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Valuation of Minerals in Takings Cases

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ABSTRACT

It is well settled that when the government uses the power of eminent domain to take private property for a public purpose, the government is required to pay the private land owner just compensation. Just compensation is the fair market value of the property. This is a difficult determination when the property does not contain unexplored mineral deposits; it is an especially difficult determination if the property does. When attempting to place a value on an unexplored mineral deposit, appraisers turn to three main methods: (1) the comparable sales approach, (2) the cost approach, and (3) the income capitalization approach. All of these methods have their pros and cons. This article explores each method and discusses the strengths and weaknesses of each. After each method is discussed, it is applied to an actual situation in Montana and discussed in that context. The final discussion includes an analysis of which method would work best in that situation and why.

INTRODUCTION

In 1922 Justice Holmes delivered the opinion of the United States Supreme Court in *Pennsylvania Coal Co. v. Mahon*.[1] The court found that a Pennsylvania regulation requiring the coal companies to leave enough coal in place in order to reduce surface subsidence was a taking requiring just compensation.[2] This was the first case to recognize that a regulation may constitute a taking of private property under the Fifth Amendment of the United States Constitution.[3]

Since *Pennsylvania Coal*, courts have been battling with the question of how to determine just compensation in regulatory takings cases.[4] One of

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1. 260 U.S. 393 (1922).

2. *Id.* at 415-16.

3. *Id.* The takings clause of the Fifth Amendment of the United States Constitution reads, "nor shall private property be taken for public use, without just compensation." U.S. CONST. amend. V.

4. *See, e.g.*, Lucas v. S.C. Coastal Council, 505 U.S. 1003 (1992); Keystone Bituminous Coal Ass'n v. De Benedictis, 480 U.S. 470 (1987); Nollan v. Cal. Coastal Comm'n, 483 U.S. 825 (1987); Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104 (1978); Village of Euclid v. Ambler

the most difficult areas in which to calculate just compensation is when a regulation restricts or eliminates a landowner's ability to develop a mineral deposit. Courts also encounter this problem when a governmental entity condemns a property containing a mineral deposit.[5]

This article will discuss the approaches courts use to value mineral deposits still in the ground. The first section will identify the various issues that arise when courts are faced with this situation. The second section will discuss methods of valuation, the sales comparison approach, the income capitalization approach, and other less common methods. This section will identify the problems associated with each of these methods. The third section will focus on a study of the McDonald Gold Project in Montana and identify problems that have arisen in other cases and might arise in that case.

I. PRELIMINARY ISSUES

In takings cases involving mineral deposits, courts face several preliminary issues before determining which valuation method to use and setting the actual value of compensation. First, a court must determine if a taking has occurred. The issue of regulatory takings is a complicated and evolving area of the law[6] that is beyond the focus of this article and will therefore not be addressed in this article. If the taking is a result of a physical occupation of the land, the court will consider it a taking per se.[7] When a court finds that a taking has occurred, the owner is due just compensation.[8] Just compensation is defined as fair market value.[9] Courts determine fair market value as "what a willing buyer would pay in cash to a willing seller."[10] In addition, any factor that a reasonable buyer or seller would reasonably consider should be included in this analysis.[11]

Once the court has determined that a taking has occurred, there are many factors to consider before it can decide which valuation method best values the deposit. These factors include, but are not limited to, whether the taking was permanent or temporary, the date of the taking, the highest and best use of the property, whether the company can economically mine the

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Realty Co., 272 U.S. 365 (1926).

5. *See generally* Robert A. Dunkelman, *Student Symposium on Oil & Gas: Consideration of Mineral Rights in Eminent Domain Proceedings*, 46 LA. L. REV. 827 (1986).

6. *See generally* cases cited *supra* note 4.

7. Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 435-36 (1982).

8. U.S. CONST. amend. V.

9. United States v. Miller, 317 U.S. 369, 374 (1943).

10. *Id.* at 374.

11. United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp. 314, 320 (S.D. Cal. 1956).

property, whether a market exists for the mineral, and the estimated annual production rate of the property. In addition, problems can arise with the qualifications of expert witnesses and with the admissibility of opinion testimony.

Whether the taking is permanent or temporary affects the calculation of just compensation. In *Yuba Natural Resources v. United States*,[12] Yuba argued that just compensation for the temporary taking of their gold mine should be the difference between the value of the gold during the taking period and the value of the gold after the taking.[13] The court rejected Yuba's argument, stating that their method would compensate them for consequential damages, which are not appropriate elements of just compensation.[14] The court concluded that the correct valuation of just compensation in a temporary taking is fair rental value for the period of the taking.[15]

The date of the taking is another area where controversy may arise. There are several possibilities for this date, including the date the regulation passed,[16] the date of service of process or summons,[17] and the date the issuing agency denied the applicant a permit to mine.[18] The date of the taking can have a substantial impact on the determination of just compensation. For example, it can be years from the date that a regulation passes until the date that an agency denies an application to mine pursuant to that regulation.

Another important decision that a court must determine is the highest and best use of the property.[19] The court will assume, without proof to the contrary, that the highest and best use of land is the use to which the owner is currently putting the land.[20] The highest and best use cannot be a speculation of future possibilities; however, owners may base it upon a reasonable probability that the owner will put the land to that use in the

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12. 904 F.2d 1577 (Fed. Cir. 1990).

13. *Id.* at 1580.

14. *Id.* at 1581-82.

15. *Id.* at 1583.

16. Whitney Benefits, Inc. v. United States, 18 Cl. Ct. 394, 406 (1989).

17. *See* Robert S. Campbell, Jr., *Condemnation of Mining Properties—Related Aspects of Just Compensation*, 15 ROCKY MTN. MIN. L. INST. 305, 314 (1969); MONT. CODE ANN. § 70-30-302 (1) (2000).

18. *See Whitney Benefits*, 18 Cl. Ct. at 407; Foster v. United States, 2 Cl. Ct. 426, 427-28 (1983).

19. INTERAGENCY LAND ACQUISITION CONFERENCE, UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITION, pt. III, § A-14 (2000), http://www.usdoj.gov/enrd/land-ack/toc.htm. *See also, e.g.*, United States v. 179.26 Acres of Land, 644 F.2d 367, 368 (1981); United States v. 1629.6 Acres of Land, 360 F. Supp 147, 152-53 (D. Del. 1973); Iske v. Omaha Pub. Power Dist., 178 N.W.2d 633, 636-37 (Neb. 1970).

20. United States v. L.E. Cooke Co., 991 F.2d 336, 341 (6th Cir. 1993).

foreseeable future.[21] In order for the court to accept testimony as to a different highest and best use, the landowner must first show (1) that he could adapt the property to the other use, (2) that the other use is reasonably probable to occur in the immediate future or within a reasonable time, and (3) that the other use would enhance the land's market value.[22] Courts are especially skeptical when the proposed highest and best use would require the landowner to invest a substantial amount of money in capital improvements.[23]

Whether or not the company can mine the deposit at an economic profit may become an issue. There are two ways in which a company could realize that they are unable to make a profit. First, they may determine that no market for the mineral exists.[24] It is well established that a landowner must prove that a market exists in order for the court to assign value to a mineral deposit.[25] The market demand cannot be speculative or conjectural.[26] The landowner must show objective support of future demand. This should include evidence on the amount of buyers and the duration for which they would purchase the mineral.[27] In addition, if the only market for the mineral is the use for which the government took the property, the landowner may not use that as evidence that a market for the mineral exists.[28]

The second possibility is that a market for the mineral exists, but the cost of extraction outweighs the expected profits, or the mineral is not of commercially marketable quality. *State Highway Commission v. Metcalf*[29] involved the valuation of a gypsum deposit.[30] The owner presented evidence that a market for gypsum existed in the area,[31] but the Highway Commission asserted that the gypsum contained so much water it was not commercially marketable.[32] In addition, the Highway Commission stated

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21. *Id.* at 341.
22. United States v. 3969.59 Acres of Land, 56 F. Supp 831, 837 (D. Idaho 1944).
23. *L.E. Cooke Co.*, 991 F.2d at 341.
24. *See, e.g.*, United States v. Whitehurst, 337 F.2d 765 (4th Cir. 1964); United States v. 237,500 Acres of Land, 236 F. Supp. 44 (S.D. Cal. 1964).
25. *See* cases cited *supra* note 24. *See also* United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp. 314, 320 (S.D. Cal. 1956); Cloverport Sand & Gravel Co. v. United States, 6 Cl. Ct. 178, 193 (1984).
26. *Whitehurst*, 337 F.2d at 771-72.
27. *Id.*
28. *Id.* at 772.
29. 500 P.2d 951 (Mont. 1972).
30. *Id.*
31. *Id.* at 953.
32. *Id.*

that the deposit was too small to produce a profit.[33] Ultimately, the court decided the case on other grounds.[34]

The annual production rate of the mineral is another issue courts must address. This is closely linked to market demand. A company may be physically able to extract 100,000 tons of a mineral in a given year, but a market may exist for only 50,000 tons. This issue arose in *United States v. 179.26 Acres of Land*.[35] In this case, the landowners estimated an annual production rate of 96,000 to 200,000 tons of limestone per year.[36] Records of prior years showed, however, that average extraction rates were much lower, sometimes as low as 6000 tons per year.[37] This is a question of fact left to the fact finder to determine.[38]

Finally, questions about expert witness qualification and opinion testimony often arise during the valuation process. An expert witness in mineral valuation proceedings should (1) have seen the deposit in question, (2) be knowledgeable about the physical properties of that mineral, (3) have studied the economic aspects of the market for that mineral, (4) have knowledge of prior sales of land containing that mineral, and (5) be aware of the chemical makeup of the deposit and whether it constitutes a marketable deposit.[39] Qualified experts may testify as to factors that a well-informed buyer might consider if purchasing the property[40] as well as the property's valuation.[41] The fact finder determines the weight of that testimony.[42] Expert testimony is "only advisory in nature and is not binding upon the jury or the court."[43] In addition, if an expert is testifying about anything that any other witness could observe or see, the finder of fact should consider it as if it came from any other witness.[44] The owner, even if not specially qualified in mineral valuation, may give opinion testimony regarding the property's valuation.[45] This is purely because of his relationship to the land as the owner. "He is deemed qualified by reason of his relationship as owner to give estimates of the value of what he owns."[46]

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33. *Id.* at 953-54.
34. *Id.* at 955.
35. 644 F.2d 367 (10th Cir. 1981).
36. *Id.* at 369.
37. *Id.*
38. United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp. 314, 322 (S.D. Cal. 1956).
39. State Highway Comm'n v. Metcalf, 500 P.2d 951, 954 (Mont. 1972).
40. Iske v. Omaha Pub. Power Dist., 178 N.W.2d 633, 731 (Neb. 1970).
41. *Id.*
42. *Id.*
43. *Id.*
44. United States v. 3969.59 Acres of Land, 56 F. Supp. 831, 838 (D. Idaho 1944).
45. *Id.* at 837.
46. *Id.*

One of the most common problems arising at trial in connection with the above topics is speculation.[47] Some deficiencies in testimony that cause courts to consider the testimony speculative include:

- Failure to account for production from competitive quarries.
- An assumption that plaintiffs could successfully capture a certain percentage of the market for the mineral.
- Failure to include start-up costs, including capital investment in transportation equipment and machinery and hiring of personnel.
- Failure to consider improvements that the developer may have to make to the property in order to market the material, such as paving a road.
- Failure to include any additional costs necessary to successfully run the mining operation.[48]

In addition, testimony must follow a clear path of reasoning.[49]

An appraiser or witness may not value a mineral deposit separately from the rest of the land. Appraisers should include mineral deposits as one factor affecting the whole.[50] In addition, appraisers should value the land with the minerals in place. "[T]he market value of the property is the value of the land with the materials in place and not the value of the materials if they were removed."[51]

II. ACCEPTED VALUATION METHODS

Although there are several methods of valuation, appraisal experts recognize three main methods. The comparable sales approach is the method appraisers most frequently use; this approach is considered the best estimate of value.[52] If no comparable sales exist, or there is an insufficient number of comparable sales to demonstrate the market, appraisers turn to other valuation methods.[53] The other two methods are the cost approach

47. *See, e.g.*, Foster v. United States, 2 Cl. Ct. 426, 446 (1983).

48. *Id.* at 451.

49. United States v. 179.26 Acres of Land, 644 F.2d 367, 371 (10th Cir. 1981).

50. *See, e.g.*, Iske v. Omaha Pub. Power Dist., 178 N.W.2d 633, 637 (Neb. 1970).

51. *Id. See also* United States v. 158.76 Acres of Land, 298 F.2d 559, 561 (2d Cir. 1962).

52. *See, e.g.* United States v. L.E. Cooke Co., 991 F.2d 336, 342 (6th Cir. 1993); United States v. 47.14 Acres of Land, 674 F.2d 722 (8th Cir. 1982); Cloverport Sand & Gravel Co. v. United States, 6 Cl. Ct. 178, 189 (1984).

53. United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp 314, 319 (S.D. Cal. 1956).

and the income capitalization approach.[54] The cost approach consists of "the calculation of a depreciated replacement cost as evidence of market value."[55] The cost approach is generally not applicable to mineral properties because it involves estimating the cost to reconstruct a similar property.[56] The income capitalization approach "derives a valuation from a calculation of the present worth of the stream of income which the property is capable of producing over its useful life."[57]

A. The Sales Comparison Approach

In *Florida Rock Industries, Inc. v. United States*,[58] Florida Rock Industries, Inc. (Florida Rock) applied to the United States Army Corps of Engineers (Corps) for a permit to mine limestone.[59] The Corps denied the permit pursuant to the Clean Water Act (CWA).[60] The court found that denial of the permit constituted a taking under the Fifth Amendment[61] because it denied Florida Rock all economically viable uses of the property.[62] *Florida Rock* has a complex history and went through four trials.[63] In the 1999 trial, the court discussed the use of comparable sales for valuation of the property as applied in an earlier proceeding.[64]

The appraiser for the United States identified several sales he considered comparable, but the court found significant differences.[65] Among the differences the court found were that some of the sales were connected with bankruptcy proceedings, one property had not secured permits, and an appraiser could not reasonably consider some of the sales as occurring between a willing buyer and a willing seller because one of the parties was under duress.[66] The court did find that some transactions were admissible as comparable sales. These sales were reasonably close in both distance and time to Florida Rock's property.[67] In order to account for

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54. *Cloverport Sand & Gravel Co.*, 6 Cl. Ct. at 189.
55. *Id.*
56. Telephone Interview with Douglas Silver, President, Balfour Holdings, Inc. (Apr. 20, 2001).
57. *Cloverport Sand & Gravel Co.*, 6 Cl. Ct. at 189.
58. 45 Fed. Cl. 21 (1999).
59. *Id.* at 22.
60. *Id.*
61. *Id.* at 23.
62. Julia Kreidler Hickey, *Florida Rock Industries v. United States: A Categorical Regulatory Taking*, 2 GEO. MASON L. REV. 245, 255 (1995).
63. *Id.* at 254-65.
64. *Id. Florida Rock Indus.*, 45 Fed. Cl. at 33.
65. *Florida Rock Indus.*, 45 Fed. Cl. at 33.
66. *Id.*
67. *Id.*

differences, the court made upward adjustments to the sales.[68] The adjustments reflected the fact that Florida Rock's property was in a more favorable location adjacent to a major artery, which would provide "ready access to the fastest growing area of the country."[69] These facts aided the court in determining the pre-permit denial value of Florida Rock's property at $10,500 per acre, or $1,029,000 total.[70]

The court then turned to valuing the property after the Corps denied Florida Rock's permit.[71] The court found that the property only had two economically viable uses, rock mining or development.[72] Because growth from Miami, the nearest city, had not reached Florida Rock's property, the court found that outside of speculative investment for development, rock mining was the only economical use to which Florida Rock could put its land.[73] The court then determined that comparable sales were the best indicator of fair market value, despite the fact that some appraisers had used the income capitalization approach.[74] Again, the court had to account for variables using the comparable sales approach.[75] Some factors the court considered were (1) sales of smaller parcels of land tended to obtain higher prices, (2) tracts fronting on roads were of higher value, (3) property closer to the fringe of Miami commanded a higher price, and (4) Florida Rock's property was unique in that it was the only property for which the Corps had denied a permit to mine.[76]

Since the court found that witnesses for both Florida Rock and the United States used the comparable sales approach correctly, the court averaged the two figures to arrive at $2490 per acre for the 98-acre tract.[77] Because the correct valuation of the 98-acre tract included it as part of the whole, the court then had to consider features that distinguished the smaller tract from the larger parcel of which it was a part.[78] The court found that an adjustment for road frontage had a negligible effect on value because the

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68. *Id.* at 33-34.
69. *Id.*
70. *Id.* at 34.
71. *Id.*
72. *Id.*
73. *Id.*
74. *Id.* at 34-35.
75. *Id.* at 35.
76. *Id.*
77. *Id.* Florida Rock's entire property consisted of 1560 acres; however, they were only allowed to apply for a permit to mine 98 acres at a time. Therefore, the court had to find a value for the 98 acres taken as part of the entire 1560-acre tract. In addition, the court had to address the fact that had the Corps approved Florida Rock's permit application, Florida Rock would have continued to apply for additional 98-acre permits to mine the remainder of the property.
78. *Id.* at 36.

only use for the property was future development, which was speculative at best.[79] The other adjustment that Florida Rock asserted concerned a gravel access road on the property.[80] Because a gravel road is likely to deteriorate over time, the court found its contribution to value even more speculative than that of the road frontage.[81] The court settled on an upward adjustment of $322 per acre for frontage on the main road and did not add any value for the gravel access road.[82] After calculating the adjustment, the final value for the 98-acre parcel after the Corps denied the permit was $2822 per acre.[83]

The court also noted that evidence of offers to purchase the property in question were a good indicator of fair market value.[84] In this case, potential buyers had made purchase offers; however, buyers made those offers during this litigation and Florida Rock did not accept any of those offers.[85] Although "[t]he court does not rely on unaccepted offers to establish fair market value,"[86] the court did note that this evidence offered confirmation of its own calculation.[87] In addition, property valuations for tax purposes may bear some evidentiary value.[88]

Finally, to calculate just compensation, the court subtracted the value after the taking from the value before the taking.[89] The fair market value was $10,500 per acre before the taking and when multiplied by 98-acres this resulted in $1,029,000.[90] The fair market value was $2822 per acre after the taking and when multiplied by 98 acres this resulted in $276,556.[91] When subtracted, the court determined that just compensation amounted to $752,444.[92]

In *Foster v. United States*,[93] the court identified some of the common problems that can arise with the comparable sales approach. Here, the United States denied the landowners permission to survey and test their property for dolomite.[94] At the valuation proceeding, the landowners

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79. *Id.*
80. *Id.*
81. *Id.*
82. *Id.*
83. *Id.*
84. *Id.*
85. *Id.*
86. *Id.*
87. *Id.*
88. *Id.*
89. *Id.* at 43.
90. *Id.* at 34.
91. *Id.* at 36.
92. *Id.* at 43.
93. 2 Cl. Ct. 426 (1983).
94. *Id.* at 427-28.

asserted that many factors must be present in order for the comparable sales approach to be reliable. As examples, the landowners pointed to proximity in time, the nature of the sale, the quality and quantity of the comparable property, the party's primary interests, and any other factors making the transaction unique.[95] The landowners contended that the comparable sales offered by the United States were not admissible because they did not involve other sales of quarry land, the details of the mineral reservations in the deeds were not comparable, the government's appraiser had inaccurately measured the acreage of the comparable properties, and it was unlikely that the owners of the comparable properties could have obtained a conditional use permit.[96] In defense, the United States argued that there are inherent difficulties in comparable sales and while some properties may not appear comparable, if the appraiser allows for variables, the court should admit the sales as evidence.[97] For example, a comparable sale need not be adjacent to the property in question in order for the court to accept it as evidence.[98] In addition, courts recognize that a mining claim is speculative by nature.[99] "Until there has been full exploiting of the vein its value is not certain, and there is an element of speculation, it must be conceded, in any estimate thereof. And yet, uncertain and speculative as it is, such prospect has a market value..."[100]

The landowners then argued that in valuation of mineral properties, the preferred method is the income capitalization approach.[101] The court noted, however, that the income capitalization approach requires evidence as to actual income from the property. When mining has not even begun as of the date of the taking, as was the case here, the income capitalization approach is of little value.[102] Ultimately, the court made its decision based on both the comparable sales and the income capitalization approach.[103]

Other cases have also addressed the comparable sales approach. In *United States v. 421.89 Acres of Land*,[104] the landowners objected to a commission's award for the taking of their property.[105] The property

95. *Id.* at 447.
96. *Id.* at 447-48.
97. *Id.* at 448.
98. United States v. American Pumice Co., 404 F.2d 336, 336-37 (9th Cir. 1968).
99. *See, e.g.*, United States v. 179.26 Acres of Land, 644 F.2d 367, 373 (10th Cir. 1981); United States v. Silver Queen Mining Co., 285 F.2d 506 (10th Cir. 1960).
100. *Silver Queen Mining Co.*, 285 F.2d at 510.
101. Foster, 2 Cl. Ct. at 448.
102. *Id.*
103. *Id.* at 455.
104. 465 F.2d 336 (8th Cir. 1972).
105. *Id.* at 337.

contained gravel deposits.[106] The landowners asserted that the court admitted evidence of comparable sales erroneously.[107] The court affirmed the use of comparable sales because the commission had "full information as to the similarities and dissimilarities between the property here involved and that involved in the other sales."[108]

In *United States v. Whitehurst*,[109] appraisers identified one comparable sale.[110] However, the seller of that tract of land was not aware that the buyer was purchasing it for use as a borrow pit. The seller thought the buyer was going to use it for residential development.[111] The court took note of this in determining whether or not the sale was in fact comparable to the sale at bar.[112] In addition, the *Whitehurst* court determined that appraisers could not consider the sale to the government as a result of the taking a comparable sale.[113]

United States v. 71.29 Acres of Land[114] involved the condemnation of land that was suitable for sand and fill dirt.[115] The court found the evidence of comparable sales presented by the United States unacceptable because they were special purpose sales, they were not physically comparable in that they did not contain river frontage and they did not have the same groundcover, and the proposed tracts did not have access to a public road.[116] In addition, the appraiser was not familiar with the area and was an employee of the Corps of Engineers, the agency taking the land.[117]

In *United States v. 24.48 Acres of Land*,[118] the United States condemned property for an Army flood project.[119] The landowners asserted, "there was gold in them thar hills."[120] The landowners alternatively stated that, at the least, there was valuable sand and gravel on the property.[121] The court placed more weight on the witnesses for the United States since the

106. *Id.*
107. *Id.* at 338.
108. *Id.*
109. 337 F.2d 765 (4th Cir. 1964).
110. *Id.* at 768.
111. *Id.*
112. *Id.*
113. *Id.* at 772.
114. 376 F. Supp. 1221 (W.D. La. 1974).
115. *Id.* at 1224.
116. *Id.*
117. *Id.*
118. 812 F.2d 216 (5th Cir. 1987).
119. *Id.* at 217.
120. *Id.*
121. *Id.*

landowner's comparable sales witness was not an expert and was an interested party to the litigation.[122]

Often a court finds a transaction inadmissible as a comparable sale because a witness bases one or more of the factors or variables upon speculation. *Todesca/Forte Bros. v. Rhode Island Department of Transportation*[123] identified three areas susceptible to speculation.[124] The court stated that "[f]actors which affect comparability include the location and character of the property, the proximity in time of the sale to the taking and the use to which the property is put."[125]

Finally, in *Murdock v. United States*,[126] the court again addressed the issue of speculation. In this case, the court considered a mineral lease on unproved oil lands too speculative to allow as evidence.[127] Specifically, mineral development had not occurred on any of the lands at issue; the only oil found was on a tract several miles from the land and only a trace amount of oil had been discovered there.[128]

While it is clear that courts and appraisers consider comparable sales the best evidence of value,[129] it is also clear from the above cases that many problems arise with this method. When no comparable sales exist, or when the court finds evidence of comparable sales unacceptable, appraisers must use another method.[130] Courts have determined that the income capitalization approach is an acceptable alternative method when comparable sales are not available.[131]

B. The Income Capitalization Approach

The income capitalization approach is complex and involves assigning a discount rate to the amount of income that a property could produce in order to ascertain its net present value.[132] The income capitalization approach is more valuable when mining operations exist on the property because the appraiser does not have to estimate the income

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122. *Id.* at 218.
123. C.A. No. 91-3156, 1994 WL 930935 (R.I. Super. 1994).
124. *Id.* at *1.
125. *Id.* at *3.
126. 160 F.2d 358 (8th Cir. 1947).
127. *Id.* at 360.
128. *Id.* at 359.
129. *See, e.g.*, United States v. 47.14 Acres of Land, 674 F.2d 722, 725 (8th Cir. 1982).
130. *Id.*
131. *See, e.g., id.* at 726; United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp 314, 319 (S.D. Cal. 1956).
132. INTERAGENCY LAND ACQUISITION CONFERENCE, *supra* note 19, pt. VII, § D-11.

stream.[133] However, the method is applicable to properties when the landowner can provide evidence of a reasonable future use.[134]

One difficulty that often arises is making sure that the approach measures only the value of the income that the property is capable of producing, not the profits of the business.[135] In *Cloverport Sand & Gravel Co. v. United States*,[136] in a claim unrelated to the mineral valuation claim, the landowners asserted that because of the taking they were unable to mine enough gravel to utilize a railroad spur track that they had installed several years before.[137] The court pointed out that the landowner's inability to use the tract did not diminish the value of the land, stating, "Rather the plaintiff has asserted a claim for the net cost of the track itself. Such a 'value to me' standard is clearly impermissible."[138] Courts criticize capitalization of business profits as uncertain and speculative because they rely more on how much capital a company initially invests in a venture, good fortune, business skill, and management skills than upon the income derived from the property itself.[139]

In addition, because the income capitalization approach is highly technical in nature, an appraiser must be knowledgeable and familiar with the approach and take several factors into consideration.[140] Such factors include, but are not limited to, likely future supply and demand, mineral recoverability estimates, current and probable future economic conditions, the value of currency, changes occurring in the marketplace, and relevant technological advances.[141] In order to correctly utilize the income capitalization approach, the appraiser must identify several important pieces of information.[142]

An appraiser must ascertain:

- The appropriate royalty rate.
- The price per unit of the mineral to which the royalty rate is applied (*e.g.*, $20.00 per ton).
- The projected amount of mineral production per year (*e.g.*, 100,000 tons per year).
- The product of the above three ingredients will produce the annual income.

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133. *Id.*
134. State Dep't of Highways v. Mahaffey, 697 P.2d 773, 776 (Colo. Ct. App. 1984).
135. INTERAGENCY LAND ACQUISITION CONFERENCE, *supra* note 19, pt. VII, § D-11.
136. 6 Cl. Ct. 178 (1984).
137. *Id.* at 202.
138. *Id.*
139. Whitney Benefits, Inc. v. United States, 18 Cl. Ct. 394, 409 (1989).
140. INTERAGENCY LAND ACQUISITION CONFERENCE, *supra* note 19, pt. VII, § D-11.
141. *Id.*
142. *Id.*

- The projected number of years the mine will be in production.
- The year when the owners anticipate that production will begin.
- The proper discount rate.[143]

Whitney Benefits, Inc. v. United States[144] is one of the leading and most detailed cases on the income capitalization approach. Whitney Benefits, Inc. (Whitney) owned the coal underlying 1327 acres in fee.[145] In 1977, Congress enacted the Surface Mining Control and Reclamation Act (SMCRA), which required Whitney to obtain a permit to mine from the Wyoming Department of Environmental Quality (DEQ).[146] After determining that the property was mineable, in that the landowners successfully demonstrated that there was a market and that they could produce the coal at a profit,[147] the court found that SMCRA had affected a taking of Whitney's property.[148] It is interesting to note that the court specifically identified the fact that SMCRA prohibits surface mining without a permit, and that while Whitney technically could engage in underground mining, surface mining was the only economically feasible method.[149]

The court determined that a taking had occurred. Next, it addressed the factors that appraisers and witnesses should consider in arriving at a value.[150] First, the court determined that the taking occurred on the date that Congress enacted SMCRA,[151] despite argument from the United States that the date of the taking should be when DEQ denied Whitney's permit application.[152]

Turning to valuation, the court heard arguments from both sides. The United States argued that the court should adopt the comparable sales approach.[153] The court determined, however, that the one sale the United States identified was sold out of necessity and compulsion.[154] Therefore, the court found the sale inadmissible.[155] The landowners argued for adoption of their plan, the Boyd Plan, which uses the income capitalization approach

143. *Id.*
144. 14418 Cl. Ct. 394 (1989).
145. *Id.* at 396.
146. *Id.* at 397.
147. *Id.* at 404.
148. *Id.* at 406.
149. *Id.* at 405.
150. *Id.* at 406.
151. *Id.* at 407.
152. *Id.*
153. *Id.* at 408.
154. *Id.*
155. *Id.*

along with a discounted cash flow analysis.[156] The court adopted the Boyd Plan for valuation purposes.[157] This plan provides a detailed analysis of how the income capitalization approach, using discounted cash flow, works.

Valuation of Whitney Coal

The court identified seven areas to address with respect to the valuation of the coal estate. The court analyzed in turn: capitalization of business profits versus capitalization of income the property was capable of producing, the annual production rate, the price of the coal, the discount rate, costs, calculations, and interest.

The first argument the United States made against the Boyd plan was that it capitalized business profits rather than income produced from the property.[158] The United States offered an alternative royalty stream method.[159] Since the alternative method disregarded the fact that another company owned a leasehold interest in the property, the court rejected the argument.[160] One way to ensure that appraisers only consider the income from the property is to use the royalty rate that the landowner could obtain if he leased the property.[161] The United States also argued that the discounted cash flow method is inherently speculative,[162] and pointed to the fact that until a company exhausts a mine, it is impossible to determine the amount of recoverable resources.[163] The court found that although speculation is unavoidable in such a situation, the prospect of mineral development still has a market value.[164]

The court next addressed the expected annual production rate.[165] The Boyd Plan identified a production rate of four million tons per year.[166] The United States argued that it would not be possible for Whitney to secure a market for that amount of coal annually.[167] The court found that the evidence the United Stated presented from its market data and expert testimony[168] was in favor of this contention and assigned an estimated value of 2.5 million tons per year.[169]

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156. *Id.*
157. *Id.*
158. *Id.* at 409.
159. *Id.*
160. *Id.*
161. *Id.* at 410.
162. *Id.*
163. *Id.*
164. *Id.*
165. *Id.*
166. *Id.*
167. *Id.*
168. *Id.* at 401-02.
169. *Id.*

The third issue the court addressed was the price per ton of the coal as it lay in the property.[170] The Boyd Plan identified four markets for the coal: utility contract, utility spot, industrial-RPM, and industrial-sized; and estimated prices for each.[171] The United States introduced evidence from a trade journal, attempting to demonstrate that Whitney's valuation was about $2.60 per ton too high.[172] The court found that since Whitney's valuation relied on actual prices from a nearby coal mine, the valuation was not speculative. In addition, the court stated that while estimates from a trade journal are helpful, appraisers should consider them a starting point, not a determinative figure.[173]

The next issue the court discussed was the discount rate.[174] The Boyd Plan utilized a discount rate of ten percent, stating that "the rate generally applied in the coal industry in 1977 fell in the range between 8% and 12%."[175] Whitney also identified several other sources that used a ten percent discount rate, including professional literature and the Bureau of Land Management's Guide to Federal Coal Property Appraisal (Appraisal Guide).[176] The United States argued that a higher discount rate of 12.5 percent would more accurately reflect the risks involved in coal mining operations.[177] The Appraisal Guide states, however, that "[i]n general, the use of a discount rate adjustment to account for risk is not recommended because of the overwhelming subjectivity involved in selecting the risk premium."[178] To account for this, the Boyd Plan incorporated risk in a sensitivity analysis.[179] The risks the Boyd plan considered in the sensitivity analysis included (1) whether the property was undeveloped, (2) the maximum annual production rate might take several years to reach, (3) a buyer might not be able to acquire necessary additional surface land, (4) DEQ might not approve other operations necessary to mine the coal, and (5) the price of coal could decrease.[180] The sensitivity analysis reduced the calculated net present value of the coal by an additional 11 percent.[181] The court found the Boyd Plan's method to be an accurate estimate of the risks

170. *Id.* at 410.
171. *Id.* at 410-11.
172. *Id.* at 411.
173. *Id.* at 411-412.
174. *Id.* at 412.
175. *Id.*
176. *Id.*
177. *Id.*
178. *Id.*
179. *Id.*
180. *Id.* at 412-13.
181. *Id.* at 413.

involved in mining the property, as opposed to the United States' proposed method of increasing the discount rate.[182]

The fifth issue that arose in the case concerned what costs an appraiser should take into account in valuing the property.[183] The Boyd Plan first addressed operating costs.[184] The plan estimated labor costs from those at a nearby mine with which Whitney would have had to compete, and from rates prevalent in the coal industry.[185] The Boyd Plan also included supply costs, miscellaneous direct expenses and general corporate expenses in the operating costs.[186] All of these figures came from a variety of reliable sources.[187] The Boyd Plan's capital costs included costs that a willing buyer would take into account in starting up a mining operation.[188] Appraisers obtained the price estimates for equipment from either actual quotes or published indices.[189] In addition, the Boyd Plan included miscellaneous capital expenses.[190] The court noted that the Appraisal Guide sets forth essentially the same cost analysis.[191] The United States attempted to argue that the court should not look to the Appraisal Guide for guidance because the case at bar concerned a sale and not a lease.[192] The court gave that contention little merit because the Appraisal Guide states that appraisers may use it for "leases, exchanges, or other methods."[193] Although the Boyd Plan was originally created assuming an annual production rate of four million tons per year, the court found that the appraisers provided an adequate adjustment factor for the court determined annual production rate of 2.5 million tons per year.[194] The United States additionally argued that the Boyd Plan greatly underestimated reclamation costs and that mining the deposit would be unprofitable because of these costs.[195] The court found this contention on the part of the United States credible but deducted $2 million from the final award to account for backfilling when the mine was exhausted, rather than finding the project unprofitable as a whole due to the high reclamation costs projected by the United States.[196]

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182. *Id.*
183. *Id.*
184. *Id.*
185. *Id.*
186. *Id.*
187. *Id.*
188. *Id.*
189. *Id.*
190. *Id.*
191. *Id.*
192. *Id.*
193. *Id.*
194. *Id.* at 414.
195. *Id.* at 414-15.
196. *Id.* at 415.

The sixth step in the analysis was calculations.[197] The court adopted all of the Boyd Plan's calculations with the reduction of the annual production rate from four million to 2.5 million tons per year.[198] Using these figures, the court found the net present value of Whitney coal to be $52,755,000.[199] The court then subtracted $2 million for the backfilling operations and applied the 11 percent discount from the sensitivity analysis to arrive at a figure of $45,172,000, or $0.844 per ton for assigned reserves.[200] Finally, the court determined that interest is due a property owner in takings cases.[201] The court had to decide whether to use a simple or compound interest rate.[202] In a later proceeding, the court determined that just compensation includes interest compounded annually.[203]

Other cases have also utilized the income capitalization approach.[204] In *United States v. 47.14 Acres of Land,*[205] the court identified a list of factors that appraisers must consider if using the income capitalization approach.[206] The list includes future supply and demand, economic conditions, estimates of mineral recoverability, value of currency, changes in the marketplace, and technological advances.[207] It is clear from an analysis of the cases discussing the income capitalization approach that these are factors that, if not present, will cause the court to reject that valuation.

In *United States v. Whitehurst,*[208] an expert witness admitted, "This method is highly susceptible to overvaluation, because of the tendency to overestimate the number of tons of annual sales and the tendency to employ a capitalization rate that is too low to reflect the hazards of the industry."[209] This is apparent in the fact that the Boyd Plan did overestimate annual production by 1.5 million tons per year.[210] In addition, the Boyd Plan utilized a sensitivity analysis to account for risks in the industry.[211] Although courts have clearly stated that the income capitalization approach

197. *Id.*
198. *Id.*
199. *Id.*
200. *Id.*
201. *Id.* at 416.
202. *Id.*
203. Whitney Benefits, Inc. v. United States, 30 Fed. Cl. 411, 413 (1994).
204. *See, e.g.*, United States v. 47.14 Acres of Land, 674 F.2d 722 (8th Cir. 1982); United States v. Whitehurst, 337 F.2d 765 (4th Cir. 1964); United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp 314 (S.D. Cal. 1956); United States v. 13.40 Acres of Land, 56 F. Supp 535 (N.D. Cal. 1944).
205. 674 F.2d 722 (8th Cir. 1982).
206. *Id.* at 726.
207. *Id.*
208. 337 F.2d 765 (4th Cir. 1964).
209. *Id.* at 773.
210. Whitney Benefits, Inc. v. United States, 18 Cl. Ct. 394, 410 (1989).
211. *Id.* at 412.

is not the preferred method of valuation, it is also clear that when courts find comparable sales lacking, it is the best alternative.

C. Other Valuation Methods

When comparable sales are not available, or the income capitalization approach is not acceptable, courts have accepted other methods.[212] One of the most commonly attempted, yet almost always rejected methods, is unit times price.[213] This involves simply multiplying the estimated number of units of a mineral in the ground by a determined price per unit that takes all costs into account.[214] The reason courts find this method unacceptable and speculative is that it "disregards market realities in that it assumes stable demand, competition, production costs, etc., and does not reflect the risks and uncertainties inherent in the operation of an enterprise."[215] Another reason this approach is not permissible is that it values the mineral deposit separately from the land.[216] "Where stone or mineral deposits may have bearing on the market value of the land, evidence as to the extent of those deposits is admissible but the award may not be reached by separately evaluating the land and the deposits."[217]

In some circumstances, a court will allow the unit times price method as evidence of the value of a mineral property.[218] *United States v. 237,500 Acres of Land*[219] involved a deposit of pumice.[220] The landowners established that the pumice was of exceptionally high quality and that a good market existed.[221] The United States asserted that the comparable sales approach was the only acceptable method to value the property.[222] The court noted that because pumice is "of a peculiar nature and of limited use,"[223] comparable sales were not available.[224] The court concluded that

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212. *See, e.g.*, United States v. L.E. Cooke Co., 991 F.2d 336 (6th Cir. 1993); United States v. 237,500 Acres of Land, 236 F. Supp 44 (S.D. Cal. 1964); United States v. 12.75 Acres of Land, 95 F. Supp 998 (E.D. Tenn. 1951).

213. *See, e.g.*, United States v. 4.553 Acres of Land, 208 F. Supp 127 (N.D. Cal. 1962); United States v. 13.40 Acres of Land, 56 F. Supp 535 (N.D. Cal. 1944); United States v. 3969.59 Acres of Land, 56 F. Supp 831 (D. Idaho 1944).

214. United States v. Land in Dry Bed of Rosamond Lake, 143 F. Supp. at 315.

215. United States v. 1629.6 Acres of Land, 360 F. Supp 147, 151 (D.Del. 1973).

216. United States v. 179.26 Acres of Land, 644 F.2d 367, 372-73 (10th Cir. 1981).

217. Iske v. Omaha Pub. Power Co., 178 N.W.2d 633, 637 (Neb. 1970).

218. *See* United States v. 237,500 Acres of Land, 236 F. Supp 44 (S.D. Cal. 1964).

219. *Id.*

220. *Id.* at 45.

221. *Id.* at 49-50.

222. *Id.* at 51.

223. *Id.*

224. *Id.*

since the property had only one use, the production of pumice, it was only logical that a unit times price valuation enter into and largely determine the question of value.[225] Although courts generally frown upon this valuation method, other cases have followed the lead of the court in *United States v. 237,500 Acres of Land*.[226] In fact, the court in *State ex rel. State Highway Commission v. Pfizer, Inc.* stated that there is no general rule of thumb against using a unit times price analysis.[227]

Another method, although rarely accepted, is the unique value of the property to the owner. In *United States v. 12.75 Acres of Land*,[228] however, the court did accept this method.[229] In this case, a cement company owned land containing sand deposits.[230] The cement company used the sand, but no other market for the sand existed.[231] The court noted that if a third party had owned the deposit, the cement company would have been the market, so it would have a market value.[232] Therefore, the court found that even though the sand was only of value to the owner, it was still a compensable interest since it would have had a market value if any other party owned the property.[233]

Finally, in *United States v. L.E. Cooke Co.*,[234] the court approved an unnamed method of valuation.[235] Here, one of the witnesses for the United States used what he termed a "discounted royalty analysis."[236] On cross-examination he admitted that it was not a true discounted royalty analysis, nor was it a comparable sales approach.[237] However, the court permitted him to use his own method of computing a discounted rate per ton based on his own experience.[238] The court stated that although the comparable sales approach is preferred, when it is unavailable, "the law of evidence...favors a broad rule of admissibility and is designed to permit the admission of all evidence which is relevant and material to the issues in

225. *Id.* at 53.

226. *See, e.g.*, United States v. 22.80 Acres of Land, 839 F.2d 1362 (9th Cir. 1988); State *ex rel.* State Highway Comm'n v. Pfizer, Inc., 659 S.W.2d 537 (Mo. Ct. App. 1983); United States v. 180.37 Acres of Land, 254 F. Supp 678 (D.Va. 1966).

227. *Pfizer*, 659 S.W.2d at 540.

228. 95 F. Supp 998 (E.D. Tenn. 1951).

229. *Id.* at 1007.

230. *Id.* at 999.

231. *Id.* at 1003.

232. *Id.*

233. *Id.*

234. 991 F.2d 336 (6th Cir. 1993).

235. *Id.* at 342.

236. *Id.* at 340.

237. *Id.*

238. *Id.*

controversy...."[239] Further, the court found that since the opinion of the witness was not mere speculation, in that he was an accomplished mining engineer and was able to provide a factual basis for his estimation of coal reserves in place, any weakness in his testimony should bear on the weight of his evidence, not its admissibility.[240] The fact that the testimony was clearly relevant and had some factual basis was enough for the court to find that the lower court had properly admitted it.[241]

III. THE MCDONALD GOLD DEPOSIT

The McDonald gold deposit contains roughly 7.2 million ounces of gold.[242] In 1998, Montana citizens voted to enact Initiative 137 (I-137), which precludes the use of open-pit, cyanide heap leach mining for gold and silver deposits.[243] Since this was the only economically feasible method of mining the McDonald deposit, the owners, Canyon Corporation, (Canyon) filed a lawsuit to either overturn I-137 or to secure just compensation for the regulatory taking.[244] This section will discuss the problems and issues that the parties are likely to encounter if the proceedings reach the valuation stage. Therefore, this section rests on the assumptions that I-137 is constitutional and the regulation constituted a taking of the McDonald property. In addition, this section will only discuss the comparable sales approach and the income capitalization approach.

Section one of this article identified several issues that a court must address before determining which valuation method is appropriate. These topics included (1) was the taking permanent or temporary, (2) what was the date of the taking, (3) what is the highest and best use of the property, (4) is the project economically feasible, and (5) what was the estimated annual production rate. The first three questions are relatively simple to determine for the McDonald project. First, if the court finds that I-137 is constitutional, then the taking is permanent. Second, according to *Whitney Benefits, Inc. v. United States*,[245] if the proponents of a regulation specifically intended it to affect a certain mine, the date that the legislature enacted the regulation is the date of the taking.[246] Although the Montana Code

239. *Id.* at 342 (quoting United States v. 2,847.58 Acres of Land, 529 F.2d 682, 687 (6th Cir. 1976)).

240. *Id.*

241. *Id.*

242. Richard H. De Voto & Terry P. McNulty, *Banning Cyanide Use at McDonald—An Attack on Open-Pit Mining*, MINING ENGINEERING, Dec. 2000, at 19.

243. *Id.*

244. *Id.*

245. 18 Cl. Ct. 394 (1989).

246. *Id.* at 407.

Annotated states that "[f]or the purpose of assessing compensation, the right thereto shall be deemed to have accrued at the date of the service of the summons...,"[247] it seems likely a court would find *Whitney* controlling and assign November 3, 1998, the date that the Montana legislature enacted I-137,[248] as the date of the taking. And third, despite the fact that Canyon is not currently mining the McDonald property, Canyon should be able to meet the three step test set out in *United States v. 3969.59 Acres of Land*[249] to show that mining is the highest and best use of the property. Canyon must show that the property is adaptable to gold mining, gold mining is reasonably probable to occur in the immediate future or a reasonable time, and gold mining would enhance the land's market value.[250] However, the highest and best use is related to economic feasibility.

Whether or not Canyon can operate the mine at an economic profit is the next question. There is no doubt that a market for gold exists today. The question is whether the price of gold is sufficient to allow for mining of the McDonald property. In order to mine the McDonald property at a profit, gold prices must be at least $300 per ounce.[251] On November 3, 1998, the date of the taking, the price of gold was $288.60 per ounce.[252] The price of gold has been steadily declining since 1980, when it was near $700 per ounce.[253] In addition, since January 1999, gold has risen above $300 per ounce only twice.[254] Although the highest gold prices each year did not drop below $300 per ounce between 1978 and 2000,[255] the annual averages have been steadily below the $300 per ounce mark for the past several years.[256] In addition, Placer Dome, a company owning a gold mine of comparable size, had to stop operations at one of their deposits in July 1999 due to the low price of gold.[257] If a mine is not economically profitable, then a regulation or condemnation proceeding has not impaired a right to mine. Factors that enter into the determination of whether a project is economically feasible include inadequate plans for mining processes, necessary acquisition of additional surface acreage, whether the mining

247. MONT. CODE ANN. § 70-30-302 (1) (2000).

248. *Id.* at § 82-4-390 (2000).

249. 56 F. Supp. 831 (D. Idaho 1944).

250. *Id.* at 837.

251. MCDONALD GOLD COMPANY, PROSPECTUS C-9 (2000).

252. Only Gold.com, *Search Historical Gold Prices*, CSG, Inc., *at* http://onlygold.com/TutorialPages/TutorialL_FSP/SearchPricesFS.asp (last visited Apr. 21, 2001).

253. *See id.*

254. *Id.*

255. Only Gold.com, *Search Historical Gold Prices*, CSG, Inc., *at* http://onlygold.com/TutorialPages/PicesSince1972FS.htm (last visited Feb. 11, 2001).

256. *Id.*

257. Jane Werniuk, *Getchell Gold: A Mine for the Long Run*, CANADIAN MINING J. (Dec. 1999), *at* http://www.canadianminingjournal.com/issues/dec99/page23_getchell_mine.asp.

company is still in need of permits, and whether the mine could function on its own or would necessitate being part of a larger project.[258] Not only is the price of gold too low for Canyon to profitably mine the deposit, but also Canyon must acquire additional surface acreage as well as several permits.[259] In addition, there are many variables that could stop Canyon from developing the McDonald project regardless of I-137.[260] These variables include the following: (1) Canyon would have to ensure that three miles of State Highway 200 were moved; (2) Canyon has not yet acquired all necessary mining equipment; and (3) Canyon has not yet constructed any mining operations facilities, such as a crushing plant, pads and ponds, and a recovery plant.[261] Finally, it is not possible for Canyon, or a company of Canyon's size and financial ability, to mine the property on its own. Additional monetary support is needed.[262] At this point, it could be difficult for Canyon to prove that the McDonald mining operation is economically feasible.

Assuming Canyon does show that it could mine the deposit at a profit, the next inquiry would be the annual production rate. Canyon estimates that at gold prices of $300 per ounce, the McDonald deposit can produce an average of 450,000 to 530,000 ounces per year for a 7.5 year mine life.[263] However, Canyon would also have to show that the market is capable of absorbing that amount of gold per year.[264]

If Canyon can show all of the above criteria, they next must determine which valuation method is appropriate. As stated in the second section of this article, the comparable sales approach is the preferred method.[265] The best comparable sale for the McDonald deposit is the Getchell Gold deposit.[266] Placer Dome, Inc. (Placer Dome) acquired the Getchell property on May 27, 1999,[267] for approximately $900 million.[268] The court must first determine that the Getchell transaction was between a willing buyer and a willing seller with full information regarding the nature

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258. *Cf.* Whitney Benefits, Inc. v. United States, 18 Cl. Ct. 394, 403-04 (1989).

259. *See* MCDONALD GOLD COMPANY, *supra* note 251, at D-6 to D-9.

260. *Id.*

261. *Id.*

262. *Id.* at D-1.

263. *Id.* at D-3.

264. *See* United States v. 179.26 Acres of Land, 644 F.2d 367, 372-73 (10th Cir. 1981).

265. *See, e.g.*, United States v. L.E. Cooke Co., 991 F.2d 336, 342 (6th Cir. 1993); United States v. 47.14 Acres of Land, 674 F.2d 722, 726 (8th Cir. 1982); Cloverport Sand & Gravel Co. v. United States, 6 Cl. Ct. 178, 189 (1984).

266. Telephone interview with Douglas Silver, President, Balfour Holdings, Inc. (Apr. 20, 2001).

267. Placer Dome, Inc., *Properties, at* http://www.placerdome.com/properties/index.asp (last visited Apr. 21, 2001).

268. Werniuk, *supra* note 257.

of the sale,[269] and the parties to the Getchell transaction did not complete it under duress, bankruptcy proceedings, in the absence of complete knowledge, or under any other terms that would eliminate it as a comparable sale.[270]

Several factors distinguishing the Getchell property from the McDonald deposit exist, however. Specifically, there are four distinctions that could cause a court to dismiss the Getchell transaction as a comparable sale. First, Placer Dome is the sixth largest gold mining company in the world.[271] Since Placer Dome is large and financially stable, it did not need to raise money or become a part of a joint venture in order to mine the property.[272] Canyon is not able to mine the property without the aid of a joint venturer.[273] Second, the Getchell property was an operating mine when Placer Dome bought it.[274] Neither Canyon nor any other company has mined any of the gold at the McDonald deposit.[275] Third, Placer Dome is using underground mining for the Getchell property,[276] while Canyon proposes to use open-pit methods for the McDonald deposit.[277] Finally, the price for Placer Dome to mine each ounce of gold in the Getchell deposit is less than the current price of gold, as evidenced by the fact that the deposit is currently producing. The McDonald deposit is not profitable when gold prices are below $300 per ounce.[278]

There are also some similarities. Most importantly, both mines have approximately the same amount of gold. Canyon estimates that the McDonald deposit contains 7.2 million ounces,[279] and Placer Dome estimates the Getchell deposit at approximately 6.5 million ounces.[280] Also, both are reasonably close to a city. McDonald is 45 miles from Helena, Montana;[281] Getchell is 28 miles from Golconda, Nevada.[282] However, because the Getchell deposit differs from the McDonald deposit, and Placer

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269. United States v. Whitehurst, 337 F.2d 765, 776 (4th Cir. 1964).

270. Silver interview, *supra* note 266.

271. Placer Dome, Inc., *About Placer Dome, Corporate Profile, at* http://www.placerdome.com/about/index.asp (last visited Apr. 21, 2001).

272. Werniuk, *supra* note 257.

273. MCDONALD GOLD COMPANY, *supra* note 251, at D-1; Silver interview, *supra* note 266.

274. Werniuk, *supra* note 257.

275. CANYON RESOURCES CORPORATION, 1999 ANNUAL REPORT AND FORM 10-K, at 15 (1999).

276. Werniuk, *supra* note 257.

277. Richard H. De Voto & Terry P. McNulty, *Banning Cyanide Use at McDonald—An Attack on Open-Pit Mining*, MINING ENGINEERING, Dec. 2000, at 20-21.

278. MCDONALD GOLD COMPANY, *supra* note 251 at C-9.

279. *Id.* at C-19.

280. Werniuk, *supra* note 257.

281. MCDONALD GOLD COMPANY, *supra* note 251 at C-1.

282. Placer Dome, Inc., *Properties, Getchell, Sustainablility Overview, at* http://www.placerdome.com/properties/index.asp (last visited Apr. 21, 2001).

Dome and Canyon differ as corporations, it is possible that the court might not find Getchell an acceptable comparable sale.

If the court does not accept Getchell as a comparable sale, the next best valuation is the income capitalization approach. One initial problem with this approach is that income capitalization works best when the property is already producing.[283] Due in part to the Montana legislature's enactment of I-137, Canyon has been unable to mine the property.[284] Next, in order to minimize the risk of capitalizing business profits rather than actual income; an appraiser should estimate probable royalties from the McDonald deposit.[285] An approximate royalty rate for the deposit is eight percent.[286]

Perhaps the most notable problem associated with the income capitalization approach is that if some factors are not present, or will be known too far into the future for an appraiser to accurately determine them, the court will consider the method speculative.[287] Some of these factors include competition from other deposits, market demand, capital and operating costs, and costs for necessary improvements.[288] Because nobody has ever mined the McDonald deposit, a court might consider some of these factors speculative. In addition, the project still requires permitting, Canyon may not be able to secure a joint venturer, and the price of gold may not rise above the $300 per ounce mark.[289] These are also the risks that exist for the McDonald deposit. Use of the income capitalization approach requires risk analysis.[290] The best way to account for risk is the use of a sensitivity analysis that identifies all of the risks associated with a project and discounts the net present value by that amount.[291] It could be that the identified risks for the McDonald project are so uncertain that an appraiser could not possibly account for them in a sensitivity analysis. In this case, the court would not allow Canyon to utilize the income capitalization approach as a method of valuing the McDonald deposit.

To summarize, the fact that the price of gold is well below $300 per ounce and shows no indication of rising creates a huge question as to the economic feasibility of the McDonald deposit. However, if Canyon could

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283. INTERAGENCY LAND ACQUISITION CONFERENCE, UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITIONS, Pt. VII, D-11 (2000), *available at* http://www.usdoj.gov/enrd/land-ack/yb2001pdf.

284. De Voto & McNulty, *supra* note 277, at 20-21.

285. *See id.*

286. MCDONALD GOLD COMPANY, *supra* note 251, at D-9.

287. *See, e.g.*, Foster v. United States, 2 Cl. Ct. 426, 446 (1983).

288. *See generally id.*

289. MCDONALD GOLD COMPANY, *supra* note 251, at G-1.

290. *See* Whitney Benefits, Inc. v. United States, 18 Cl. Ct. 394, 412 (1989).

291. *See id.* at 416.

show that it would be economically feasible for a larger company, such as Placer Dome, to mine the deposit, then the deposit has considerably more value. If a court determines that someone could feasibly mine the McDonald project, then it needs to determine the best valuation method. In this case, a court would most likely look to the Getchell transaction as a comparable sale. Although the sale is distinguishable from the McDonald property on several accounts, the court in *Florida Rock Industries, Inc. v. United States*[292] found that appraisers could compensate for many differences by making adjustments to the sale prices.[293] In this case, if appraisers could adequately adjust for the risks, the comparable sales method would best indicate McDonald's value. Although it is possible to account for those risks in the income capitalization approach, courts prefer the comparable sales method. A court would most likely utilize the Getchell transaction as a comparable sale and find a value accordingly.

CONCLUSION

Valuing minerals while they are still in the ground is not easy. Of the three main valuation methods, the comparable sales approach, the income capitalization approach, and the cost approach, the cost approach is not useful for mineral properties. Both the sales comparison approach and the income capitalization approach contain difficulties that make each case unique. Ultimately, although courts must decide each case differently, there are common threads and standards that can aid in making the appraisal process more uniform.

292. 45 Fed. Cl. 21, 33-34 (1999).
293. *See id.*