuation professional who has been developing his mining industry analysis and valuation skills in surface and underground mining operations for over thirty years. Michael's diverse assignments have included: mineral property appraisal, mineral production royalty valuation, and mining geology for surface and underground mine exploration, development and production; debt and equity financial and investment analysis, and; mineral commodity, property, and mining business market analysis. Prior to establishing Mineral Business Appraisal, Michael was Chief Geologist for two major international mining company operations: deep underground uranium development and production, and a joint venture managing both exploration and mill feed and heap leach ore grade and quality control for three operating mines. He was the original Consultant-in-Charge of Royalty Valuation and Acquisitions for Euro/Franco-Nevada Mining Corporations, now Newmont Mining Corp, major public companies specializing in purchasing and creating mineral property royalties. Michael's unique combination of business maturity and broad technical experience can only be partially demonstrated by his credentials.

- **BS Geology Mackay School of Mines and Master of Business Administration University of Nevada**
- **Registered Professional Geologist (AZ, CA, ID, NE, NV, OR)**
- **Certified Minerals Appraiser - American Institute of Minerals Appraisers**
- **Accredited Senior Appraiser, Mines and Quarries - American Society of Appraisers (1995-2003)**
- **Certified General Real Property Appraiser (CA, NE, NV)**
- **States: AK, AL, AR, AZ, CA, CO, CT, FL, GA, ID, LA, ME, MT, NE, NV, NM, NY, NC, OK, OR, SC, TN, TX, WA, WI, WY**
- **Foreign: Australia, Canada, Dominican Republic, Guam, Guyana, Liberia, Mexico, Papua New Guinea**
- **Minerals: Precious-Base-Platinum Group Metals, Aggregates, Industrial Minerals, Geothermal**
- **Competent/Qualified Person (CQP) for Reports/Disclosures: Australia, Canada, S. Africa exchanges**
- **Admitted as an Expert in Contra Costa County, California, Superior Court**
- **Independent Mining Industry Valuation Consultant since 1986**

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