# THE LAW OF PLACER MINING CLAIMS

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# SUBMERGED LANDS

## Definition of navigability - the Daniel Ball Test

1870 U.S. Supreme Court case

Rivers "are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade or travel are or may be conducted in the customary modes of trade or travel on water."

## Gulkana River case

1987 Federal District Court in Alaska

BLM said that lower 30 miles of Gulkana River are not navigable and then conveyed lands to an ANCSA regional corporation. The District Court reversed and quoted Utah v. United States where the Supreme Court said "neither the extent nor the nature of commerce in the region at the time of statehood is relevant" to title.

When applying the Daniel Ball test test consider only the physical dimensions of the river at the time of statehood rather than how it was used.

The question then is whether the waterbody is susceptible to use as a highway for commerce based on its physical conditions at statehood.

## Physical Characteristics of the Gulkana River

3 to 6 feet deep
150 feet wide
frozen over 6 months/year
17 ft long native boats used it for fishing
now used by recreational craft

## Equal-Footing Doctrine

Because the original 13 colonies retained the beds of navigable waters upon entering the union, if the other states are to enter on

Boundary lines versus meander lines

If no error or fraud in a survey, the water line and not the meander line is the boundary of the riparian land.

The meander line is run to compute the acreage of fractional lots.

Cases where the meander line is the boundary line

Meander line was run where no lake or stream existed, or meander line is so far from the water line that fraud or error is indicated.

United States v. Ruby -

1. lands are large compared to patented lands

2. distance between meander line and water line

3. value of lands at the time survey

Basart exception to boundary rules so meander line is boundary line and United States owns accreted lands

Where accretion formed prior to homestead or private acquisition and substantial accreted lands exist between the water line and the meander line.

Eldon Johnson case - the IBLA held that accreted lands were owned by the United States.

79 acres patented
37 acres accreted

Determination is not based on exact percentage but all the facts.

Water action that changes boundaries:

accretion - gradual and imperceptible deposition of material along the bank.

Same rules of navigability apply to lakes and streams

Mining claims contiguous to navigable waters

Water line is boundary line, not meander line

All accretions after patent go to patentee

Federal minerals between the meander line and the water line

David Provinse (1978) said oil and gas lease does not cover lands between the water line and the meander line.

Lease extends only to the meander line.

Island existing at statehood in navigable waters

If the island is public land at statehood, it remains public land.

Unsurveyed island in navigable waters

Omitted islands belong to the United States if in existence at statehood.

Nonnavigable bodies of water

Just because a waterbody is meandered, does not mean it is navigable.

If uplands are unappropriated, beds are available to location and leasing.

Boundary of lease is meander line

partition lines

median lines

> It is not essential that there be an actual discovery of mineral on the land. It is sufficient to show only that known conditions are such as reasonably to engender the belief that the land contains mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end. Such belief may be predicated upon geological conditions, discoveries of minerals in adjacent land and other observable external conditions upon which prudent and experienced men are shown to be accustomed to act.

**Mineral in Character and the Ten Acre Rule (Placer Claims Only)**

Each 10-acre subdivision of a placer claim must be mineral in character; if a 10-acre tract is nonmineral in character, it must be excluded from the patent. In **McCall v. Andrus**, 628 F32d 1185 (9th Cir. 1980), cert. denied 450 U.S. 996 (1981), the Ninth Circuit Court of Appeals upheld the ten-acre rule and also the rule that only one discovery is required for a claim, regardless of size.

**Distinction between "Discovery" and "Mineral in Character"**

A small number of Interior and Federal court cases have distinguished between "discovery" and "mineral in character." Proof of discovery requires a showing of an exposed mineral deposit on the claim, whereas, mineral in character may be proved by geological inference. The marketability test is applied to both discovery and mineral in character. Discovery is the higher standard because lands may be mineral in character but still lack a discovery.

**Ten-Acre Rule Applies to Individual Placer Claim**

The 10-acre rule is equally applicable to individual and association placer claims. Therefore, every placer claim subjected to a validity examination will have at least two tracts examined for mineral in character, unless the claim is less than 10 acres in size.

It is quite possible that lands settled upon as suitable only for agricultural purposes, entered by the settler and patented by the government under the preemption laws, may be found, years after the patent has been issued, to contain valuable minerals. Indeed, this has often happened. We, therefore, use the term **known** to be valuable at the time of sale to prevent any doubt being cast upon titles to lands afterwards found to be different in their mineral character from what was supposed when the entry of them was made and the patent issued.

**Mineral in Character Established by Economics**

In the 1981 **Oneida Perlite** case, the Interior Board of Land Appeals described the two different situations that can be a basis for mineral in character:

1. **Geologic conditions** - The lands may be nonmineral in character where the mineral does not exist in sufficient quality and (or) quantity for a 10-acre subdivision to be of commercial value.

2. **Economic conditions** - The lands may be nonmineral in character where there is a superabundant supply of a mineral that has no market and therefore no commercial value. In other words a mineral deposit would exist that is so large that only a small part of it could conceivably be marketed in the foreseeable future. Some these cases have involved deposits so enormous that they alone could satisfy the entire needs of the United States for several hundred years. Construction minerals such and sand and gravel, pumice, cinders, building stone, perlite and clay are common examples of minerals with reserves for which there is no market.

**Marketability Applied to Mineral in Character**

Mineral in character may be proved by geological inference coupled with marketability. The application of marketability means that there must not only be a mineral deposit on the property but that it can be extracted, processed and marketed at a profit.

does not render the location entirely void. The part of the claim that is within the marked boundaries and on unappropriated land is valid.

### Amended Location

An amended location may be filed only if the original location was valid and had a curable deficiency. Although a mining location may be amended without loss of any rights acquired under the original location, the amendment cannot be used to acquire rights already established by other locations made between the dates of the original and amended location. For example, a locator cannot amend a claim to cover additional ground that was acquired by an intervening locator.

## PLACER CLAIMS

### Placer Deposits Defined

Placer deposits are defined in the statute as "including all forms of deposit, excepting veins of quartz, or other rock in place." In other words every deposit, not located with a lode claim, should be appropriated by a placer location. Because many mineral deposits do not fall readily into either category, the courts have interpreted this definition in many cases.

### Maximum Claim Size

No location of a placer claim shall include more than 20 acres for each individual claimant. However, an association of two locators may locate 40 acres;; three may locate 60 acres, and so on. The maximum area that may be embraced by a single placer claim is 160 acres and such a claim must be located by an association of at least eight persons. Corporations count as an individual claimant and are limited to 20-acre claims. For example, a 20-acre placer claim might be described as being the N1/2 NE1/4 NW1/4, Section 5, T.6 N., R.3 W., Boise Meridian.

application process, a metes and bounds survey may be required to describe the actual land that may be patented.

### Exceptions to the Rule of Conformity

Conformity to the public land surveys and the rectangular subdivisions is not required if such compliance would necessitate running the boundaries of the claim over other prior locations or where the claims are surrounded by prior locations. Federal regulations provide that "where a placer location by one or two persons can be entirely included within a square 40-acre tract, by three or four persons within two square 40-acre tracts placed end to end, by five or six persons within three square 40-acre tracts, such locations will be regarded as within the requirements where strict conformity is impracticable." For example, the Secretary has held that a 10-acre placer claim consisting of a string of four contiguous 2.5-acre tracts straddling three regular 10-acre subdivisions is in conformity with the public land surveys.

### Lack of Conformity Is a Question of Fact

According to Interior Department regulations, "whether a placer location conforms reasonably with the legal subdivisions of the public survey is a question of fact to be determined in each case." Therefore in the event of alleged unconformity in connection with a patent application, a hearing would be required before the application could be rejected. However, the most appropriate way to handle such a problem is to require a claimant to amend the claim so that it does conform as nearly as practicable with the rectangular system of survey.

### Gulch Placers

AA "gulch" placer, which cannot, by reason of its environment, practicably be conformed to the system of public land surveys, may, upon sufficient and satisfactory showing, be patented in a shape approximating the public survey system as nearly as the conditions will reasonably permit. Gulch placers may be allowed with a mineral deposit confined within a narrow strip of land in the bed and on the banks of a small stream in a canyon flanked by abrupt walls or rocky slopes on each side, containing no mineral, agricultural, or timber value. It is almost always to the advantage of the claimant as well as the

in character. The rule is applied equally to individual and association placer claims. Use of the rule is not restricted to validity examinations in connection with patent proceedings, but is also applied on all validity examinations of placer mining claims.

### Ten-Acre Tracts May Include Nonmineral Land

If a placer location is made to conform as nearly as practicable to the system of public land surveys and the rectangular subdivisions of such surveys embrace small portions of land not valuable for placer mining, it is still appropriate to conform the location to legal subdivisions.

### Advantages of Association Placer Claims

A single discovery of a valuable mineral deposit is sufficient to validate a placer location, whether it be 20 acres by an individual, or of 160 acres or less by an association of persons. However, each 10-acre subdivision with the claim must be mineral in character. Furthermore, only one hundred dollars worth of assessment work is required per claim, regardless of size. There are other advantages such as savings in recordation and filing fees with fewer claims.

### Subdivision of Placer Claims into 10-Acre Parcels

Placer claims must be laid out in square 10-acre parcels to determine whether each 10-acre portion of the claims is mineral in character, regardless of whether the claims conform to the system of public land surveys. In a 1984 case , the Interior Board of Land Appeals gave the rules for subdividing a placer claim into square 10-acre parcels in situations where such claims are not in conformity with the public land surveys.

In applying the 10-acre rule, each claim must be subdivided along the axis in which it was laid out on the ground. Inasmuch as it is presumed by the statute that a placer claim shall conform to the public land survey, the 10-acre rule is properly applied by subdividing a claim into parcels as nearly square as possible.

the courts have dealt with the issue of dummy locators, generally only hearing the most blatant or obvious cases. Such cases are normally exposed during the examination of title documents as required by the mineral patent process. It is quite likely that most of such cases go undetected because of the lack of record information concerning the relationships among the individual parties.

Perhaps the most common example of dummy locators is where all the locators of an association placer claim are officers in the same corporation. Because a corporation has the status of an individual claimant, a corporation is only entitled to locate 20-acre claims. If a locator has knowledge of a concealed interest and is a party to the use of dummy locators, the location is deemed fraudulent and is invalid in its entirety. However, whether a claim is located by dummy locators is a question of fact that must be determined at a hearing.

### Discovery Required Before Transfer of Association Placer Claim

Although it permissible for an individual to acquire an association placer claim more than 20 acres in size, it is essential that there were sufficient individuals to make the original location, and furthermore that a discovery was made within the limits of the claim prior to the date of transfer. In many cases, corporations have purchased association placer claims from associations of persons. If the association claim does not have a discovery established prior to the date of conveyance, a subsequent discovery will only entitle the corporation to a 20-acre patent.

### No Limit to Number of Contiguous Claims Included in a Patent Application

There is no limit to the number of 160 association placer claims that may be included in a patent application. Of course the claims must be contiguous.

### Building Stone Placer Act

Locatable deposits of building stone may be located with placer-type claims as authorized by the Act of August 4, 1892. The law requires that building stone placers may be located only on lands "that are chiefly

excepting veins of quartz, or other rock in place..." Therefore, the statutory definition of a placer includes essentially every type of deposit that is not a lode.

### Statutory Definition of Lodes

The mining law states that lode location may be made "upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits..." Upon comparing the statutory definition of a lode with that of a placer, it appears the critical distinction between the two is that a lode should be rock in place, whereas, a placer should be a deposit that is not rock in place. However, the confusion began when the courts held certain hardrock deposits consisting of rock in place to be placers.

### Importance of Making Proper Location

The importance of making the proper location over a mineral discovery has been clearly stated by the United States Supreme Court. In **Cole v. Ralph**, the Court held that "a placer discovery will not sustain a lode location, nor a lode discovery a placer location." Therefore, a placer location will not appropriate a lode deposit and a lode location will not appropriate a placer deposit.

### Placer Building Stone Act

The Placer Building Stone Act of August 4, 1892, was enacted to clear up confusion which had been generated by various decisions of the Interior Department concerning the proper method of location for building stone deposits. The Act requires that lands chiefly valuable for building stone must be entered as placer claims.

### No Rule of Thumb Definition

Another problem with precedents established by earlier court cases involving the question of whether a specific deposit should be located by lode or placer claim is that each ore deposit is unique. It has not worked well to apply a precedent established in one case to another case where the deposit in question may differ greatly from any other. As Lindley the well-known early authority on mining law said, "there can be

## Good Faith Location Should Be Protected

In cases involving right of possession to mining claim, whether the issue be marking claim boundaries, posting notice, recording the notice or assessment work, the courts generally rule in favor of the senior locator, if such locator attempted to perfect the location and maintain it in good faith. This is also true for the original locator who acts in good faith and improperly locates the wrong type of claim.

Early writers such as Lindley have proposed that the courts "recognize the rights of the original discoverer who has acted in good faith, regardless of whether he locates as a lode or as a placer." This approach has been more or less followed by the courts and is about the only solution to the inherent ambiguity in determining whether a deposit is a lode or placer. In all but the most simple case where you have either a well-formed vein or a deposit of stream gravels, even the experts have difficulty in determining the proper type of claim. Furthermore, the case law is conflicting and does not lend itself for use in developing a list of characteristics by which a claimant can use to select the proper type of location to fit a particular deposit.

## Form and Character of a Lode Deposit

The courts have identified the following characteristics of lode deposits:

1. The quartz or other rock must be "in place." This means it must be suspended between, or lie within, or be enclosed by walls of rock constituting the general mass of the earths crust.

2. A lode may lie on the surface, or in other words may not have a hanging wall because of exposure to erosion.

3. Although the ore may be loose and friable, the enclosing walls must be country rock; the enclosing walls may also be highly faulted and broken.

4. The mining law makes no limitation on the width, length or depth of a lode; although a lode may pinch and swell, it must be continuous.

igneous dike that was in place. There were also placer deposits of crystals on the claim which the original claimant had successfully recovered using placer mining methods. The Court was further convinced that the crystals could not be removed from the unaltered portion of the dike without shattering them.

### Res Adjudicata

It is well established that once a claim has been determined to be invalid on the basis of a lack of discovery rather than as an improper type of location, the claimant cannot change the type of location and depend on the same mineral deposit for his discovery.

### Section 38 Remedy for Wrong Type of Claim

One possible remedy for those who have located the wrong type of claim for a particular deposit is to establish that they held and worked the claims prior to an intervening right (withdrawal or another claimant) for a period of time equal to the state's statute of limitations. Under the appropriate circumstances, holding and working may be the legal equivalent of proof of location, recording and transfer of mining claim. Of course such claim must be properly recorded and maintained under section 314 of the Federal Land Policy and Management Act.

## MILL SITES

The location and patenting of lands for mill site purposes is authorized by the Mining Law of 1872, as amended by the Act of March 18, 1960 (30 U.S.C. 42; 43 CFR 3844 and 3864). The Federal law provides for three types of mill sites: (1) mill sites in connection with lode claims, (2) independent mill sites, and (3) mill sites in connection with placer claims.

### Mill Sites Dependent on Lode Claims

The Federal law provides that "where nonmineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes, such nonadjacent

propriated, and must be open to location under the mining laws. Lands where the United States owns the surface but not the mineral rights is not open to entry. However, the Department does not approve of mill sites on lands where the United States owns the minerals but not the surface. Mill sites cannot be located on lands where only the mineral estate is owned by the United States, such as Stock-Raising Homesteads.

Pickett Act withdrawals which are open to the location of metalliferous minerals are also open to dependent mill site locations in connection to metalliferous mineral locations.

Mill sites could not be located on lands known to be valuable for leasing Act minerals or lands under lease or permit before the Multiple Mineral Development Act of 1954. The Act allowed the location of mill sites on such lands.

### Mill Sites Must Be Nonmineral Land

The statute requires that land located for mill sites must be nonmineral. In a 1979 case, a mill site patent applicant's mill site location was contested because the Forest Service mineral examiner found that mill tailings on the property contained sufficient mineral value to be "mineral in character." On appeal, the Interior Board of Land Appeals noted that land can be mineral in character so as to invalidate a mill site; yet there may be insufficient evidence of discovery to validate a mining claim.

### Section 38 Applies to Mill Sites

A mill site may be established like a mining claim without a formal location where the mill site is held and worked for a period equal to the statute of limitations of the State in which the land is located.

### Public Law 167 Applies to Mill Sites

The owner of a valid mill site location with surface rights under section 4 of the Act of July 23, 1955, may cut and remove the timber on the claim for the purpose of constructing a mill, reduction works, and other accessories required in the development of mineral interests. In other words surface resources may be used for mining or milling

### Lode Claim Located Over Existing Mill Site

If a lode claim is located in such a manner that it overlaps an existing mill site, the owner of the lode claim has no right to remove minerals from the land embraced by the mill site location.

### Mill Site Located Over Senior Location

The location of a mill site over a valid mining claim is void and cannot become valid, even if the senior location becomes forfeited or abandoned.

### Mill Site and Subsequent Lode Claim

A mill site location becomes valid at the time it is actually used or occupied for mining and milling purposes is initiated, rather than the date of location. By comparison, a mining claim becomes valid at the time of discovery which likewise might occur at the time of location or sometime later. However, where there is no conflict, the initiation of a claimants rights or title dates back to the date of location. Therefore where a mining claim is staked over a mill site, the question of mineral character of the mill site should be addressed at the location date or the date the mill site became valid rather than at the later date when the mining claim was located. Otherwise the mill site location would not be protected for improvements and expenditures.

### How to Determine Validity of Dependent Mill Site if Occupancy But No Present Use

While "use" necessarily implies present mining or milling activities, it has long been noted that land may be "occupied" under the statute even in the absence of present "use" of the land for mining or milling purposes. If there is no present "use" of the land for mining or milling purposes, the claimant must show an occupation, by improvements or otherwise, as evidences and intended use of the tract in good faith for mining or milling purposes. The Board of Land Appeals recently specified the elements the must be considered to determine whether dependent mill site is occupied but not used for mining or milling purposes:

1. The validity of the claim if unpatented.

does not show the element of either use or occupancy, it is excess and must be excluded.

### Alternative Method of Omitting Portions of Multiple Mill Sites

Where portions of multiple mill sites are used or occupied for mining or milling purposes, the claimant may be required to omit portions of several mill sites to arrive at the minimum number of mill sites that can embrace all the lands used or occupied.

### If Associated Mining Claims Not Operated, Mill Site Cannot Be Used for Mining Purposes

If none of the associated mining claims are being operated, a claimant cannot be using the mill sites for mining purposes. Mill sites have been held to be invalid with improvements such as a 40 by 60 foot metal building, trommel with feed and discharge conveyors, holding reservoirs, 7 trailer space hook-ups, underground water, sewer, and electric lines, septic disposal tank and a well with storage tank because the associated mining claims were not being operated.

### Proper Use or Occupancy of a Dependent Mill Site

The following list of uses held to validate a mill site have been approved by numerous Interior and Federal Court decision:

1. Depositing tailings and overburden.

2. Stockpiling or storing ore.

3. Tailings ponds.

4. Blacksmith shop and tool or machine shops.

5. Offices and living quarters for workmen. However, the use of a cabin as a base of operations while engaged in prospecting activities will not validate a mill site.

6. Improvements used to develop water such as wells, springs (if improved) and pumping stations. Although the mere

**Quartz mill**: A machine or establishment for pulverizing quartz ore, in order that the gold or silver it contains may be separated by chemical means; a stamp mill.

**Reduction works**: Works for reducing metals from their ores, as a smelting works, cyanide plant, etc.

The Interior Board of Land Appeals has held that an independent mill site may not be used as a custom works to beneficiate material from placer claims.

### Continuous Operation Required for Independent Mill Sites

Coupled with good faith and the existence of an operable mill or reduction works, there must also be evidence of an ongoing and more or less continuous operation for custom work on the mill site. The custom mill must be in continuous operation to satisfy a present demand for milling services.

### Independent Mill Site Occupied but Not Used

Where an independent mill site is occupied but not used for mining or milling purposes, the Interior Board of Land Appeals has held that we must apply a test of reasonableness to determine whether the period of nonuse demonstrates invalidity. Within the concept of reasonableness, the Board specified a number of relevant factors:

1. The time of nonuse.
2. The condition of the mill.
3. The potential sources of ore to be run through the mill.
4. The marketing conditions.
5. The costs of operations, including labor and transportation.
6. All factors bearing upon the economic feasibility of a milling operation being conducted on the site.

### Prima Facie Case Based on No Use or Occupancy

A prima facie case that a mill site is not used or occupied for a significant period of time is not a weak case. Evidence that land has not been used or occupied for mining or milling purposes goes to the very heart of a mill site's validity.

### Dependent Mill Site May Be Contested without Contesting Validity of Associated Claim

A dependent mill site may be contested without contesting the validity of a claim with which it is connected. A mill site can be contested separately and declared invalid when evidence establishes it is not being used for mining and milling purposes independent of the issue of the validity of the mining claims.

### Survey Requirements

If the lands in a patent application are described by legal subdivision and are situated in surveyed lands, no mineral survey is required regardless of whether they are independent mill sites or located in connection with lode or placer claims. However, if a mill site is described as a portion of an irregular lot or is described by metes and bounds, and is not accompanied by the official survey, the application must be rejected.

### Used or Occupied at the Date Final Certificate Issued

The older Interior cases indicate that the land covered by a mill site location must be used or occupied for mining or milling purposes at the date of patent application. However, a recent case indicates that the critical date for establishing the validity of a mining claim in a patent application is the date final certificate is issued. The date final certificate issues is the date equitable title has passed. Of course any time after issuance of the final certificate until issuance of patent, the Department of the Interior may inquire into the validity of a mining claim.

### Applications for Multiple Mill Sites

A separate mill site is not necessarily complemental to each lode location; nor does the mining law necessarily provide for a mill site to be patented for a group of contiguous lode claims held and worked in common. However, if needed and used for mill site purposes, there is no restriction on the number of mill sites that may be included in a patent application.

### Adverse Claims

A mill site claimant may not file an adverse claim against a mineral patent applicant but should instead file a protest. The reason for this is only the Interior Department has the authority to determine whether a discovery exists or that the land is nonmineral. An adverse claim should only be filed where a priority of right is involved such as with two conflicting mill sites.

## COEXISTENCE OF LODE CLAIMS PLACER CLAIMS AND MILL SITES

### Can You Stake a Lode Claim Over a Placer Claim Or a Placer Claim Over a Lode Claim?

This has probably been the most frequently asked question in the area of mining law during the last few years. One reason people find this subject confusing is because the answer depends on whether they are interested in (1) locating a lode claim over their own placer claim, or locating a placer claim over their own lode claim (no conflicting locator), or (2) locating a lode or placer claim over another persons lode or placer claim (two or more conflicting locators). Therefore when you read this chapter keep in mind which of the two categories the information pertains. Another part of the confusion stems from the fact that this is a somewhat unsettled area of the mining law.

claims over placer claims, or authority for any sequence of location; it is merely a procedure to delineate the lode deposit within a placer claim so that the Government can be compensated for the lode deposit at the lode rate of $5.00.

It is a common misconception that a lode claim ranks differently than a placer claim because the law requires that known lodes be surveyed out or reserved from the placer patent. However the mining law states that placer claims are subject to entry and patent "under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims. The United States Supreme Court has interpreted this statement "to place the location of placer claims on an equality both in procedure and rights with lode claims." **Clipper Mining Company v. Eli Mining & Land Company**, 194 U.S. 220 (1904). Therefore it appears that if anything the statute supports the position that no preferred sequence is necessary because both lode claims and placer claims are equal in rights and procedures.

It is a logical rule that to locate a second lode claim over your prior lode claim is an implied admission that the prior lode claim has problems. Furthermore because both lode claims would be appropriating the same lode deposit, the location of the second lode claim could be deemed an abandonment of the prior lode claim. However, in both cases, the location of a lode claim over a placer claim or the location of a placer claim over a lode claim, represents an attempt to appropriate two different types of mineral deposits. For example if you discovered a vein and appropriated it with a lode claim and then some time later discovered a placer deposit within the boundaries of the lode claim, the subsequent location of a placer location over your prior lode claim could hardly be deemed abandonment.

The traditional law of abandonment as it relates to mining law includes relinquishment of possession together with the subjective intent to abandon. To show abandonment,, the intent of the claimant to abandon must be demonstrated. For example, if a claimant maintained title on a claim performing annual assessment work and making timely annual filings with both the BLM and the local recorder, such actions could hardly indicate abandonment. As the Court said in **Fuller v. Harris**, 29 F. 814, 818-19 (D. Alaska 1887), "a claimant who relocates the same ground does not evidence an intent to abandon the prior claim." Conversely, a relocation negates the intent to abandon the ground. **Hartman Gold Mining Co. v. Warning**, 11 P.2d 854, 856 (1932). The advantage of this rule is that if an attempted relocation fails, the claimant may still maintain the rights he had under the first location. **Peach v.**

cannot be deemed abandonment of the lode claim because the lode claim was intended to appropriate the lode deposit, whereas the placer claim was intended to appropriate a completely different deposit.

3. You have not made a discovery of either lode or placer minerals but based on geological inference or some other basis you would like to appropriate an area with lode and placer claims while you conduct exploratory drilling. Of course without a discovery you will be holding the claims under prediscovery rights or pedis possessio.

   In this situation follow the conventional practice by first locating a placer claim followed by a lode claim.

4. You have just discovered a mineral deposit such as limestone or perlite and are uncertain as to whether a lode location or a placer location would be most appropriate because the deposit does not clearly fit into either category. You are also aware that "a placer location will not sustain a lode location, nor a lode discovery a placer location." **Cole v. Ralph**, 252 U.S. 286 (1920). In this situation you are at the core of the "sequence of location" controversy. Because here it is advisable to locate both lode and placer claims to make certain that you appropriate the deposit. There is an important distinction between this case and the three cases described above. Here we are only concerned with one type of deposit, whereas in the other three situations we were describing the existence of both a lode and a placer deposits within the same claim.

   As in situation #3, first locate a placer claim and then a lode claim. Even if there is no basis for locating lode over placer rather than placer over lode, it is advisable to do so if only because so many people believe it is important.

**Lode Claims May Not Be Located on Prior Valid Placer Location and Vice Versa**

No person, other than the owner of a valid placer claim, has the right to enter upon such unoccupied placer claim for the purpose of discovering and locating lodes. To do so without the placer claim owners consent or knowledge is a trespass. This rule is supported by many Federal court cases, including the United States Supreme Court.

The mill site must be located on nonmineral land. By changing the location to a lode claim because it was ascertained that the land therein was mineralized, it was thereby admitted that the mill site was void from its inception, and no mining title can be held to relate back to the inception of a void location.

**Location of Placer Claim over Tailings on Mill Site Claim**

Tailings and ore become personal property once severed from the ground. Mill tailings are not available for appropriation until abandonment of such tailings is established by showing both intention to abandon and actual relinquishment. However, if such tailings are move to lands owned by another through natural processes such as erosion, they become the property of that owner; or, if the tailings are deposited on unappropriated public lands, they may be acquired by placer locations.

Although it may be appropriate to locate abandoned mine tailings with placer claims, it very unlikely that such placer claims could be patented. Aside from the fact that mill tailings are not naturally deposited, to allow a claimant to patent a tract of land by merely placing valuable tailings on it would create an enormous loophole in the mining law.

**Discovery Made After Placer Patent Issues Goes to Patentee**

If veins or lodes within a placer claim are not known at the date of application, they will go with the placer patent; only veins or lodes that are known but not applied and paid for are reserved in the placer patent. Any subsequent discovery of a vein or lode not known at the date of application goes to the benefit of the patentee.

This test, known as the "prudent person test" has been approved by the Supreme Court of the United States in many cases.

## What Has Been Done Successfully

The most persuasive evidence as to what a person of ordinary prudence would do with a particular mining claim is what people have actually done, not what a witness is willing to state that a prudent person would do. For example, a mining claimant would be justified in initiating actual mining operations on mineral showings that are the same or very nearly the same as those where actual mining operations have been successfully brought to fruition by others.

## Cost Analysis Required in Prudent Man Determination

The Interior Board of Land Appeals recently gave an example of why a cost analysis plays a crucial role in the prudent man determination. The Board said the "determination that a valuable mineral exists on a property is only the first step in the 'prudent man' determination. On analysis of the earth's crust noted that the gold contained in seawater represents the largest known 'reserve' of gold in the world. However, the cost of extracting gold from seawater is far greater than the value of the gold that would be recovered. A prudent man, therefore, would not expend his time and means to evaporate sea water and process the solids to recover the gold. A mineral deposit becomes an ore deposit only if the cost of removal and rendering the minerals contained in the deposit suitable for sale is less than the sales price. Cost of extraction must, therefore, be examined."

## Insufficient Evidence for Discovery

Not long after enactment of the General Mining Law of 1872, the courts began to develop a definition of what constitutes a discovery of a "valuable mineral deposit." The following quotations were excerpted from three different turn-of-the-century cases.

> ...such applications should not be granted unless the existence of mineral in such quantities as would justify expenditure in the effort to obtain it is established as a present fact. **Davis v. Weibbold** (1891).

burden of proof that a discovery exists. The prudent man rule requires the claimant to submit proof that a prudent man would develop a mine. One of the most common means of demonstrating what a prudent man would do is through the testimony of expert witnesses who have examined the property and express their opinions, as experts, that the evidence supports a determination that further development is warranted. To have an expert in the field examine the property and render a decision is, itself, an exercise of prudence.

**No Discovery If Deposit Warrants Additional Exploration**

In a 1981 Interior Department case, a geologist (White) employed by the claimant had sampled at the same points tested by the government and also sampled using a suction dredge. The assay values of Whites report indicated lower values for gold than assays taken by the government. Because the appellant indicated at the hearing that he accepted the findings of the report, the Board focused on the conclusions of the report where White said "there is sufficient gold present in those Denny placers examined by me, to justify the continued expenditure of time, effort and money in the search for the fabled golden fleece." Concerning the effect of White's report on the case, the Board said "Whites conclusion (quoted above) expresses an often-cited principle of mining law. That principle is that mineralization which may warrant further exploration or prospecting in an effort to ascertain whether sufficient mineralization might be found to justify mining or development does not constitute a valuable mineral deposit. That is, a valuable mineral deposit has not been discovered because a search for such a deposit might be indicated."

It is a common pitfall for a claimant or his expert witness to reveal at the hearing that the deposit is mineralized to the extent that it justifies additional exploration or prospecting to find a commercial deposit. The hearing officer considers this to be an admission by the claimant that there is no discovery. This does not meet the present court interpretation of discovery which requires that the valuable mineral deposit has been found and ready for development and mining. With discovery, no more prospecting or exploration work to find the deposit would be necessary.

## Discovery In Each Claim

The discovery of minerals on one claim will not support rights to another claim or group of claims even though the claims are contiguous. In contest proceedings involving more than one claim, the test of discovery is applied to each claim individually, since "[a] discovery without the limits of the claim, no matter what its proximity, does not suffice." **Waskey v. Hammer**, 223 U.S. 85, 91 (1912).

In order to be valid each claim in a claim group must have a discovery within its boundaries. However, under certain circumstances the government has taken a broad look at the requirement. For example, in the case of large, low-grade, porphyry-copper deposits which by necessity require hundreds of claims to cover the mineralized area, it is obvious that any one claim could not stand by itself as a paying mine. The entire deposit must be available in order to be economically feasible. In acknowledging this fact, the government has issued mining patents on numerous such claims. In recognition of this reality, the Interior Board of Land Appeals issued the **Schlosser v. Pierce** decision.

## Each Claim Need Not Support Independent Mine

In **Schlosser v. Pierce**, 93 I.D. 211 (1986), the Board held that a mining claimant is not required to show "the profitability of each claim in a group as a potentially viable independent mine." Although the mineral in this case was bentonite, this ruling would apply to any high-tonnage, low-grade mineral deposit appropriated with a group of mining claims. This is true even though an individual claim of the group might not contain ore of sufficient quantity and quality to support a discovery. Under the following circumstances, there is no requirement that each claim be independently capable of being mined and marketed at a profit:

1. A group of mining claims must be located over a high-tonnage, low-grade deposit.

2. Ore can be extracted profitably from each claim under a single large mining operation; or

3. To be valid, each claim must contain sufficient quality and quantity of mineral to be extracted profitably under an overall mining plan.

## Other Values Require Clear and Convincing Evidence

Where the discovery of a valuable mineral deposit is claimed on land known to be valuable for purposes other than mining, the Department requires clear and convincing evidence that the land is valuable for mineral. The existence of other values may be considered in assessing the weight and credibility to be accorded the locator's testimony and may be an issue in evaluating his bona fide intention to develop a mining operation.

## Conflicting Claimants Held to Prudent Man Discovery

The 1987 Nevada Federal District Court case of **Amax Exploration, Inc. v. Ross Mosher** represents a significant departure from the general rule that the test of discovery is less stringent in a contest between two rival locators than in a contest between a locator and the United States Government. The Federal District Court of Nevada held both the senior and junior claimants to the prudent man discovery standard commonly required of mining claimants by the Department of the Interior. In this case, Amax staked both lode and placer claims over placer claims owned by Ross Mosher on the basis that Mosher had not discovered a valuable placer mineral. Although the Court acknowledged that courts typically view the evidence of discovery more in favor of the senior locator in a dispute between rival claimants, it held that the advantage of being the senior locator cannot displace the need to prove the elements of a discovery. As the Court said, the senior locators "have failed to prove credibly, with respect to each particular claim, placer mineralization which would lead a reasonable and prudent miner to conclude that there is a reasonable prospect of developing a profitable mine." After holding that none of the parties in the case had made a discovery, the Court declared "that the land remains in the public domain open to peaceable exploration by the parties or by any other citizen. The Court took this position even though it agreed that the claims of both parties are procedurally proper.

The Court also found that Amax had not proven a discovery of gold within any of its claims even though gold was found in many samples taken by surface sampling. Amax geologists also used bigeochemical and geomicrobial sampling, resistivity/inverse-polarization geophysical testing, ground magnetic testing and gravimetric testing methods. On this basis Amax geologists extrapolated "a geologic inference that there is excellent potential for discovery of minable

discovery. In **Cole v. Ralph**, 252 U.S. 286, 294-96 (1920), the Supreme Court held that "location is the act or series of acts whereby the boundaries of the claim are marked, etc., but it confers no right in the absence of discovery, both being essential to a valid claim."

### Circumstance Discovery May Precede Location

Although the statute requires that discovery precede location, the order may be reversed provided there is no intervening right established. In **Cole v. Ralph**, the Supreme Court said:

> In practice, discovery usually precedes location, and the statute treats it as the initial act. But, in the absence of an intervening right, it is no objection that the usual and statutory order is reversed. In such a case the location becomes effective from the date of discovery; but in the presence of an intervening right it must remain of no effect.

### Assessment Work My Not Substitute for Discovery

The performance of assessment work has no relationship to discovery. It is a common belief among claimants that the longer they have held a claim and done their annual assessment work, the better the title of the claim. However, in **Cole v. Ralph**, the Supreme Court has said that assessment work does not take the place of discovery "for the requirement relating to such work is in the nature of a condition subsequent to a perfected and valid claim and has nothing to do with locating or holding a claim before discovery."

### Bad Faith Can Invalidate a Claim

In a 1984 case the Interior Board of Land Appeals held that claims were invalid because they were not located in good faith. During the five years the claimants occupied the lands embraced by the claims, they built two cabins, a water system and cut 50 trees. From the time of location until the hearing, the claimants had done no work on the claims other than take a few samples. Although the owners indicated the claims were valuable for gold, assays indicated a value of only $0.025 per cubic yard using a gold price of $700 per ounce. The claimants also maintained that a discovery existed on the claims for fire clay; however they provided no information on purity, costs of production and

proving that a discovery exists. In cases of withdrawal of the land, such withdrawal entitles the Government to restrict the development of a claim, but restrictions must be reasonable. Of course, a discovery must be judged by what has been exposed on a mining claim at the time of a withdrawal, and a claimant is not entitled to go onto a claim thereafter for the purpose of exposing new veins or lodes.

### Exposure of New Reserves or Increase in Mineral Price after Withdrawal

If a discovery did not exist on a claim at the date of a withdrawal, a later discovery established by subsequent mineral exposures or rise in mineral commodity prices would not give a claim validity at the date of a hearing.

### If Disclosure of Mineral before Withdrawal, Sampling After Withdrawal May Prove Discovery

The acts of sampling and assaying are acts which either confirm or disprove the existence of a discovery. Therefore, if there was a exposure of mineral at the date of withdrawal, that exposure is a discovery of valuable mineral if subsequent sampling, assaying, and testing confirm the fact that the exposed mineral is valuable. Furthermore, assay results from diamond-drill intercepts of the mineralized zone will support a conclusion that there was an exposure of valuable mineral if reasonable geologic projection leads to a conclusion that the intercept and the exposure are from the same mineralized structure.

## GEOLOGICAL INFERENCE

### Geological Inference to Determine Mineral In Character But Not Discovery

It is well established that geological inference may be used to support a classification of land as "mineral in character" but may not be used to support the existence of a discovery. The reason for this is that a discovery requires actual physical exposure of a mineral deposit within the claim boundaries; whereas, mineral in character may be established by geological inference.

evidence will not establish the validity of the claims. There must be a physical exposure of the ore body.

### Use of Geologic Inference to Show Discovery

Although geologic inference cannot be relied upon to establish the existence of a mineral deposit, it may be used as evidence to the extent of a deposit. In **U.S. v. Feezor**, 90 I.D. 262 (1983), the Board significantly expanded the use of geologic inference in determining the necessary reserves or quantity of ore necessary to establish the existence of a discovery. The Board held that "to the extent exposures and samples exist which show high values of relative consistency, geologic inference is properly used to determine the reasonable likelihood of the persistence of similar mineralization beyond the areas actually sampled or exposed."

In **Feezor** it was pointed out that "geologic inference is primarily applicable as a basis upon which to show continuity of values" and that isolated and erratic high values cannot be used to infer the existence of better values someplace else on the claim. The Board then held that "where values have been high and relatively consistent, geologic inference can be used to infer sufficient quantity of similar quality mineralization beyond the actual exposed areas, such that a prudent man would be justified in expending labor and means with a reasonable prospect of success in developing a paying mine."

In **Fe[illegible]r**, the Board examined the type of reserves necessary to support a discovery using definitions given in Principles of Mineral Resources Classification, **Geological Survey Bulletin 1450-A** at A3-A4 are as follows:

> **Measured** - Reserves or resources for which tonnage is computed from dimensions revealed in outcrops, trenches, workings, and drill holes and for which the grade is computed from the results of detailed sampling. The sites for inspection, sampling and measurement are spaced so closely and the geologic character is well defined that size, shape, and mineral content are well established. The computed tonnage and grade are judged to be accurate within limits which are stated, and no such limit is judged to be different from the computed tonnage or grade by more than 20 percent.

### Case Where Geological Inference Cannot Be Applied

The **New York Mines**, 105 IBLA 171 (1988) case involved a mined out supergene mineral deposit. This type of deposit occurs below an oxide zone where the minerals are leached by ground water and redeposited at the water table in the zone of supergene enrichment. Below the zone of supergene enrichment is a much lower grade deposit of primary mineralization. This is the lower portion of the deposit.

The Board of Land Appeals held that in the face of such strong evidence that past production came from a zone of supergene enrichment, it would not be prudent to project the size or grade of the ore previously mined to the underlying mineral deposit, where exposures in that deposit show it to be composed of primary mineralization. In other words the facts in this case do not support the downward projection or ore-grade deposits below the water table using geological inference.

## MINERAL EXAMINATIONS

### Objectives of the Examination

The mineral examiner's field examination represents the first step in the validity determination. The validity determination, as far as the mineral examiner is concerned, is a mineral property evaluation or feasibility study to determine if a mineral deposit has a reasonable prospect of sustaining a profitable mining operation. The mineral examiner conducts the study somewhat similar to the way a mining company might make an evaluation of the property, utilizing modern geologic and engineering principles and procedures. Of course, the mineral examiner is not allowed to drill or excavate so as to uncover the deposit as this is considered exploration.

In the case of a validity determination, if the mineral examiner verifies that a discovery exists within the boundary lines of the mining claim, the claimant retains full possessory title; and, in the case of a patent examination, if all other aspects of the case are in order, a patent will issue. However, if the mineral examiner should determine that a discovery does not exist within the limits of the mining claim, contest proceedings are initiated with subsequent Departmental hearings.

that is the responsibility of the claimant. In other words, the requirement for physical exposure means that all overburden or cover must be removed.

The principle of physical exposure also applies to deposits inaccessible river bottom. In one case the Board of Land Appeals upheld the samples taken by an examiner along a streambank even though the claimant contended the values were in the river bed.

## Charge of Lack of Good Faith

Although it is common for the Government to include a charge indicating a claim is not held in good faith, the applicable Interior and Federal court decisions generally require that the evidence for such a charge must be clear and convincing. While the existence of other land values does not qualify a locator's rights under the mining law, if he has a valid claim, evidence of such other values may be considered in assessing the weight and credibility to be accorded the locator's testimony in determining whether a discovery has been made. Evidence of other land values may also be a factor in evaluating his bona fide intention to develop a mining operation. The most prevalent evidence of bad faith occurs when a claimant makes improvements on a claim unrelated to mining.

## Examiners Mistakes

Even though a Government mineral examiner errors in the examination procedure or evaluation, the claimant cannot take advantage of such error. And under certain circumstances the claim will be reexamined.

## Qualifications of Examiner

In mining claim contests, the qualifications and competence of a Government examiner to investigate a specific type of mineral deposit are commonly challenged. Because there are hundreds of different types of mineral commodities that any one examiner may be responsible for, it is quite likely that even the most experienced examiner will have experience with only a small percent of the total types. However, even though possessing a lack of specific experience, general education and experience coupled with diligent preparation on the deposit in question

## SAMPLING AND ASSAYING

### Introduction

The sampling and assaying program represents the most important part of the mineral examination. In many cases the claimant selectively samples the highly mineralized portion of the ore body rather than attempting to take a representative sample which reflects the total amount of rock that must be extracted, including both ore and waste. This variance in sampling procedures among claimants often leads to inconsistent assay values for the same ore body. Such problems may be avoided by (1) conducting the sampling program according to recognized engineering standards, (2) adequately describing the sampling procedure, and (3) having the samples processed by competent assayers.

### High Assay Values Are Not Sufficient Evidence

The Department has consistently held that high assay reports alone are not evidence of a discovery. The nature of the samples yielding the high values must be considered and the evidence, taken as a whole, must suggest that the assay results are representative of mineralization on the claims. Other factors must be considered, such as the extent of the mineral deposit, the number of samples assayed which show only a trace of mineral value, and the nature of the samples which yielded the high values. To be meaningful, the samples must be representative of the entire mineral deposit, no simply selective showings of the best mineralization.

### Sampling a Minable Width

The Interior Department has, in several cases, required that samples be cut across a "minable width." This requirement is justified and is a standard practice among experienced geologists, engineers and miners. Even though a vein is one foot wide, it would be impossible in most cases to remove only the vein and leave all of the host or waste rock. The "minable width" merely recognizes that in developing underground workings one must provide sufficient space to allow people and equipment to enter the mine and follow the vein. Although the minimum "minable width" is generally four feet wide, it of course may be more or less depending on the circumstances in an individual case. An

mining was by suction dredge in the bed of active streams. In **U.S. v. Williams**, 65 IBLA 346 (1982), the Forest Service investigated the validity of a gold placer claim. The claim was contested and a prima facie case was established on the basis of the Government examiner using standard sampling techniques, rather than using a section dredge. The claimant submitted evidence showing a recovery of 26 or 27 ounces of gold using a suction dredge. Because the government did not submit evidence showing that suction dredging on the claim has not resulted in a discovery, the Board held that the claimants evidence was sufficient to overcome the Government's prima facie case. The Board determined that the Governments evidence was even more deficient than the claimants because it did not sample using a suction dredge. The Board then stated:

> The record showed that contestees were removing mineral material laid down in the stream bed, concentrating it, and apparently removing enough gold to meet their expenses. The "deposit" consisted of the material laid down in the stream bed by the water. The contestees were removing the material, not the water itself, as Ball testified. The fact that they were mining in an active stream bed did not make the process any less placer mining. Further, the fact that they used a suction dredge (or any other instrumentality) did not make the process any less legitimate, as long as it was economical for them to do so, as measured by the traditional marketability tests.
>
> FS' position that it need not address the economics of suction dredging was evident at the hearing and is now urged upon us as a rule of law. We reject it, and we emphasize that if FS expects to successfully contest the validity of claims such as this one, it must meet its burden of showing, on a case by case basis, that such operations are not economical. It may be necessary for FS to use a suction dredge to take sample tests at the claim in order to so demonstrate.
>
> In any event, FS did not establish that contestees were removing "flood gold." The record contained no evidence that the geological situation described by Wells in his discussion of "flood gold" existed, or that other conditions existed that favored the conclusion that flood gold was being collected. In the absence of evidence of such a showing, we cannot presume that contestees were not actually mining a "river deposit" that had been overlooked because it was within an active stream bed. The record contained evidence showing that no concentrations were present on the banks of the stream, but it did not deal adequately with the stream bed itself. We do not comment on the extent to which

From the standpoint of the mineral examiner, it is very difficult to establish accurate reserve and grade information on a deposit using a suction dredge, particularly if the water is deep, turbulent or murky. However, a suction dredge may be the most appropriate mining method for certain types of river placers, especially it is possible to reach bedrock. Then, if possible, calculate the quantity of material removed. The assay value could be estimated by relating the weight of gold recovered during the specific period of operation to the quantity of material removed. Similar sample pits could be distributed in a geometric pattern to determine the extent of the deposit. Costs of operating the dredge for a specific period of time could be calculated and related to the production during the same period. If gold should exist in a river bed, the nature of concentration can be diverse. The gold may be concentrated on the surface of the river bed, in one or more layers or paystreaks, disseminated throughout the gravels or concentrated on bedrock. Under the best of circumstances, it is difficult to quantify the reserves and grade of a deposit situated below an active stream or river.

### Assayer or Sampler Not at Hearing

Assay reports are generally admitted into evidence even if the reports have major deficiencies; however, the reports will be accorded appropriate weight by the judge or fact finder depending on the circumstances in each case. Normally the assayer is not present at the hearing but the sampler is available to testify. If neither the assayer or sampler are present, the evidentiary value of the report is very low.

### Selection of Assayers

Assayers should be selected on the basis of established reputation and registration under state law if required. Many assayers have a poor reputation or no reputation. In most states, there is no requirement at all for an assayer to have any education or experience. For this reason, it is crucial to have a well established and reputable assayer.

### Delivery of Samples to Assayer

The procedure for handling samples, from the time they are collected at the outcrop until they are delivered to the assayer is important. In order to maintain the integrity of samples, the sampler is responsible to see that (1) the assay results of one sample will not be

## Examiners Should Independently Select Sample Sites

Although it is appropriate for a mineral examiner to take a sample at sites recommended by the claimant or the representative of the claimant, examiners should also independently select sample sites in the same manner as they would if unaccompanied by the claimant.

## Date of Exposure Versus Date of Sample

In order to establish discovery by a certain date such as a withdrawal, it is essential that the discovery be exposed prior to that date. Then once the discovery is validated by exposure prior to the withdrawal, the sample may be taken at any later time.

## Claimant Objects to Government's Sampling Procedure

If a claimant contends that the Government samples his claim improperly, he must be able to offer probative evidence tending to show that the samples taken by the Government failed to adequately represent the mineral value of the land.

## Joint Sampling When Discrepancy in Assay Values

In situations where there is a significant discrepancy between the assay values of the Government and the claimant, a joint sampling of the claim may be ordered by the judge to reconcile the conflicting testimony. However, if the claimant fails to submit the requested report in accordance with the hearing examiner's instructions, the claimant's charge, made after issuance of the decision that the Government's mineral examiner failed to sample properly is entitled to no consideration.

## Nonstandard Assay Methods

There are numerous methods of assaying minerals; however in most cases there is only one method that is considered most appropriate for a given situation. The Board of Land Appeals has held that a nonstandard method of assay is not entitled to probative weight without a scientific basis. In one case the Board said:

## Chemical Assays Given Greater Weight Than Radiometric Measurements of Uranium Ore

Chemical assays of a sample of uranium mineralization may be given greater weight to demonstrate the value of uranium ore than radiometric probe measurements of gamma ray emissions. Radiometric measurements may be used as supporting geological inferences in evaluating a deposit; however, alone, they cannot be accepted to prove the existence of a uranium deposit.

## Atomic Absorption Assays Are Recognized Test

Atomic absorption assays have been approved by the Interior Board of Land Appeals as a recognized test for hardrock gold deposits. The Interior Board of Land Appeals has held that "while the atomic absorption method is not as universally accepted in the mining industry as is the standard fire assay, it is, nevertheless, a recognized test of gold content."

## Expert Witness Must Have Personal Knowledge of Sampling and Assaying

Testimony regarding the mineral values of ore samples will be held to have no value if the witness has no personal knowledge of the sampling or the testing of the samples

## Assay Values in Old Reports

It is not uncommon for mining claimants to submit assay values mentioned in old reports as evidence that a discovery exists. However, there is seldom sufficient description of such samples to make them useful; furthermore, since publication of the report, the mineral deposit may have been mined out. As the Board says, such reports are not reliable evidence of whether the claims now contain valuable minerals.

## Labor Costs

In numerous cases the Interior Department has held that labor costs must be considered in determining whether a mining operation could be profitable; and furthermore, the value of such labor must be applied in amount that would be sufficient to hire another person. Even in a one man operation, the value of the claimant's labor must be considered in determining whether has been a discovery of a valuable mineral deposit. In other words, there must be profit left over after the value of the claimant's labor is subtracted from the gross income. The Board of Land Appeals has rejected the argument that a meager yield of income from the claims would constitute a substantial increment to the income of a person living on retirement benefits and would be sufficient to satisfy the amount required to establish a profitable operation.

## Basis for Estimating Mining Costs

To satisfy the prudent man test, mining costs may be established by comparison of the estimated costs based on a reliable cost analysis system and by use of a comparison to an operating mine.

## What a Prudent Man Might Expect as Mining Costs and Selling Price

It is not necessary for a prudent man to know exactly the cost of producing the product or the exact price he might receive. Rather, based upon a reasonable and rational estimate of the cost of production and a reasonable and rational estimate of the market price for the product, there is a reasonable probability of success in the development of a valuable mine.

## Mining Costs Must Be Supported by Specifics

The Board of Land Appeals found that a claimant's profit analysis was of little probative worth because "mining, hauling, and milling costs are unsupported by specifics or realistic cost data. For example, a contract mining cost of $55.25 per ton is posited, but neither the necessary machinery nor man-hours is itemized. Nor is there any mention of other operations which might serve as comparisons."

## Claim Bootstrapped Into Validity by Associated Business

A claim must be validated on the basis of the mineral commodity itself rather than riding on the "coattails" of an associated business. An otherwise invalid mine cannot be bootstrapped into validity because of the profitability of some other business in which a claimant may be engaged.

## Closed or Captive Market

The marketability test is not met by a claimant selling minerals in a closed or captive market and that a mining claimant must prove willing customers exist to whom the claimant could reasonably expect to sell at a profit.

## Value Added by Manufacture

It is well established that the value of a mineral as it relates to the validity of a claim is the value of the mineral after extraction from the mine, but before any additional manufacturing that would significantly raise the value. In other words the value should be based on the mineral in its raw state rather than on the value of subsequent workmanship. For example, the value of gold may be $400 per ounce, whereas, the same ounce of gold, once manufactured into jewelry, might have a value of more than $1,000.

## Government Support

During certain periods, the Federal Government has created an artificial market for low-grade ores by paying an incentive price under a stockpiling program. The Interior Board of Land Appeals has held that there is no justification to issue a mineral patent for mining claims containing low-grade manganese ore simply because patents were issued for similar-type claims during the war. In 1966 the Court of Claims has held that the incentive price should not be considered as establishing the value of manganese for the purpose of commodity tariff rates.

In such a case, the claimant asserts that he has a new *recovery process that will enable profitable recovery of the* gold.

2. The Government determines that only small amounts of gold can be detected by standard assays; however, the claimant contends that additional gold does exist and can be profitably recovered by a secret or unconventional process.

In general, if a claimant asserts that he has a novel and unproven method for recovery of very fine gold which cannot be recovered profitably by conventional methods, it is the claimant's affirmative duty to present evidence that such gold can be recovered at a profit.