

UNITED STATES  
v.  
GEOFFREY J. GARCIA  
CHARLOTTE M. GARCIA

IBLA 98-270

Decided May 5, 2004

Appeal from a decision of Administrative Law Judge Harvey C. Sweitzer declaring the Last Chance Association Placer Mining Claim valid (OR 38521A).

Reversed.

1. Evidence: Generally--Evidence: Sufficiency--Evidence: Weight--Mining Claims: Discovery: Generally--Rules of Practice: Evidence

When, following a hearing in a mining claim contest, the administrative law judge bases his validity determination on his own economic analysis of mining the claim, utilizing the testimony and exhibits provided by the parties' expert witnesses, and that analysis involves choices of what evidence to rely on based on the judge's weighing of sometimes conflicting evidence, the Board has a long-standing reluctance to overturn the judge's findings. The basis for this deference is the fact that the judge who presides over a hearing has the opportunity to observe the witnesses and is in the best position to evaluate the weight to be given to conflicting testimony. Nevertheless, the Board will closely examine the judge's findings in order to ensure that they are legally sound and supported by the record.

2. Evidence: Prima Facie Case--Mining Claims: Contests--Mining Claims: Determination of Validity--Mining Claims: Discovery: Generally

When the Government contests a mining claim based on a charge of lack of discovery of a valuable mineral deposit, it has the burden of going forward with sufficient evidence to establish a prima facie case. Once a prima facie case has been established, the contestee has the burden of overcoming the prima facie case by a preponderance of the evidence.

3. Mining Claims: Contests--Mining Claims: Determination of Validity--Mining Claims: Discovery: Generally

The Board has long held that the costs of compliance with all applicable Federal and State laws, including environmental laws, are properly considered in determining whether or not the mineral deposit is presently marketable at a profit, *i.e.*, whether the mineral deposit can be deemed to be a valuable mineral deposit within the meaning of the mining laws.

APPEARANCES: Geoffrey J. and Charlotte M. Garcia, Merlin, Oregon, pro sese; Marianne King, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Portland, Oregon, for the Bureau of Land Management.

#### OPINION BY DEPUTY CHIEF ADMINISTRATIVE JUDGE HARRIS

On April 30, 1996, the Bureau of Land Management (BLM) initiated a contest of the Last Chance Association Placer mining claim, ORMC 81850, by filing a contest complaint charging that minerals had not been found within the limits of the claim in sufficient quantity and/or qualities to constitute a discovery of a valuable mineral deposit.<sup>1/</sup> Following completion of a hearing in Grants Pass, Oregon, on September 9, 10, and 11, 1997, Administrative Law Judge Harvey C. Sweitzer issued a decision declaring the Last Chance Association Placer claim valid. BLM filed a timely appeal from that decision. For the reasons set forth below, we reverse.

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<sup>1/</sup> The complaint also charged that “[t]he land involved is not being used or occupied for the purposes of mining, milling, processing, beneficiation or other operations in connection with a placer mining claim.”

### Factual Background

The Last Chance Association Placer mining claim is situated on 24.23 acres of public land described as lot 3, sec. 26, T. 34 S., R. 8 W., Willamette Meridian, Josephine County, Oregon, approximately one mile northwest of Galice, Oregon. On March 26, 1985, Geoffrey and Charlotte Garcia relocated the claim on top of two mining claims, the Last Chance Placer claim and the First Chance Placer claim, purchased by Mrs. Garcia in 1981. (Ex. 1 at 4.)

The claim is situated on a mountain ridge between the steep, narrow canyons of the north and south forks of Rocky Creek (also known as Rocky Gulch). (Decision at 2.) After merging, the combined forks flow into the Rogue River, which is approximately one-half mile away from and 600 feet below the claim. (Ex. 1 at 4; Ex. 2 at 2, 7; Tr. 26.) A long road, difficult to access, leads to the claim from the west. (Tr. 30-31.) In the late 1980's, the Garcias built a shorter, steep, unpaved road, which enters the claim from the east, providing better access. (Tr. 30-31.)

Mining of the claim area dates back to the early 1900's. (Ex. 1 at 3.) Previous mining has created a 55- to 80-foot high and 300-foot long scarp along a southwest trending ancient river channel containing gold-bearing gravels deposited on bedrock. (Ex. 2 at 7; Ex. 3 at 21.) The ancient river channel traverses the claim and adjacent private property to the south owned by Seneca Lumber Company. *Id.*; Tr. 26-27, 34. The gravels on the claim average 23 feet in thickness with the bottom 9 feet being the "pay zone," which is cemented by clay and not easily broken up for processing; the remaining gravels are overburden. (Ex. 2 at 7, 37, 39; Ex. 3 at 3; Ex. V; Tr. 36, 460.) Overlaying the gravel is 30 to 35 feet of dense tan clay, which in turn is overlain by a dense orange-red clay. (Ex. 2 at 7.) Mining has also exposed approximately three acres of bedrock which are relatively flat. (Ex. 2 at 7.)

There has been a dwelling of some kind on lot 3 since at least the late 1950's and the Garcias have resided on lot 3 since the early 1970's. In 1987 or 1989, their home on the claim burned down and they rebuilt it. (Ex. 2 at 22; Ex. 4; Tr. 32.) The Garcias' house and a work shop are located on the bedrock exposed by mining. (Ex. 3 at 21.) Geoffrey Garcia, a geologist, uses the claim in connection with a consulting business. (Ex. 2 at 22, 23.)

Geoffrey Garcia has mined the claim area for gold either alone or with others since the mid-1970's. (Ex. 1 at 3-4; Ex. 2 at 8.) In the past, hydraulic mining or ground sluicing was the common mining method utilized on the area of the claim. (Ex. 2 at 37.) During hydraulic mining, the overburden and tailings were washed or pushed with a bulldozer over the cliff into Rocky Gulch. (Ex. 2 at 2, 22; Ex. 12.)

Beginning in 1983, the Garcias had numerous contacts with State agencies regarding actual or contemplated discharges of tailings, overburden, or waste water into Rocky Gulch from the claim area, the legality of such discharges, and the availability of or necessity for a permit for such discharges. See, e.g., Ex. 3 at 2, 4, 6-8; Exs. 11, 12; Tr. 166-72, 188, 190, 196, 203-04, 214. Their early contacts included the February 1983 filing of an application with the Oregon Department of Environmental Quality (DEQ) for a waste water discharge permit to allow the discharge of turbid waters from mining operations on the claim area into Rocky Creek. (Ex. 12 at 2.)<sup>2/</sup> However, in 1984 DEQ cited him for mining without a permit or for violating a permit. (Tr. 214.)

During the period 1978 through 1985, the Garcias purchased a Caterpillar D-8 13A bulldozer, a front end loader, a welder, and sluice boxes, spending \$8,125. (Ex. 1 at 8; Ex. 2 at 37, Attach. 3.) On June 7, 1985, the Garcias filed with BLM an application to patent the Last Chance Association Placer claim, therein proposing, despite the purchase of the above-described equipment, to mine by hydraulic methods using gravity flow water in the winter months to remove overburden, break up and wash the gravels, and push them through a sluice box. (Ex. 1 at 7-8; Ex. 2 at 2.) Thereafter, in February 1987, Geoffrey Garcia applied to DEQ for a permit to discharge tailings from the subject claim into Rocky Gulch. (Ex. 12 at 1.) He acknowledged therein that “it would be improbable that we can operate without raising the turbidity level of Rocky Creek above state guidelines.” Id. There is no evidence in the record that he received such a permit.

On March 3, 1990, following submission of the purchase price for the claim, BLM issued the Garcias a First Half Final Certificate (FHFC) for the Last Chance Association Placer mining claim. (Ex. 2 at 4.) The FHFC is the Department’s internal administrative recordation of an applicant’s compliance with the initial paperwork requirements of the mining law, i.e., that the title, proofs, posting requirements, and purchase money have been submitted to BLM. The FHFC informs the applicant that a patent may issue if all is found regular and upon demonstration and verification of a discovery of a valuable mineral deposit, subject to the reservations, exceptions, and restrictions noted in the patent. (Solicitor’s Opinion, Nov. 12, 1997 M-36990 at 3.) After the Secretary signs the FHFC, the patent application is returned to BLM for preparation of a mineral report by a BLM examiner in order to verify discovery. The BLM examiner may request additional documentation from the applicant if there is

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<sup>2/</sup> In the letter accompanying the application, Geoffrey Garcia stated that “[i]t is not feasible for our mine to operate under your department’s general permit # 0600j in that our discharge into Rocky Creek creates a stream turbidity above background.” (Ex. 12.)

not enough information with the initial application to make a determination that there has been a discovery.

Gerald Capps, a geologist and BLM mineral examiner, conducted a mineral examination of the claim in May 1990. (Tr. 14; Ex. 2 at 2.) During the examination, he took four samples of the gold-bearing gravels (samples G-1 through G-4). (Ex. 2 at 8-12.) At Capps' request, the Garcias updated their patent application by letter dated June 14, 1990, to include, among other things, the results of the validity examination sampling. (Ex. 2 at 36-40; Tr. 39-40.) Therein, the Garcias stated that “[r]ecent state and federal regulations have greatly restricted mining by these methods [hydraulic mining and ground sluicing].” (Ex. 2 at 37.) They further stated that, while some mining was still being contemplated by those methods, “the owners have accumulated equipment which would enable mining by more conventional methods.” (Ex. 2 at 37.) The Garcias asserted that their present plan was to initially mine a 300-foot by 100-foot area between the points from which sample G-1 and sample G-3 had been taken, referred to at the contest hearing as Area 1. (Ex. 2 at 37; Ex. 3 at 21; Tr. 252.) Area 1 had the thinnest overburden, making it the area most likely to be profitably mined. (Tr. 252-53.)

In January 1992 and January 1993, the Oregon Department of Fish and Wildlife (DFW) received reports of unusually turbid or muddy water entering the Rogue River from Rocky Creek. (Tr. 65-67, 72-74, 153-54.) David Haight, a DFW fisheries biologist, investigated each report. First, on January 24, 1992, and later on January 24 and 25, 1993, and in each instance Haight found that the unusual turbidity or muddiness resulted from Geoffrey Garcia's stripping and discharging clay overburden from the Last Chance Association Placer claim into Rocky Creek. (Tr. 67, 72-73, 84.) Haight concluded that the turbidity and sedimentation resulting from the discharges were harmful to fish populations in Rocky Creek and the Rogue River. (Tr. 88-89, 94-97, 128-29.) In January 1993, he found clay mud covering the bottom of Rocky Creek up to a depth of one foot, which would have been harmful to the cutthroat trout and invertebrate populations in Rocky Creek. (Tr. 91, 93-94.)

The State of Oregon brought both criminal and civil charges against Geoffrey Garcia for the January 1993 discharge into Rocky Creek. (Tr. 72-73, 84-85.) On November 22, 1993, he was criminally convicted and fined \$5,045 for mining without a permit. (Ex. 2 at 20, Attach. 5; Tr. 72-73.) Probation conditions included a requirement that he apply for a storm water discharge permit from DEQ within 30 days and that he obtain one within 6 months unless a longer time period was needed by the agency or the need for the permit was eliminated through reclamation. (Ex. 2, Attach. 5.) He was also required to obtain a State permit authorizing the resumption of mining, if mining was to continue. *Id.*

On January 21, 1994, an Oregon Environmental Quality Commission hearing officer found that Geoffrey Garcia had violated State law by discharging overburden from his mining operation into State waters without a permit and had increased turbidity above the regulatory standard. She upheld a DEQ civil penalty of \$4,800. (Ex. 2, Attach. 6 at 1.) Garcia appealed that determination to the full Commission and on August 11, 1994, it affirmed, stating that “[t]he evidence shows that Garcia knew both that the law required a permit and that his discharge would reduce water quality below the allowable limits. In proceeding to operate his equipment nonetheless, he showed a conscious objective both to discharge without a permit and to reduce the quality of the state waters. Therefore, he acted intentionally.” (Ex. 2, Attach. 6 at 11.)

In 1994, Capps completed a Mineral Report detailing his findings and conclusions from his validity examination. That report, which received BLM technical approval on January 19, 1995, and BLM management acknowledgment on April 21, 1995, was introduced into evidence at the hearing as Exhibit 2. Capps concluded that there was no discovery of a valuable mineral deposit as of the date of the issuance of the FHFC. (Ex. 2 at 1, 21; Tr. 247, 269-70.) He based his conclusion on his analysis of the economics of mining Area 1, using similar methods and many of the estimated production rates and costs proposed by the Garcias. (Tr. 252-54, 258-65; Ex. 2 at 14, 17.) Capps also concluded that the use and occupancy of the claim was primarily for residential purposes. (Ex. 2 at 1, 22.)

Based on Capps’ conclusions, BLM issued the contest complaint. The complaint sought to have the claim declared null and void and the mineral entry cancelled. In July and August of 1997, Capps revisited the claim on several occasions and discovered that most of the pay zone gravels had been mined out and the overburden in Area 1 had been pushed off the claim into Rocky Creek. (Tr. 18-19, 274-76, 534-35, Ex. 3 at 2.) He then recalculated the financial return from mining “a three hundred by three hundred foot block of ground [Area 2] immediately adjacent to the area [Area 1] he recently mined,” including in his calculations the additional cost of preventing offsite water quality degradation. (Ex. 3 at 2; see Tr. 274-77.) In his Revised Mineral Report, designated as Exhibit 3, Capps analyzed the economics of mining Area 2 and concluded it would be uneconomic, as the estimated operating costs far exceeded the estimated revenues. (Ex. 3 at 5.)

Following the contest hearing, Judge Sweitzer issued his decision concluding that a discovery of a valuable mineral deposit existed on the claim on March 20, 1990, the date of issuance of the FHFC. He also held that “Contestant has not met its burden of clearly proving that the Garcias’ use and occupancy of the claim was not in good faith.” (Decision at 32.)

[1] Judge Sweitzer based his validity determination on his own economic analysis of mining the claim utilizing principally the testimony and exhibits provided by Capps and the Garcias' expert witnesses, James D. Rodine, an engineering geologist, and Walt Freeman, a mining engineer. That analysis necessarily involved choices of what evidence to rely on based on his weighing of sometimes conflicting evidence. In such a situation, the Board has a long-standing reluctance to overturn an administrative law judge's findings. The basis for this deference is the fact that the Judge who presides over a hearing has the opportunity to observe the witnesses and is in the best position to judge the weight to be given to conflicting testimony. See, e.g., Yankee Gulch Joint Venture v. BLM, 113 IBLA 106, 136 (1990); United States v. Whittaker, 95 IBLA 271, 286 (1987). Nevertheless, we closely examine such determinations in order to ensure that they are legally sound and supported by the record.

We agree with Judge Sweitzer's analysis and find no reason to disturb it, except in one circumstance, *i.e.*, his selection of a production rate for the wash plant, which is not supported by the record. Adjusting for that error alone, as explained below, is determinative of the result in this case, *i.e.*, that the claim is not supported by the discovery of a valuable mineral deposit.

#### Discussion

BLM argues at length in its statement of reasons for appeal that Judge Sweitzer erred in evaluating the discovery of a valuable mineral deposit as of the date of issuance of the FHFC. BLM relies on two opinions issued by the Solicitor, with the concurrence of the Secretary (M-36990, Nov. 12, 1997, and M-36994, May 22, 1998), to argue that, where a patent applicant has not submitted sufficient information at the time the FHFC was issued to verify a discovery, the Department should not measure marketability as of the date of issuance of the FHFC, but rather as of the date the applicant submitted adequate information to allow the Department to verify the discovery. BLM asserts that the Garcias' application was not supported by evidence of discovery, and that the Garcias failed to demonstrate in their application that "there was a reasonable probability that minerals could be extracted and marketed at a profit in compliance with environmental regulations." (SOR at 9.) Therefore, BLM insists that the Garcias had not fulfilled the prerequisites for patent at the time the FHFC was issued, and thus that the FHFC could not have passed equitable title.

BLM contends that the correct date to verify a discovery was the third day of the contest hearing, September 11, 1997, when the Garcias provided their evidence in support of a discovery. (SOR at 2.) BLM urges that the latter date is proper

because, even assuming that a discovery existed in 1990, Area 1 had been essentially mined out at the time of the hearing and, thus, no discovery existed. It points out that the Supreme Court held in Best v. Humboldt Placer Mining Co., 371 U.S. 334, 336 (1963), that a claimant who does not carry a claim to patent does not lose the claim, but that the claimant does take the risk that the claim will no longer support issuance of a patent. BLM is correct in asserting that a discovery may be lost. In United States v. Johnson, 16 IBLA 234, 237 (1974), this Board stated:

The princip[al] thrust of the appeal appears to be that the locator, having once made a discovery, secures a valid and subsisting right to his claims, and that such discovery may not thereafter be “lost” or the locator’s right divested. This statement is simply wrong. A discovery, once made, may be lost through the occurrence of any one of a number of events, including the physical loss of the discovery, the loss of essential transportation facilities, exhaustion of the deposit or a loss of the market of substantial duration (as distinguished from temporary market fluctuations).

We find that it is not necessary to determine whether September 11, 1997, is the proper date for judging whether there was a discovery of a valuable mineral deposit on the claim. Only if a discovery existed on March 20, 1990, that might have been lost as of September 11, 1997, would such a determination be necessary. As discussed below, no discovery existed on March 20, 1990.

[2] When the Government challenges the validity of a mining claim, it has the burden of presenting sufficient evidence to establish a prima facie case that the claim is invalid. United States v. Springer, 491 F.2d 239, 242 (9th Cir. 1974), cert. denied, 419 U.S. 834 (1974); United States v. Pool, 78 IBLA 215, 220 (1984). Generally, when a Government mineral examiner, who has had sufficient training and experience to qualify as an expert witness, testifies that he has physically examined a claim and found mineral values insufficient to indicate the discovery of a valuable mineral deposit, the United States has established a prima facie case that the claim is not supported by a discovery. United States v. Gillette, 104 IBLA 269, 274-75 (1988); United States v. Copple, 81 IBLA 109, 133 (1984). Once a prima facie case of lack of discovery has been established, the contestee has the burden to overcome that case by a preponderance of the evidence. United States v. Winkley, 160 IBLA 126, 142 (2003), and cases cited therein.

Judge Sweitzer stated:

The standard utilized to determine whether a discovery of a valuable mineral deposit has been made is the “prudent man” test. United States v. Coleman, 390 U.S. 599 (1968). Accordingly, there must be found within the limit of the contested mining claim mineral of such quality and quantity as to justify a person of ordinary prudence in the further expenditure of his labor and means with a reasonable prospect of success in developing a paying mine. Converse v. Udall, 399 F.2d 616 (9th Cir. 1968), cert. denied, 393 U.S. 1025 (1969); United States v. Edeline, 39 IBLA 236, 238 (1979).

One means for determining whether there will be a “paying mine” is to apply the “marketability test.” United States v. Multiple Use, Inc., 120 IBLA 63, 80 (1991). Application of this test presupposes the established existence of a mineral deposit, United States v. White, 118 IBLA 266, 312 (1991), and requires a showing that the evidence is of such a character that there is a reasonable prospect that the commercial value of the deposit will exceed the cost of extracting, processing, transporting, and marketing the contained mineral. Multiple Use, Inc., 120 IBLA at 80. In other words, to have a reasonable prospect of success in developing a paying mine, the mine owner must be able to demonstrate, as a present fact, considering historic price and cost factors and assuming they will continue, that there is a reasonable probability that the mineral can be extracted and marketed at a profit. Id. at 80 n.16.

(Decision at 16.)

Judge Sweitzer concluded that equitable title to the claim passed upon issuance of the FHFC, as stated in BLM Manual 3860, Glossary 4 (Rel. 3-266, July 9, 1991). He further held that the question of whether the claimed deposit was marketable at a profit must be judged as of that date, quoting from United States v. Whittaker (On Reconsideration), 102 IBLA 269, 274-75 (1988).

Judge Sweitzer found that Capps’ testimony that no discovery of a valuable mineral deposit existed in 1990 established a prima facie case, and, therefore, the Garcias had the burden of showing that there was a discovery of a valuable mineral deposit on March 20, 1990, when the FHFC was issued.

The Garcias' updated mining plan, included in their June 14, 1990, amendment to their patent application, proposed sequential mining of Area 1 in the following fashion:

A D-8 bulldozer will be used to strip the overburden. The overburden will be placed in the old hydraulic pit immediately to the northeast. The overlying vegetation would be placed along the toe of the overburden pile to help prevent erosion. The underlying pay gravel would be loaded into a 7 yd. dump truck using a catapillar [sic] 951 tracked skiploader and hauled to a washing plant located near the settling ponds below the cabin. The washing plant consists of a vibrating grizzly over a puddle box which is drained by a 34' long 3' wide sluicibox. Water would be recycled by an 8" x 10" diesel-powered irrigation pump. The coarse fraction of the tailings will be used to reinforce and raise the walls of the settling pond and to rip rap the eroding base of the cliff along Rocky Creek. Mining will progress southwards towards the area of sample #1 with the overburden being pushed northeast to reclaim previously mined areas.

(Ex. 2 at 37-38.)

Capps analyzed Area 1 in his initial Mineral Report because the Garcias proposed to mine that area first and because the overburden was thinnest there, making that area the least costly to mine. (Decision at 7; Tr. 252-53). Capps concluded that the estimated operating costs of mining Area 1 exceeded the estimated revenues and that the same would be true of mining any other area because the operating costs would be higher still due to the greater depth of overburden to be stripped. (Decision at 7; Ex. 2 at 21, Table 6; Tr. 269-71.)

Judge Sweitzer concluded that the appropriate time period for determining the price of gold were the years leading up to the date of the issuance of the FHFC. In his Mineral Report, Capps provided monthly gold prices for 5 complete years, 1988 through 1992. (Ex. 2 at 35.) The Garcias submitted gold prices for the 5-year period from April 1985 through March 1990. (Ex. L.) Judge Sweitzer used the 5 years of gold prices, as provided by the Garcias, after comparing them to the BLM figures for the years that overlapped. Once he determined the figures for the years of overlap were virtually the same, he concluded that the remaining periods set forth in the Garcias' table could be considered to be accurate.<sup>3/</sup> He calculated the average gold

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<sup>3/</sup> There were some minor discrepancies between Capps' figures and those of the  
(continued...)

spot price for the period of April 1985 through March 1990 as \$396.73 per troy ounce (/tr-oz.), with a range of \$316.37 (May 1985) to \$486.31/tr-oz. (Dec. 1987), and therefore determined that a valuation of the gold at \$400/tr-oz. was appropriate. BLM argues that Capps correctly used data both before and after the issuance of the FHFC, which resulted in a value of gold of \$382/tr-oz.

Capps provided figures for the spot price of gold showing that the market trend was downward after the issuance of the FHFC. The Garcias' figures show that in 1985 the monthly value ranged from \$316.37 to \$330.23 and then started to climb in 1986, reaching a peak of \$486.31 in December 1987, followed by a gradual drop below \$400. The Garcias' figures also show that the average prices were: \$322.48 in 1985 (for the last 9 months), \$375.37 in 1986, \$446.41 in 1987, \$436.98 in 1988, \$381.35 in 1989, and \$383.60 in 1990 (for the first 3 months). (Ex. L.) Capps' figures show average gold prices of \$362.19 in 1991 and \$343.69 in 1992. The historic range of gold prices based on the combined 8 years of information from Capps and the Garcias shows that there were abnormally high gold price years in 1987 and 1988. The average gold price for all 8 years is \$381.51.

The question of whether the mineral discovered on the claim is "presently marketable at a profit" means that a mining claimant "must show that, as a present fact, considering historic price and cost factors and assuming that they will continue that there is a reasonable likelihood of success that a paying mine can be developed." United States v. Knoblock, 131 IBLA 48, 80, 101 I.D. 123, 140 (1994); In re Pacific Coast Molybdenum Co., 75 IBLA 16, 29, 90 I.D. 352, 360 (1983).

In United States v. Collord, 128 IBLA 266, 277, n. 14 (1994), aff'd in relevant part, rev'd in part, No. 94-0432-S-EJL (D. Idaho, Sept. 28, 1994), aff'd, 154 F.3d 933 (9th Cir. 1998), we did not limit consideration of the price of gold to an historic range up to and including the date of issue of an FHFC. Instead, the Board discussed the evidence in the record, which included gold prices from January 1, 1984, the date the land in question was withdrawn from mineral entry, through July 1988, the FHFC

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<sup>3/</sup> (...continued)

Garcias, but in only one month did this amount to more than a dollar. In March 1990 the figures differed by \$2, with the Garcias' figure being the higher. However, for the 2 years in which there are prices from both parties, it is Capps' prices that are minimally higher, with his average gold price for 1988 being 6 cents higher and 8 cents higher for 1989.

having been issued in June 1985,<sup>4/</sup> and then limited itself to “the Jan. 1, 1984, price and the average price for the period from May 1984 to January 1986 (\$330.66/oz.) as representing the immediate historic period surrounding issuance of the final certificate in June 1985.” *Id.* Thus, while Collord does provide support for looking beyond the date of issuance of the FHFC in order to establish an applicable gold price in this case, it does not provide specific guidance on what the relevant period of time should be.<sup>5/</sup> For that reason, under the circumstances of this case, we will defer to Judge Sweitzer’s finding of \$400/tr-oz. for the price of gold, as it does not differ significantly from that offered by Capps (\$382/tr-oz.).

There is no dispute over the amount of recovered gold in the samples or over the inclusion of a 1 percent smelting fee. (Tr. 318-19.) However, while Capps used a fineness factor of 800 in his calculations, Judge Sweitzer correctly applied a fineness factor of 808 as measured by the laboratory. (Ex. 2 at 44; Tr. 247.) Because Capps did not explain why he used a selling price of 80 percent of the spot price, Judge Sweitzer correctly accepted the testimony of Freeman that, based upon his experience in gold mining in Oregon, the selling price of gold was typically 85 percent of the spot price. (Tr. 388-90.)

In his decision, Judge Sweitzer utilized the formulas below to determine the gold value of a loose cubic yard (lcy) of pay zone gravels, based on \$400/tr-oz., a fineness factor of 808, and a 1 percent smelting charge. See Decision at 21.

Cents per milligram (mg) of gold (au) = \$400/troy oz. (spot price) x 808 (fineness factor) x 0.1 ÷ 31104 mg/au/troy oz. = .99 cents/mg au

Gold value per loose cubic yard of sample (\$/lcy) = (recovered gold x .99 cents/mg au) ÷ (sample size x 100)

Value sample = sample size x \$/lcy

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<sup>4/</sup> “Following payment of the required purchase money, BLM issued a “Mineral Entry Final Certificate” on June 26, 1985, with patent to issue upon verification of the discovery of a valuable mineral deposit.” 128 IBLA at 267.

<sup>5/</sup> Therein, despite having data for a three-year period beyond issuance of the FHFC, the Board utilized only a few months of that data (July 1985 to January 1986).

$\$/\text{lcy}$  of pay zone gravels = sum of “value of samples” for relevant samples <sup>6/</sup> x 0.99  
(to account for 1 percent smelting fee)  $\div$  sum of sample sizes

<u>Sample No.</u>	<u>Size</u>	<u>Recovered gold</u>	<u>\$/lcy</u>	<u>Value of sample</u>
G-1	2.12 lcy	1717 mg	\$ 8.42	\$ 17.85
G-2	2.80 lcy	1541 mg	\$ 5.72	\$ 16.02 <sup>7/</sup>
G-3	1.20 lcy	1406 mg	\$12.19	\$ 14.63
G-4	1.40 lcy	664.6 mg	\$ 4.94	\$ 6.92

The value of the pay zone gravels derived from the three samples in Area 1 is the sum of value of those samples (\$17.85+\$14.63+\$6.92 or \$39.40) x 0.99  $\div$  sum of sample sizes (2.12 lcy+1.20 lcy+1.40 lcy or 4.72 lcy). That figure is \$8.26/lcy. <sup>8/</sup>

There was no challenge to Capps’ estimate of an in-place volume of 26,667 cubic yards of overburden and 10,000 cubic yards for the pay zone gravels at the time of the issuance of the FHFC. In his original report Capps had applied a swell factor of 1.14 to the pay zone, resulting in a pay zone of 11,400 lcy. <sup>9/</sup> (Decision at 8; Ex. 2 at 13, 14, 17) In his revised Mineral Report, Capps used a swell factor of 1.3 because it approximated the 1.33 swell factor used by the Garcias in their economic analysis in the patent application. Rodine also used a 1.3 swell factor. Freeman testified that the measured swell factor for a gravel sample he took from the

<sup>6/</sup> In this formula, Judge Sweitzer incorrectly described this factor as the “sum of \$/lcy for each relevant sample.” However, it is properly the “sum of ‘value of samples’” for each of the three relevant samples (G-1, G-3, and G-4), which is, in fact, what he used in computing his value of the pay zone gravels.

<sup>7/</sup> Capps did not use Sample G-2 in estimating revenues because it was located outside of Area 1 near the boundary with the Seneca Lumber Company’s property. (Tr. 249-51.) Although Judge Sweitzer held that this was proper (Decision at 7), he did include the figures for Sample G-2 in his chart.

<sup>8/</sup> Utilizing Capps’ value for gold, \$382/tr-oz., would result in a value for the pay zone gravels of \$7.87/lcy.

<sup>9/</sup> “Swell” is defined in A Dictionary of Mining, Mineral and Related Terms, U.S. Department of the Interior, Bureau of Mines 1110 (1968), as: “The tendency of soils, on being removed from their natural, compacted beds, to increase in volume due to an increase in void ratio; that is to say, the space between soil particles increases.”

deposit on the Seneca Lumber property near its border with the Garcias' claim was 1.4 and that this figure was consistent with the swell factors for gravel of 1.2 to 1.3 in a reference book. Judge Sweitzer also noted that another reference book identified the swell factor for ordinary gravel, cemented gravel, and gravel and clay to be 1.2 to 1.3, 1.4, and 1.35, respectively. (Ex. 18; Decision at 11).

Judge Sweitzer concluded that the weight of the evidence showed that a swell factor of 1.35 to 1.4 would be appropriate and properly applied a swell factor of 1.35 to the pay zone gravels. This resulted in a total figure of 13,500 lcy for the pay zone. Multiplying this volume by the average value of the pay zone gravels of \$7.87/lcy for Area 1, the value of the Area 1 pay zone gravels was \$111,510 as of March 20, 1990. Given a selling price of 85 percent of the spot price for gold, the expected revenue from the sale of gold extracted from mining Area 1 would be \$94,784 ( $\$111,510 \times 0.85$ ) or \$94,800, rounding to the nearest \$100.<sup>10/</sup>

Application of the prudent man standard requires consideration of all the costs of producing the gold. See Lara v. Secretary of the Interior, 820 F.2d 1535, 1541 (9<sup>th</sup> Cir. 1987). Thus, Judge Sweitzer analyzed the total operating costs and capital costs of mining Area 1 of the claim.

He first looked at the cost of removing the overburden. He noted that the Garcias and Capps had estimated the overburden swell factor to be 1.33 and 1.3 respectively, and that Bob DeTar, a BLM geologist, had opined that a swell factor of 1.3 was conservative. (Decision at 12; Tr. 542-43.) He discounted the opinion of Freeman that the swell factor should be 1.2 because that opinion was not supported by the reference books. (Decision at 12, n.2.) Judge Sweitzer applied a swell factor of 1.35 and estimated the overburden "conservatively" at 36,000 lcy. (Decision at 22.) BLM has not challenged the swell factor for the overburden.

Both Capps and Rodine used a labor cost of \$12.50 per hour and operating costs of \$7.50 per hour for bulldozer operations in their economic analyses. Capps testified that he used those rates because they were used by the Garcias, but that he believed that the rate for a dozer operator in the local market was much higher. (Tr. 267.) Capps, however, did not provide any other labor rates. Because there was no evidence to support any other rates, Judge Sweitzer accepted \$12.50 and \$7.50 as appropriate hourly costs.

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<sup>10/</sup> Expected revenue from the sale of gold extracted from mining Area 1, based on Capps' gold value of \$382/tr-oz., would be \$90,300. (Decision at 21.)

One point of dispute between the parties is the bulldozer production rate. To calculate the mining costs, Capps used a bulldozer production rate of 105 lcy/hour, which he got from the Garcias. (Tr. 567.) That production rate was similar to the average production rate of a D-8 bulldozer engaged in road excavation, as set forth in a 1992 update of a BLM road appraisal guide. (Tr. 514, 567; Ex. 17 at 3-4.) Judge Sweitzer observed that Capps did not indicate whether the D-8 referenced in the guide was similar to the Caterpillar D-8 13A bulldozer, whereas Freeman testified that the “big, new D-8s are an entirely different thing” from an old D-8 like that owned by the Garcias. (Decision at 12; Tr. 372-73.) BLM asserts that there is no evidence in the record correlating a 1955 D-8 13A dozer performance with that of a D-6, as suggested by the Garcias’ witness, Rodine, other than evidence that the weight is similar, and argues that if Judge Sweitzer wished to use lower costs based upon older equipment it would be reasonable to use the lower production rate of that equipment. BLM points out that in the Garcias’ amended patent application, the Garcias estimated that they would strip 500 lcy in an 8-hour day for a production rate of 62.5 lcy/hour. (SOR at 25; Ex. 2 at 39.)

Rodine selected a D-6 bulldozer for his analysis because he believed that it was the bulldozer most similar to the Garcias’ old D-8, weighing nearly the same. (Tr. 425, 486.) Judge Sweitzer concluded that the appropriate basis for a bulldozer production rate was the handbook rate for the D-6 because no other witness testified that another bulldozer was similar to that used by the Garcias. He recognized that there was a dispute over the accuracy of the production rate figures in the handbook, but concluded that use of the handbook rates was preferable because they more specifically related to the bulldozer the Garcias anticipated using, and also contained correction factors to account for the specific job conditions on the claim. The case record supports that conclusion.

Judge Sweitzer applied job condition correction factors of .75 for “average” operator efficiency, 1.0 for the difficulty of cutting or pushing the material, 1.2 for the efficiency gains of slot dozing, 0.8 for a direct drive transmission, and 0.83 for job efficiency. (Decision at 14-15.) BLM did not challenge these factors. Applying the correction factors to the base production rate of a D-6 bulldozer resulted in a production rate of 188 lcy/hour before considering a slope factor. (Decision at 23.)

Capps estimated the average slope to be zero, but did not explain how he made that estimate. Rodine did not estimate the slope in Area 1, but estimated that Area 2 had a 10-percent downgrade. After examining topographical maps introduced by the Garcias (Exs. P, S), Judge Sweitzer concluded that the slope was less than 10 percent. He then determined that an average of the Capps and Rodine estimates was a reasonable approximation of the slope. That average was a five percent downgrade which translated into a 1.1 correction factor for slope. (Decision at 24; Ex. W.)

Applying the slope correction factor to the production rate resulted in a production rate of 207 lcy/hour. He found that it would therefore take 174 hours to remove 36,000 lcy of overburden.

Judge Sweitzer used the same factors in determining the production rate of the bulldozer in removing the pay zone gravels, except for a correction factor of 0.8 for ripping bedrock. (Decision at 27.) This resulted in a production rate of 189 lcy/hour. On this basis, he determined that it would take 71 hours to remove 13,500 lcy of pay zone gravels.

Capps and Rodine differed in regard to the rental rate for a bulldozer.<sup>11/</sup> Capps applied a rate of \$64.78/hour for a D-7 bulldozer, which was an average he derived from three reference guides. (Ex. 2 at 29.) Rodine gave his personal estimate of a rental rate equivalent of \$25.00/hour to cover the opportunity cost of using the Garcias' old D-8, including capitalization, maintenance, and repair costs. (Tr. 493-94.) Judge Sweitzer averaged the two estimates and determined that a reasonable bulldozer rental rate would be \$44.89/hour. He supported this conclusion by noting that the BLM road appraisal guide showed that the rental rate for a D-6 bulldozer, which he found was more similar to the Garcias' bulldozer, was 25 percent less than that for a D-7, and that the rental rate should be based upon rental of older equipment. (Decision at 25.) He found that the rental rate for a D-7 in a reference guide for older construction equipment was \$58.00 per hour. He stated: "Given that a rental rate of a newer D-6 was 25 percent less than the rate for a newer D-7 it was reasonable to assume that the rental rate for an older D-6 would be 25 percent less as well." (Decision at 25.) Thus, the estimated rental rate of \$43.50/hour ( $\$58.00 \times .75$ ), as calculated from the rental guides, was nearly identical to the average of the estimates provided by Capps and Rodine.

Judge Sweitzer correctly determined that the total hourly rate to operate the bulldozer would be \$64.89 based on labor costs of \$12.50/hour, fuel and lubricant costs of \$7.50/hour, and a rental rate of \$44.89/hour. With an estimated 174 hours required to remove the overburden, the estimated cost of removing the overburden was \$11,291. The estimated cost of removing the pay zone gravel was \$4,607 (71 hours x \$64.89/hour). We round these costs to the nearest \$100 as \$11,300 and \$4,600.

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<sup>11/</sup> All parties recognized that, although the Garcias owned their equipment, it was necessary to consider a reasonable rate that a prudent man would pay for the equipment. United States v. Wirz, 89 IBLA 350, 358 (1985).

Because a front end loader would be used to load the pay zone gravels into the wash plant, Judge Sweitzer calculated the cost of its operation. Capps had used the same three reference guides he used for bulldozer costs to estimate a \$42.40/hour rental rate for a front end loader. On the other hand, Rodine used a rental rate of \$20.00/hour. (Ex. X.) Judge Sweitzer concluded that Rodine did not adequately explain the basis for his figure. Using the same rationale as he had used for the bulldozer, he averaged the two figures and arrived at a rental rate of \$31.20/hour, to which he added \$12.50/hour in labor costs, as well as \$3.75/hour in lubricant and fuel costs, because Capps and Rodine had agreed that those cost estimates were appropriate. (Decision at 27.) Thus, he concluded that an appropriate cost for the front end loader was \$47.45 per hour.

The parties do not dispute the estimate of costs attributable to the front end loader, or Judge Sweitzer's calculation that the cost to load the tailings into the dump truck would be \$5,125, based upon a production rate of 100 lcy/hour for 108 hours. Nor do they challenge Judge Sweitzer's determination that the total cost of the dump truck to haul the tailings to the disposal area would be approximately \$5,244, resulting in a total cost of \$10,369 to dispose of the tailings. Judge Sweitzer broke down the placing of tailings into two components: (1) cost to load the tailings into the dump truck (\$5,125) and (2) cost of hauling the tailings to the disposal area (\$5,244). We round each to the nearest \$100 (\$5,100 and \$5,200) before arriving at a total cost to place tailings of \$10,300.

Further, Judge Sweitzer's conclusion that it would take 135 hours for the front end loader to load the 13,500 lcy of pay zone gravels into the wash plant is not questioned. Multiplying the hourly cost rate of \$47.45 by 135 hours results in a cost of \$6,406 to load the pay zone gravels into the wash plant. We round that cost to \$6,400.

Judge Sweitzer determined that the best approximation of the rental rate of the wash plant was \$27.68/hour. He reached that figure by averaging Rodine's \$10/hour estimate (Ex. V) and Capps' estimate of \$45.35/hour (Ex. 2 at 34; Ex. 3 at 11), after concluding that neither of the estimates stood out as being more reliable. (Decision at 28.) Capps and Rodine agreed that fuel and lubricant costs would be \$2.40/hour. (Ex. 2 at 28; Ex. V.) Judge Sweitzer accepted that figure, stating at page 28 of his decision that the total hourly cost for the wash plant would be \$30.08. We accept Judge Sweitzer's estimate as reasonable.<sup>11/</sup> For reasons discussed in

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<sup>12/</sup> We note that Judge Sweitzer did not include any labor cost in the total wash plant cost. Capps used an hourly labor cost of \$12.50 in his original Mineral Report  
(continued...)

detail below, we find that the record supports a wash plant that operates at 25 lcy/hour. At that rate, it would take 540 hours to process the 13,500 lcy of pay zone gravel, and the processing cost is estimated at \$16,243 or \$16,200 (540 hours x \$30.08/hour).

[3] The Board has long held that the costs of compliance with all applicable Federal and State laws, including environmental laws, are properly considered in determining whether or not the mineral deposit is presently marketable at a profit, *i.e.*, whether the mineral deposit can be deemed to be a valuable mineral deposit within the meaning of the mining laws. Agri Beef Co., 148 IBLA 25, 59 (1999), and cases cited. Thus, Judge Sweitzer properly reviewed the costs of environmental compliance.

David Belsky, an employee of DEQ, testified that, when there was any water discharge that goes directly to the surface water, a Federal permit is required, but for activities that recycle the waste water on site without a direct discharge to surface waters a state permit, termed a Water Pollution Control Facilities permit (WPCF), is mandated. (Tr. 165-66.) He also testified that the rules required “that there be no direct discharge to surface waters and that ground water not be impacted above what the water quality requirements are in the appropriate rules.” (Tr. 173.) He stated that, if Garcia submitted an application which met the requirements of a WPCF permit, it would be approved. (Tr. 170.)

Judge Sweitzer concluded that there was a reasonable probability that the settling ponds proposed by Capps would meet with the approval of DEQ and comply with environmental standards. He found that the evidence showed that it was likely that the Garcias would have to obtain the WPCF permit. Thus, he added \$7,115 as the cost of the WPCF permit to the cost of mining. That cost was based on a \$50 filing fee, a \$6,280 processing fee and an annual compliance fee of \$785. Judge

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<sup>12/</sup> (...continued)

(Ex. 2 at 28), although he did not include any labor cost in his revised report. Rodine used an hourly labor cost of \$12.50 in his economic analysis. (Ex. V at 2.) In their updated application, the Garcias stated that in their experience mining other claims, the wash plant was fed at the rate of 60 to 100 lcy/hour with a “two[-]person crew.” (Ex. 2 at 38.) The Garcias proposed a 25 lcy/hour wash plant operation, which included a “helper for cleanup, maintenance, etc.” *Id.* Thus, arguably the record supports the inclusion of a \$12.50 labor cost for a “helper” at the wash plant. However, we have not included that additional cost, which would be \$12.50/hour x 540 hours or \$6,750.

Sweitzer added only one annual fee because the anticipated life of the mine was less than one year. (Tr. 496; Decision at 29.) We round this cost to \$7,100.

Belsky testified that in order to obtain a WPCF permit a settling pond would have to be constructed that would meet the state's water quality standards. Because of the topography of the area, Belsky believed that an engineered settling pond would be required before DEQ would issue a permit. (Tr. 169.) Since BLM did not present any evidence as to how much the engineering of settling ponds would cost, Judge Sweitzer reviewed the testimony of the Garcias' witnesses, Rodine and Freeman. Rodine testified that the ponds could be engineered for less than \$500 (Tr. 491), but Freeman believed that engineering would cost a few thousand dollars. (Tr. 379.) Judge Sweitzer used the testimony of Freeman and Rodine to calculate that a reasonable figure for engineering costs would be \$1,000.

Judge Sweitzer noted that the need for filter rock and pond liner for the settling ponds was in dispute, but concluded that "the witnesses had placed more confidence in the efficacy of settling ponds made out of filter rock and a liner rather than clay set on bedrock" and therefore included those costs. (Decision at 29.) He then accepted Capps' estimate of a construction cost of \$14,700, which was based on the cost of clean filter rock and a polypropylene liner. (Ex. 2 at 21; Tr. 349-50.) However, BLM argues that Capps' estimate was based on a waste water system intended to handle a production rate of 25 lcy/hour and the costs, therefore, should be increased four-fold, consistent with Judge Sweitzer's use of a rate of 100 lcy/hour. (SOR at 25.)

The waste water treatment system that Capps designed was one in which all water would have to be recirculated through a rock filter system to remove suspended clay. (Ex. 2 at 21.) The treatment system consisted of three ponds, two pre-recirculation ponds and one recirculation pond, that would recycle the water with no discharge to surface waters. (Ex. 2 at 21; Tr. 271-72, 340-42, 592-93.) The size of the ponds was based on the Garcias' June 14, 1990, figure of a wash plant production rate of 25 lcy/hour. (Tr. 287; Ex. 2 at 20; Ex. 3 at 13.) Capps testified that he "used a publication from Alaska on the design of settling ponds and used their method of calculating the size of the settling pond for production rates and so I ran that through the computer to generate the size of the settling pond that would be required, based on their information." (Tr. 272.) Judge Sweitzer accepted Capps' estimate, using it for the cost of the pond. (Decision at 30.)

Judge Sweitzer used a production rate of 100 lcy/hour for the wash plant based on the testimony of Rodine and the updated patent application, in which the Garcias noted that, even though they proposed a 25 lcy/hour operation, in the past

the wash plant had been used to process ore on other claims at rates of 60 to 100 lcy/hour with a two-person crew. (Tr. 427-28; Ex. 2 at 38.) However, while the wash plant might be able to process ore at the rate of 100 lcy/hour, the question was whether the settling ponds could handle that level of production, because a WPCF permit required that there be no direct discharge. Allen Throop, an employee of the Oregon Department of Geology and Mineral Industries (DOGMI), testified that a settling pond system was necessary if Garcia intended to mine the site with a non-discharge system and that the small settling pond on the claim was not adequate to process the gravel and water necessary to mine 600 lcy a day. (Tr. 218, 219.) Capps testified that the settling pond the Garcias had was totally inadequate (Tr. 271) and that when he was on the claim in July 1997 the pond was overflowing. (Tr. 275.) Belsky testified that the same pond was wholly inadequate to handle the operation. This testimony supports BLM's argument that the settling ponds described in Judge Sweitzer's opinion would not support a wash plant production rate of 100 lcy/hour with no direct discharge of process water.

While the Garcias argue that there is no evidence that there is any relationship between the size of ponds required and the ore production rate, the record shows otherwise. The wash plant production rate of 25 lcy/hour determines the amount of water that will be used and therefore the size of the ponds. (Tr. 338; Ex. 2, Table 7.) The design handbook shows a calculation of 15 gallons per minute (gpm)/cubic yard. (Tr. 338; Ex. 2, Table 7.) Thus, a production rate of 25 lcy/hour results in water use at a rate of 375 gpm or 22,500 gallons per hour (gph). The waste water treatment system on which Capps based his cost estimates would be inadequate for a wash plant production rate of 100 lcy/hour because, if the production rate quadrupled, the amount of water used also would quadruple from 22,500 gph to 90,000 gph. From this it is clear that the size of the ponds as designed by Capps would be too small to handle the water from a wash plant operating at 100 lcy/hour. The WPCF permit requires that there be no water discharge, and thus the settlement ponds must be large enough to handle all of the water from the wash plant.

The design handbook used by Capps shows a direct correlation between the size of the first pre-recirculation pond and the water flow with 1 square foot per gallon per minute. (Ex. 2, Table 7.) Thus, a production rate of 25 lcy/hour uses 375 gpm and requires a first pond size of 375 square feet. The size of the second pond is half the size of the first. Because the size of these ponds would have to be quadrupled to handle a production rate of 100 lcy/hour, so would the amount of filter rock. As designed by Capps, the volume of filter rock required for the two pre-recirculation ponds is 1,800 cubic yards at an estimated cost of \$6.00 per cubic yard or \$10,800 for the ponds, with an additional cost of \$3,900 for the liner. (Ex. 2 at 21.)

We could, as BLM suggests, simply quadruple the cost of building the ponds. However, to do so would ignore economy of scale, and there is no evidence regarding the cost of building settling ponds capable of holding the effluent from a 100 lcy/hour plant at the site. On the other hand, there is, as described above, sufficient evidence in the record of the costs to build settling ponds to support a 25 lcy/hour wash plant.

BLM also asserts that there is no evidence in the record that there is sufficient space to construct ponds of a size necessary to accommodate 100 lcy/hour. While there is some question whether there is space to construct ponds of a size to process the water from a wash plant operating at 100 lcy/hour, BLM does not dispute that there is adequate space to accommodate ponds of a size sufficient to service a 25 lcy/hour operation.<sup>13/</sup> We will include Capps' cost estimate of \$14,700 for the construction of the ponds, as did Judge Sweitzer.

Capps stated that the pre-recirculation ponds would have to be cleaned out each day with a front end loader, or they would fill up with fine tailings gravels and become inefficient to operate. (Ex. 21 at 12, 21, 30; Tr. 342-43.) Capps proposed use of the front end loader for 114 hours for that job. (Ex. 2 at 30.) Judge Sweitzer explained that Capps' hourly estimate was based on 11,400 lcy of pay zone gravels; that the revised amount of those gravels, 13,500 lcy, is 18.42 percent more than the 11,400 lcy estimate; and that "[t]he number of hours to clean out the settling ponds ought to be increased by the same percentage." (Decision at 28.) Judge Sweitzer found that the number of hours should be 135; that the hourly rate for the front end loader was \$47.45/hour; and that "the operating cost to clean the settling ponds would be \$6,413." *Id.* There was a small mathematical error in his calculation and the corrected estimate of the cost of cleaning the ponds is \$6,406, versus his estimate of \$6,413, which we round to \$6,400

BLM argues that Judge Sweitzer should have included costs from compaction and stabilization of the overburden. Judge Sweitzer stated that it was "unclear whether the overburden stockpile for Area 1 would have to be graded and

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<sup>13/</sup> We note that the settling pond design proposed by Rodine and depicted on a map of the claim (Ex. Q), which was drawn to scale, showed a primary settling pond constructed with overburden, with berms "ultimately 10 feet high, ultimately about 40 feet wide at the base, with a 20-foot roadway section across the top with a 1-1/2 to 1 slope, armored with the gravels." (Tr. 450-51.) A comparison of Ex. Q with another map of the claim (Ex. S), also drawn to scale, shows the primary settling pond covering the shop and abutting the Garcias' house. (Tr. 451-52: see Ex. R.)

compacted” and he explained his rationale for not including such costs. (Decision at 25-26.) We find this explanation persuasive and supported by the record.

Recognizing that the wash plant operation has been downscaled from 100 lcy/hour to 25 lcy/hour, we will briefly review the various operating costs to determine which of those costs must be adjusted. First, the rate and cost to remove overburden, place tailings, and remove pay zone gravels are a function of the size of the equipment being used. The equipment has not been changed, and the costs will remain the same. The time required to load the material into the wash plant hopper is a function of the size of the front end loader and its bucket, as is the time for removal of solids from the pond. Therefore, the only cost that will increase is the cost of operating the wash plant. All other costs remain the same as those used by Judge Sweitzer, with the exception that we have rounded each cost to the nearest \$100.

The total operating costs to mine Area 1 are calculated as follows:

Remove overburden	\$ 11,300
Place tailings	\$ 10,300
Remove pay zone gravels	\$ 4,600
Load gravels into wash plant	\$ 6,400
Process gravels through wash plant	\$ 16,200
Clean settling ponds	\$ <u>6,400</u>
Total Operating costs (exclusive of “lost time,” contingencies, and overhead and supervision costs)	\$ 55,300

Judge Sweitzer noted that both Capps and Rodine agreed that a cost for “lost time” and for contingencies should be included in operating costs. (Decision at 28.) After discussing the respective positions on those costs, Judge Sweitzer found that “lost time” should be 10 percent of “hard costs,” which are the total operating costs + the total capital costs, and contingencies should be 10 percent of total operating costs. BLM has not challenged these determinations and they are supported by the record.

Judge Sweitzer also explained that Rodine, but not Capps, had incorporated an additional overhead and supervision cost of 10 percent of all costs. Judge Sweitzer determined that “Rodine’s overhead and supervision cost shall be incorporated for purposes of analysis.” (Decision at 29.) That determination is supported by Rodine’s testimony: “And I also included, which Mr. Capps did not,

overhead and supervision cost, 10% of the cost, thinking that somebody has to write the checks, somebody has to watch out what's going on and whether or not that's Mr. Garcia, that's a project cost." (Tr. 429.)

As Judge Sweitzer stated: "To calculate the 'lost time' cost and overhead and supervision cost, the capital costs must be known." (Decision at 29.) He correctly excluded from capital costs \$10,000 in criminal and civil fines relating to Geoffrey Garcia's discharge of overburden into Rocky Creek in 1993, which Capps had included. Rodine testified, and Judge Sweitzer agreed, that including that amount as a cost of mining is clearly inappropriate. (Tr. 429.) We agree. As the Board has stated many times, "the prudent man test is objective, and subjective considerations \* \* \* have no place in the calculus of prudence." United States v. Rice, 73 IBLA 128, 140-41 (1983), and cases cited.

Both Capps and Rodine estimated setup costs of \$500, which Judge Sweitzer adopted. Rodine failed to include reclamation costs, but Capps estimated those to be \$2,000. Judge Sweitzer accepted that amount. Regarding environmental compliance, as noted above, Judge Sweitzer found that an expense of \$7,115 was appropriate for an individual WPCF permit.

<sup>14/</sup> Capital costs for engineering of \$1000 and for settling pond construction have been discussed previously.

The total capital costs are calculated as follows, again rounded to the nearest \$100:

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<sup>14/</sup> Neither Capps nor Rodine include a cost for a DOGMI operating permit. Nor did Judge Sweitzer. However, the record contains a letter to Geoffrey Garcia from DOGMI, signed by Throop, stating that as a result of a July 22, 1997, inspection, DOGMI had determined that mining without a permit had been taking place and that "a Closure Order has been issued for the site." To obtain a permit, it required an application, a \$535 application fee, an inspection fee of \$110 for a site operating without a permit, a reclamation plan, and an adequate bond. Such evidence could support an additional capital cost of \$535 for obtaining an operating permit. We have not included such a cost.

Setup	\$ 500
Individual WPCF permit	\$ 7,100
Reclamation	\$ 2,000
Settling pond construction	\$ 14,700
Settling pond engineering	\$ <u>1,000</u>
Total capital cost	\$ 25,300 <sup>15/</sup>

Thus, the total “hard costs” are \$80,500 (\$55,200 for operating costs + \$25,300 for capital costs). The three additional costs are (1) 10% of “hard costs” for “lost time” or \$8,100 ; (2) 10% of operating costs for contingencies or \$5,500; and (3) 10% of total costs, *i.e.*, “hard costs,” lost time, and contingencies, for overhead and supervision or \$9,400 ( $\$80,500 + \$8,100 + \$5,500 = \$94,100 \times .10 = \$9,400$ ). Thus, total estimated costs of mining are \$103,500 ( $\$80,500 + \$8,100 + \$5,500 + \$9,400$ ).

Subtracting the estimated total cost of \$103,500 to mine Area 1 from the estimated revenue from Area 1 (\$94,800), results in an estimated loss of \$8,700. <sup>16/</sup> Thus, the record fails to show the discovery of a valuable mineral deposit on March 20, 1990, and the claim must be declared invalid. We reverse Judge Sweitzer’s decision on that basis.

BLM also challenges Judge Sweitzer’s conclusion at page 32 of his decision that the evidence presented at the hearing “does not clearly show that residency was the primary purpose of [the Garcias’] use and occupancy.” Because we conclude that the Garcias failed to show the discovery of a valuable mineral deposit on the Last Chance Association Placer mining claim and that their claim is invalid, we need not address this alternative ground for declaring the claim invalid. <sup>17/</sup>

To the extent that other arguments have not been specifically addressed herein, they have been considered and rejected.

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<sup>15/</sup> This total is essentially the same as Judge Sweitzer’s. He found total capital costs of \$25,315, because he did not round costs to the nearest \$100, the cost of the individual WPCF permit being \$7,115.

<sup>16/</sup> Using the revenue calculation based on Capps’ gold price of \$382/tr-oz. (\$90,300) would result in an even greater loss (\$13,200).

<sup>17/</sup> We note that neither Geoffrey nor Charlotte Garcia offered any testimony at the hearing.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is reversed.

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Bruce R. Harris  
Deputy Chief Administrative Judge

I concur:

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H. Barry Holt  
Chief Administrative Judge