

A-30564

*Decided August 30, 1968***Mining Claims: Contests**

The fact that a charge in a mining contest complaint may not adequately raise an issue does not vitiate a decision which rests upon that issue where the contestee examined and cross-examined witnesses on it, the record demonstrates that he was aware that the issue was important to the resolution of the contest, and he has not demonstrated that he has been prejudiced by the inartistic allegations of the complaint.

Mining Claims: Discovery

To satisfy the requirement that deposits of minerals of widespread occurrence be "marketable" it is not enough that they are capable of being sold but it must be shown that the mineral from the particular deposit could have been extracted, sold, and marketed at a profit.

Mining Claims: Common Varieties of Minerals

The Act of July 23, 1955, excludes from mining location only common varieties of the materials enumerated in the Act, i.e., "sand, stone, gravel, pumice, pumicite, or cinders"; therefore, a material must fall within one of those categories before the issue of whether it is a common variety becomes pertinent.

Mining Claims: Common Varieties of Minerals

Where a stone containing mica can be ground and used as a whole rock for certain purposes, the issue may properly arise as to whether the particular stone is a common variety which is excluded from mining location by the act of July 23, 1955; but if the interest in the stone is simply for the mica to be extracted from the stone and value is claimed only for the mica, the issue presented is not whether the stone is a common variety of stone but whether the mica or feldspar constitute valuable minerals subject to location irrespective of the 1955 Act.

Mining Claims: Common Varieties of Minerals

Where a deposit of sand has an allegedly valuable mica and feldspar content, its locatability may depend upon either whether the sand is locatable as an uncommon variety of sand because of its mica and feldspar content or whether the mica or feldspar constitute valuable minerals subject to location as mica or feldspar.

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Mining Claims: Discovery—Mining Claims: Common Varieties of Minerals

Lack of discovery is properly found in the case of deposits of common varieties of limestone, aplite, and mica schist where credible evidence is lacking that materials from the deposits could have been marketed at a profit as of July 23, 1955; evidence that a general market for the materials existed as of that date and purely theoretical evidence as to profitable operations are not sufficient to show a discovery where the credibility of the evidence is open to question.

Mining Claims: Discovery—Mining Claims: Common Varieties of Minerals

Lack of discovery is properly found in the case of deposits of mica and feldspar where credible evidence is lacking to show that the minerals can be marketed at a profit.

APPEAL FROM THE BUREAU OF LAND MANAGEMENT

Harold Ladd Pierce has appealed to the Secretary of the Interior from a decision dated September 20, 1965, by the Chief, Office of Appeals and Hearings, Bureau of Land Management, which affirmed a decision of a hearing examiner holding invalid the P-61-Pierce Group and the Z-81-Zemula-Pierce lode mining claims, the Jamie placer mining claim and the Pierce-PMS-No. 1 mill site claim, all located in sec. 24, T. 3 S., R. 3 E., S.B.M., California.¹

The United States instituted the contest action against the two lode claims and the mill site charging in a complaint dated February 21, 1963, that:

- a. The land embraced within the lode mining claims is non-mineral in character.
- b. Minerals have not been found within the limits of the lode mining claims in sufficient quantities to constitute a valid discovery.
- c. The Millsite claim is not being used or occupied for mining, milling, processing or beneficiation purposes.

In his answer Pierce denied the first two charges and asserted that the claims contained mica, feldspar, ferro-silicons, and rare earth and that these minerals were on the claims in quantity and quality sufficient to make them valid mining claims. He admitted the charge against the mill site, but contended that it would serve no useful purpose to hold it invalid until there was some application for a conflicting use.

At the hearing the complaint was amended by stipulation of the parties to include the Jamie placer claim. In addition to the charges made against the lode claims, the Jamie was also attacked on the

¹ Pierce did not appeal from the decision with respect to the Pierce-PMS-No. 1 mill site claim.

ground the minerals found within it are common varieties within the meaning of the act of July 23, 1955, 30 U.S.C. sec. 601 *et seq.*

The claims cover the whole of lot 8 (the NW $\frac{1}{4}$ SW $\frac{1}{4}$) of section 24. The lode claims cover all of lot 8 except for 5 acres in the southeast corner, which is the millsite, and triangular areas at the northeast and southwest corners, which are in the placer claim. The placer claim is described as including all of lot 8 not in known lodes or in the mill site. The lode claims contain deposits of mica schist or biotite gneiss, feldspar and aplite and the placer claim deposits of mica and feldspar silica sand. A ridge running northeasterly through the lode claim sand averaging about 400 feet in width and 800 feet in height is composed of interbedded limestone and biotite gneiss or mica schist in layers varying in thickness from 2 to more than 20 feet. The biotite gneiss or mica schist and limestone layers are cut by feldspar dikes and interfusion quartz.

The hearing examiner found that there are at least 4,500,000 tons of mica schist deposited on the P-6 and Z-8 claims, that recovery of a mica of 98 percent purity can be obtained from the mica schist in quantities ranging from 15 percent to 22 percent of the whole mica schist, that ground mica schist has been sold from an Ogilby, California, deposit to the roofing industry in Los Angeles at \$14 per ton plus \$11 per ton for freight at a cost of \$6.25 per ton at Ogilby, that the mica schist from the P-6 and Z-8 claims can be sold for some of the same purposes as the Ogilby deposit at the same or lesser cost, that the freight rate from the claims to Los Angeles would be approximately \$2.20 per ton, and that a general market for mica schist for roof rock and roofing backing existed on and prior to July 23, 1955, and exists now.

He next found that the P-6 and Z-8 claims contain approximately 2,800,000 tons of limestone suitable for roofing rock, limestone sands and fillers in the paint, plastic and mastic floor tile industries, that the limestone can be sold in Los Angeles for \$6 a ton as roof rock and can be mined, processed and transported to Los Angeles for approximately \$4.70 a ton, and that the Los Angeles market for limestone used for roof rock existed on or before July 23, 1955, and exists now.

He then found that the P-6 and Z-8 claims contain approximately 600,000 tons of feldspar, that the feldspar can be mined, processed and sold to the glass and ceramic industry at a profit, but that no market for feldspar existed on or before July 23, 1955, or exists now.

As to aplite, the hearing examiner found that these two claims contain at least 2,800,000 tons of aplite, that the aplite can be mined, proc-

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essed and sold to the roofing industry as material for road bases and for the manufacture of amber glass.

He also found that while mica and feldspar silica sand exist on the Jamie placer claim, the sand cannot be processed at a cost of 6½ cents per ton into a feldspar silica sand which would meet the specifications of the glass and ceramic industry. He rejected a proposed finding that like amounts of mica and feldspar silica sand cannot be obtained from ordinary types of sand that exist in Southern California.

The hearing examiner stated that if all the deposits on the claims were common varieties of minerals of widespread occurrence a mineral location based on them could be valid only if they were marketable at a profit on or before the passage of the act of July 23, 1955 (*supra*). He then held that the evidence did not establish or demonstrate that these particular deposits were marketable at that time although there was then a market for similar materials in Los Angeles. Therefore, he held, the validity of the claims must be based upon the discovery of valuable mineral deposits which are not excluded from location by the act of July 23, 1955, as a "common variety."

He then concluded that each of the deposits on the claims, limestone, feldspar, aplite, biotite gneiss or mica schist, and sand, was a common variety within the meaning of the act, that this being so, present marketability was immaterial, and that as a result all of the claims were null and void.

He also held that the mill site was invalid because it was not being used in conjunction with any mining operation.

Finally he found that since his rulings had disposed of all of the claims, it was not necessary for him to determine the mineral character of the land they cover.

On appeal to the Director, the contestee contended that the only issues in the contest as to the lode claims were the mineral character of the land and the quantity of mineral within the limits of the claims. He asserted that, as to the lode claims, marketability on or prior to July 23, 1955, was not an issue but that, even if it were, there was a market on or before that date and that, in any event, the United States had not made a prima facie case that the deposits were not then marketable. Furthermore, he contended that the deposits of mica schist, feldspar, and feldspar silica sands on the claims are not of widespread occurrence and that the minerals they contain are not common varieties. He also insisted that the mineral character of the land should have been decided.

In his decision the Chief, Office of Appeals and Hearings, Bureau of Land Management, held that a deposit of a widespread nonmetallic mineral is a valuable mineral deposit within the meaning of the mining laws only if the claimant can demonstrate that it can be mined, removed and disposed of at a profit. The contestant's evidence, he continued, established a prima facie case that this test had not been satisfied and that as a result there has been no discovery of a valuable mineral deposit on any of the claims. He then concluded that the contestee's evidence did not refute the testimony of the Government's mining engineers and that the fact that material from land in the same general area had been sold did not show that the particular deposits of materials on the P-6 and Z-8 claims could be disposed of in the same market. In the absence of a showing that a valuable mineral deposit existed within the mining claims, he said, there was no need to determine whether or not the deposits were of a "common variety." He agreed with the hearing examiner that it was not necessary to determine whether the lands in the claims were mineral in character once the claims had been held null and void. Finally, he pointed out that the appellant had not alleged any errors in the hearing examiner's decision holding the mill site invalid. Therefore, he affirmed the decision holding the mining claims and the mill site null and void.

In his appeal to the Secretary, Pierce first asserts that it was error to raise the "common varieties" issue with respect to the lode claims since the complaint did not attack those claims on that ground but only on the allegations that the land in the claims is nonmineral in character and that the quantity of minerals in the claims was not sufficient to constitute a valid discovery. Next he asks whether the contestant should not be required to present prima facie evidence on each matter in issue before the burden of proof passes to the contestee. Finally, he contends that the evidence does not support the conclusion in the decision that a prima facie case of lack of discovery of a valuable mineral deposit on each claim was established by the two government witnesses, who each expressed the opinion that the minerals found upon the claim could not be extracted, transported to market and sold at a profit. In support of this contention he argues that one government witness admitted, and the hearing examiner found, directly or by inference, that some of the materials on the claim could be marketed at a profit. Furthermore, he denies that evidence of the marketability of minerals removed from mining claims not in contest is only "speculation" as to the worth of the minerals on the subject claims and that absence of significant development work or the fact that no minerals

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from the claims have been sold indicates that the contestee did not believe in the existence of a market for the minerals. He also asserts that the fact that one government witness saw no evidence of discovery work on the placer claim is of no importance because the deposit is there and the wind-blown sand would cover up any work done in a relatively short time. Finally, he says that the failure of the Bureau's decision to consider the question of "common varieties" ignores the primary basis for the decision of the hearing examiner.

As we have seen, the decisions below while reaching the same result, came to their conclusions for different reasons. The Office of Appeals and Hearings' decision essentially held that the claims were invalid because there was no discovery under the general rule of discovery as applied to nonmetallic minerals of widespread occurrence, while the hearing examiner based his decision on the finding that the deposits were "common varieties" not subject to location under the mining laws so that the question of present marketability is not now pertinent.

We consider first appellant's contention that the decisions below disposed of the contest against the lode claims on issues not raised by the complaint and answer and that decisions based upon such issues are invalid.

In *United States v. Harold Ladd Pierce*, 75 I.D. 255 (A-30537), decided today and hereafter referred to as first *Pierce*, involving a contest against another of Pierce's mining claims, the P-1 Pierce placer mining claim, we considered a similar contention. There the complaint brought against a limestone placer mining claim located prior to July 23, 1955, charged that no discovery had been made because the minerals could not be marketed at a profit and that an actual market had not been shown to exist. We held that the charges could not be construed to raise the issue of whether a valid discovery of a common variety of limestone had been made prior to July 23, 1955, where no evidence was offered on that issue at the hearing and the issue had not been adverted to by either party.

We distinguished another case, *United States v. Keith J. Humphries*, A-30239 (April 16, 1965), in which the Department held that it was proper to rule on the pre-1955 marketability of deposits of sand and gravel on contested mining claims although the charges gave only lack of sufficient quantities and of present marketability as reasons for disputing the claim. The Department pointed out that the Government had made its position known at the hearing, that the contestee had not objected and that he had questioned witnesses concerning operations in 1955. Moreover, in the absence of allegations that the contestee had

been denied an opportunity to produce evidence at the hearing or that he could produce new evidence on the issue at a new hearing, the Department concluded that the contestee had not been misled by the charges or prejudiced in any way.

The case on appeal, in our view, is much more akin to *Humphries* than to first *Pierce*. The record demonstrates that at the hearing, held on December 11 and 12, 1963, and especially at the reopened hearing, held on June 16, 1964,² the contestee questioned his witnesses and cross-examined the contestant's witnesses about the "common variety" nature of the deposits and their marketability on or before July 23, 1955, and at the time of the hearings, and that the applicability of the ordinary rule of discovery to the deposits on the claim was raised.

It is true that the contestant offered no evidence that there had been no market for the minerals on the lode claims on or before July 23, 1955. The contestant did offer testimony that there was no current market for some of the products Pierce said he could produce from the claims (Tr. 23).³ When one of its witnesses, Tom H. W. Loomis, admitted that limestone from the claims could be sold in Los Angeles for use as roofing granules at a profit of 80 cents per ton, the witness also stated that in his opinion the existence of such a market would not establish a valid discovery of the claims because limestone located for sale as roofing granules was "a common usage, common variety" not locatable under the act of July 23, 1955 (Tr. 100). Loomis also testified that the deposits of mica schist, feldspar, and aplite could not "compete economically" (Tr. 110, 83) and that these minerals are common ingredients of most common rocks (Tr. 113). Pierce in his turn said that the mica schist and feldspar were not common varieties (Tr. 251). The hearing, however, closed without any further examination of the market status of the several lode deposits on or before July 23, 1955.

It was later reopened at the request of the contestee for the limited purpose of receiving additional testimony or evidence relative to the percentage of mica contained in, and recoverable from, the mica bearing rock exposed on the claims. The evidence offered at the reopened hearing held on June 16, 1964, covered many other aspects of the controversy. Pierce spoke of new uses for the mica deposit. He stated that after treatment of the mica by heat to expand it, a process described as exfoliation, it could be used as a substitute for vermiculite,

² In the first *Pierce* case the hearing was held on September 18 and 19, 1963.

³ This and similar references are to the pages of the transcript of the proceedings at the original hearing. The transcript of the reopened hearing is referred to as "R. Tr."

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as a chemical carrier, as an absorbent, and as an insulating agent (R. Tr. 20-22). He also discussed how the mica could be processed to develop a product suitable for use in the paint industry (R. Tr. 23), and how the sand on the Jamie claim could be processed to produce a silspar sand for use in the ceramic industry (R. Tr. 29-31). He also explained in detail his estimated mining costs, selling prices, and other matters of economic interest (R. Tr. 33-38).

Clifford O. Fiedler, his next witness, who had testified at the first hearing as an expert in the machinery, manufacturing, and engineering business (Tr. 146), reviewed a production schedule (Ex. R-L) showing the feasibility and practicability of mining, milling and marketing the various products that are found on the claims (R. Tr. 41 *et seq.*).

As an introductory question the contestee's attorney asked:

Q. Now, the next question I have, Mr. Fiedler, in the procedure that you had in your first projection, which was Exhibit V, and the one you have in front of you at this time [Exhibit R-L], did a market exist for all of these products on or prior July 23rd, 1955?

A. Yes, they did.

Q. For all of them?

A. For each and everyone of them.

Q. All right.

A. I would like to make an exception to that, Mr. Bridges. The aplite section of this projection, I couldn't attest for the market prior to 1955.

Q. All but the aplite? (R. Tr. 41.)

A short while later, the contestee's attorney again asked the same witness.

Q. Now, on this projection, other than the aplite shown in the right-hand column, was there a market for the products prior to July 23rd, 1955?

A. Yes, for each and every one of them. (R. Tr. 46-47.)

Fiedler was also queried about the use of limestone for roofing rock by the Pyramid Rock Company on or prior to July 23, 1955 (R. Tr. 48-49), and about the ability of the silica feldspar sand from the claims to have competed with the Monterey Beach sand prior to July 23, 1955 (R. Tr. 49).

On cross-examination he asserted that a market for all the products, except aplite, existed at the time of the hearing (R. Tr. 60).

The hearing examiner asked Pierce several questions concerning the general occurrence of mica schist in the area of the claims (R. Tr. 92-93). Pierce's attorney also asked him why the mica schist was unique (R. Tr. 97-98).

In its presentation the contestant, too, was concerned with the current marketability of the products from the claim (R. Tr. 106). On cross-examination of one of the contestant's witnesses, the contestee asked whether the mica schist was a common type of product and whether there was a market for it prior to July 23, 1955. Later in the same cross-examination, contestee's attorney asked:

Q. * * * Mr. Loomis, is it your understanding a limestone deposit, which we will assume to be a common variety of limestone, which was located prior to July 23rd, 1955, and for which there existed a market on or prior to July 23rd, 1955, and from which this deposit could have competed; that this would constitute a valid discovery within the purview of the mining laws?

Would you like to have that question read back, Mr. Loomis?

A. I would state that the limestone would have to be shown to have been participating in the market in 1955 as well as today, not just in a possible competitive market, but actually participating in it.

Q. Is that what you would call "Loomis Regulation No. 1"?

A. No. (R. Tr. 132.)

This exchange illustrates how well the contestee understood the related issues of "common variety" and "pre-July 23, 1955, marketability."

It is our conclusion therefore that the contestee offered evidence on the issues on which the decisions below rested and that he has not demonstrated that he has been prejudiced by the inartistic allegations of the complaint. Moreover, he does not profess to have any additional evidence to submit on these issues. Therefore we conclude that despite the possible deficiency in the complaint, the issues on which the decisions rested are in the record in a manner consistent only with a recognition that they were important to the resolution of the contest and that the proceedings are not to be vitiated for any inadequacy in the complaint.

As we have seen, the hearing examiner rested his decision on the conclusion that the deposits for which the claims were located comprise common varieties of minerals which were not marketable on or prior to July 23, 1955, and which, if marketable now, do not possess some property giving them a special and distinct economic value so as to constitute them deposits locatable under the mining laws.

Pierce contends that the deposits were "marketable" prior to July 23, 1955, because they were in the dictionary sense of the word capable of being sold, or were "saleable" or "merchantable." For purposes of the mining law, "marketable" has a more specialized meaning. The Department has held that for a mineral deposit, especially one of a non-metallic mineral of widespread occurrence, to qualify as a "valuable mineral deposit" under the mining laws (30 U.S.C. sec. 22 (1964)) it

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must be shown that it can be "extracted, removed and marketed at a profit"—the marketability test. The Supreme Court has recently approved this standard and held that the marketability test is a logical complement to the "prudent man test" of discovery. *United States v. Coleman*, 390 U.S. 599 (1968).

We are faced then with a series of questions: First, do the deposits on the lode and placer claims constitute common varieties of minerals? If they do, then were the deposits on the lode claims marketable at a profit as of July 23, 1955? This question is not relevant to the placer claim, for it was located on June 28, 1963, long after common varieties were excluded from mining location. If the minerals on the lode claims are common varieties and were not marketable as of July 23, 1955, the claims are invalid. If the minerals on the claims, lode and placer, are not common varieties, the inquiry turns to whether they are marketable at a profit as of the present time. If they are not, the claims must be declared invalid.

The first issue is whether the deposits are "common varieties" within the meaning of the act of July 23, 1955. Section 3 of that act, as amended, 30 U.S.C. sec. 611 (1964), provides that

No deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders and no deposit of petrified wood shall be deemed a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such mining laws: * * *. "Common varieties" as used in this Act does not include deposits of such materials which are valuable because the deposit has some property giving it distinct and special value * * *.

At the outset it is to be noted that the statute does not apply to common varieties of all minerals but only to common varieties of those enumerated, namely, "sand, stone, gravel, pumice, pumicite, or cinders." Some of these terms, *e.g.*, sand, gravel, and stone, are broad in meaning and can encompass a wide range of materials. The term "stone," in particular, is extremely broad in meaning, including material of igneous, sedimentary, or metamorphic origin and material of variegated mineral composition, ranging, for example, from white limestone to dark basalt. This being the case, it is important not to confuse the material with the constituent elements that make it up. That is, in determining whether a particular material falls within the purview of the common varieties provision, it is necessary to determine whether the material as a totality has value or whether only a constituent element of the material has value.

An example will illustrate. Suppose we have a granitic rock which

is composed of quartz and the other minerals usually found in a granitic rock. The rock as such is suitable for use in constructing buildings. There is no doubt that the rock would constitute a "stone" within the meaning of the common varieties provision and the question would be whether the particular rock was a common variety of stone. If, however, the same rock carried gold and was located only for the supposed value of the gold, the question would not be whether the rock was a "stone" and whether it was an uncommon variety of stone because of its gold content. The question would simply be whether there was a valuable deposit of gold on the claim. In other words, the matrix in which the gold is embedded would be of no significance and no "common variety" question would be present.

With this in mind we turn to the question whether the mineral deposits on appellant's claims present a common varieties question. The materials claimed to be valuable on the lode claims are limestone, aplite, mica schist (or biotite gneiss), and feldspar. The materials of asserted value on the placer claim are mica and feldspar silica sand. The examiner held all these minerals to be common varieties.

There is little problem with the limestone and aplite. They occur in rock formation and are used in crushed or ground form. In his appeal to the Director, Pierce did not contend that the limestone and aplite deposits were uncommon varieties, nor does he do so on this appeal. There is no evidence in the record to indicate that the limestone and aplite are different from the limestone and aplite commonly found in the Southern California area. The findings of the hearing examiner that they are common varieties of stone therefore remain unchallenged. See the first *Pierce* case, decided today. The only issue then is whether the limestone and aplite were marketable as of July 23, 1955. We turn to that issue later.

The mica schist presents a different problem. Pierce contends strongly that it is an uncommon variety of stone. However, whether it is or not raises the question that we have just discussed. On the one hand, great value is claimed for use of the mica schist as backing on composition roofing. For that use the whole rock is simply ground and the pulverized rock applied. The mica content is of little significance—it averages 10 or 12 percent but can be as low as 1 or 2 percent—and other material can be used for the same purpose, such as beach sand (Tr. 73-74, 155, 163-164, R. Tr. 57, 119, 150-153). The mica schist then is properly considered to be a "stone" (Tr. 107) within the meaning of the common varieties provision and it seems clear that, used as a stone, it is a common variety having no unique or special value. If the validity of the lode claims depended upon value of the mica schist as a whole rock, a showing of the profitable marketability of the schist as of July 23, 1955, would be necessary.

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However, Pierce also claims value for the mica alone. This is the biotite mica which would be extracted or separated from the matrix in which it occurs. In this situation the value asserted for the claims would not be for the mica schist as a stone, but for the mica alone, which could not be characterized as a "stone." Therefore, no question could exist as to whether the mica is or is not a common variety; the validity of the claims would depend simply upon whether the mica can be marketed at a profit at the present time. This is a distinction which the hearing examiner did not draw.

The feldspar appears to be akin to the mica so far as the common varieties issue is concerned. While it is a common constituent of rocks, its value here is claimed to be for its chemical qualities. For such use the crystals of feldspar would be extracted from the matrix in which they occur. The feldspar therefore cannot properly be considered to be a "stone" within the purview of the common varieties provision. Like the mica, to sustain the validity of the claims based on it, the feldspar would have to satisfy the test of present marketability at a profit.

The Jamie placer claim presents another variant. Its claimed value is based upon material which is clearly "sand" within the meaning of the common varieties provision. However, since the claim was located after July 23, 1955, if its validity is based upon a discovery of "sand," its validity would have to be based upon the sand as an uncommon variety of sand. The uncommon nature of the sand is predicated upon its mica and feldspar content. But it may not be necessary to base validity of the claim upon the discovery of an uncommon variety of "sand." It may be based on a discovery of the minerals mica and feldspar. In this case it is immaterial that these minerals occur in the form of constituent elements of sand. Regardless of which basis is asserted however, the same showing must be made as to discovery, that the minerals can be marketed at a profit at the present time.

We turn then to a consideration of whether the evidence shows that the limestone, aplite, and mica schist were marketable at a profit as of July 23, 1955, so as to sustain the validity of the lode claims, or whether the evidence shows that the mica and feldspar are marketable at a profit at the present time so as to sustain the validity of both the lode and the placer claims.

First, as to the aplite there is no evidence that it was marketable at a profit as of July 23, 1955. Appellant's witness, Fiedler, prepared schedules of production for the claims in which he showed production of 1,000 tons of aplite per month at a net profit of over \$2,000 per month (Ex. V, R-L), but he testified frankly not only that he could not attest

to a market for the aplite prior to 1955 but that he was not aware of any existing market at the time of the hearing (Tr. 160, R. Tr. 41, 60). There was no other credible evidence of a market for the aplite as of July 23, 1955.

As for the limestone on the lode claims, the principal use claimed for it is as roof rock, pool sand, and filler (Tr. 174). It is not claimed to be as high a quality limestone as is the limestone deposit on the P-1 Pierce placer claim, situated a mile away, which is the subject of the first *Pierce* decision decided today. For the reasons stated in that decision, there is little basis for believing the broad statements made by appellant that a profitable market existed for the limestone on the P-6 and the Z-8 claims as of July 23, 1955. In fact, Fiedler's revised production schedule (Ex. R-L) lumped the materials from the P-1 placer claim together with those from the P-6 and Z-8 claims in projecting a profit. The reasons for doubting that a showing can be made as to the existence of a profitable market on July 23, 1955, for the limestone deposit on the P-1 placer claim apply with even greater force to the lower quality limestone on the P-6 and Z-8 lode claims.

Now for the mica schist, which is the principal deposit of value claimed for the lode claims. As we have seen, a principal use asserted for it is as coating for roofing paper. In fact, that was the major use asserted at the original hearing (Ex. V, Tr. 150, 158, 161, 163, 257). For that use the whole rock is simply ground; the mica is not separated and its percentage is not critical. The evidence as to its marketability as of July 23, 1955, consists of the testimony of Fiedler to that effect, based principally on the fact that mica schist from the Ogilby deposit, which he operated for 4 years (1956-1960), was sold in Los Angeles for that purpose and that the P-6 and Z-8 claims have a definite freight advantage (R. Tr. 41, 47, Tr. 147-149, 153-156).

However, although the evidence indicates that ground mica schist from the claims might have been sold as of July 23, 1955, the evidence is completely theoretical. It consists of estimates as to mining costs, grinding costs, transportation costs, etc., from which it is concluded that appellant's claims could have captured a share of the market. However, much of the evidence, such as Fiedler's plans (Ex. V, R-L), is projected on the basis of operations which would include the production of other materials such as limestone for roof rock and filler, pure mica, feldspar, and aplite. The figures also assume the production and sale of certain quantities without any hard evidence to support the assumptions. The result is that the economic feasibility of a mica schist operation for producing ground rock for roofing paper backing alone is considerably beclouded.

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It is true that Fiedler observed that if it became necessary because of limited capital to install a single small plant it would be economically practical to put in a plant to process only the mica schist, that such a plant could be installed for \$60,000 to \$70,000 to process 300-500 tons of material a month with a single operator handling everything, that this was the type of operation at Ogilby. If Fiedler's estimates for a multi-product plant are accurate, such a one-product plant would be a success. In his first plan (Ex. V) Fiedler showed a monthly profit of \$1,650 on sales of 350 tons of mica schist. In his second study (Ex. R-L) he showed a monthly profit on the same tonnage of \$1,910. These add up to yearly profits of \$19,800 and \$22,920 which would appear to be attractive returns for an investment of \$60,000 to \$70,000. The question is why this relatively modest investment has not been made on the claims since they were located in 1948. Fiedler testified that the Ogilby deposit has been worked continuously since 1928 (R. Tr. 47). With the profitability of that operation established at that time and with the claimed advantages of the P-6 and Z-8 claims from the standpoint of freight costs and mining costs, why was no mica schist produced and sold from the claims by July 23, 1955?

The stock answer that Pierce has given is that he cannot proceed with development until he receives patent to the claims (Tr. 256, 267, R. Tr. 37). It may be true that loans may be difficult to secure on unpatented property. However, Pierce admitted that if he had the money he could operate it as an unpatented mining claim but said "it would be hazardous" (Tr. 267). The excuse that any production and sales must await the issuance of patent is too pat. If that standard were to be adopted, it could lead to the patenting of one claim after another simply upon a paper showing of a profitable operation.

This, of course, is not to say that the Department requires as an inflexible rule, or even a general rule, that actual profitable operations must be shown before a valid discovery will be recognized. The Department has disclaimed this to be the rule. *United States v. New Jersey Zinc Company*, 74 I.D. 191 (1967); *United States v. Robert E. Anderson, Jr. et al.*, 74 I.D. 292 (1967). All that we say here is that failure to demonstrate a discovery by the commencement of actual operations is not to be explained away in all cases simply on the ground that such operations must await the issuance of a patent. In the first *Pierce* case, no operations had begun on the patented Guiberson deposit adjoining the P-1 claim although patent had been issued for that deposit in 1922.

With respect then to the aplite, limestone, and mica schist, used as ground rock, we conclude that the appellant has not shown by

a preponderance of credible evidence that these materials could have been marketed at a profit as of July 23, 1955. There is no evidence as to the aplite and the evidence as to the limestone and mica schist is purely theoretical. Although theoretical evidence may be of probative value in certain circumstances involving certain minerals or mineral deposits, its value in the case of common varieties of minerals of widespread occurrence is extremely limited. *United States v. New Jersey Zinc Company, supra*; *United States v. Robert E. Anderson, Jr. et al., supra*; *Osborne v. Hammitt*, Civil Action No. 414 (D. Nev., August 19, 1964), discussed in *Anderson*.

This leaves for consideration the validity of the claims as based on a discovery of mica or feldspar (silica feldspar sand in the case of the Jamie placer). The question as to these minerals is whether they can be marketed at the present time at a profit.

There is no doubt that there is a substantial amount of feldspar on the lode claims, but the contestant's witnesses denied that it could be mined economically (Tr. 55, 83, 109). They pointed out that the feldspar found on the claims appear in narrow stringers which would make its extraction difficult and expensive (Tr. 109). Feldspar mined, successfully, they said, occurs in well defined zones in pegmatite deposits with large crystals of feldspar accumulated in lenses and pods (Tr. 60, 83). Fiedler, the contestee's witness, said his operational plan contemplated no processing of the feldspar other than selective mining and grinding (Tr. 168, 169, 177, 186). On cross-examination, he stated that his opinion that the feldspar deposit could be mined economically was based on information given him as to quantity and quality of the material at the mine site, that he was not a geologist and was not qualified to make an analysis of the material (Tr. 172). Loomis, the government witness, after pointing out that feldspar is a common constituent of rock and that there was not a large tonnage of rock on the claims with sizable feldspar crystals (Tr. 274), concluded that of the 30 to 50 feet of feldspar stringers on the lode claims, the largest one he saw was 5 to 6 feet in width, that they did not appear to be continuous, and that the selective mining of them would be expensive (Tr. 275).

Pierce, in his Exhibits O and Z, which roughly depict the position and relative size of the various deposits on the lode claims, shows the feldspar quartz lodes as quite narrow compared to the limestone and mica deposits. He referred to "some" feldspar dikes of 20 to 30 feet in width (Tr. 263), but this statement seems inconsistent with the references to a total width of 40 to 50 feet for all the feldspar dikes on the claims, the figure used by contestee in computing the volume of feldspar on the claims (Tr. 82, 136).

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Upon a careful consideration of the evidence, it is our conclusion that Fiedler based his opinion of the economic feasibility of producing feldspar from the lode claims on an assumption about the quantity and quality of the feldspar which is not supported by the evidence, that the feldspar as it exists on the lode claims is for purposes of extraction similar to the vast amounts of feldspar that exist in igneous rock in non-economic form, and that it has not been shown to be marketable at a profit at this time.

As for the mica in the mica schist, Pierce presented evidence that through flotation or electrostatic separation of the mica from the schist, which assays had shown to have over 29 percent mica, a 98 percent pure biotite mica could be recovered which would then be finely pulverized to 325 mesh. The resulting product could, he and Fiedler said, be sold in quantity at \$25 or \$57.50 per ton and yield a substantial profit (R. Tr. 25, 34, 43). While Fiedler admitted that finely ground mica was ordinarily produced from sericite or moscovite mica, he testified that he had been told by an official of a paint manufacturing company, a consumer of such material, that biotite type mica could be used as a replacement (R. Tr. 42). The contestee relies heavily on a pricing chart included in a government publication listing the prices of wet and dry ground mica in the United States in 1961 which gives as the price per pound of wet-ground biotite 6½ cents for carload and 7¼ cents for less than carload lots (Ex. R-I). Loomis, on the other hand, testified that his inquiries had produced only statements that there was no demand for biotite mica for use for anything other than in the roofing industry (R. Tr. 106, 120). Despite repeated cross-examination he was adamant that he had found no market in the Los Angeles area for use of biotite mica (Tr. 109, 110, 120, 123, 131, 143). Edward F. Cruskie, the other witness for the contestant, testified that a search of the literature had shown biotite mica to be used only as a novelty and that there was no significant tonnage produced (Tr. 54, 157-158).

The contestee offered no evidence of actual sales or probable sales to support his assertion that biotite mica from the lode claims can be sold at the prices set out in Exhibit R-I. We find contestant's evidence that no market could be found and that nothing could be found in the technical literature to indicate that any substantial tonnage of biotite mica was produced to be persuasive that there is no market for it in the volume and at the prices on which the contestee based his computations. It is concluded therefore that the mica on the lode claims does not satisfy the test of discovery.

There remains the contestee's contention that the sands upon the Jamie claims are not of widespread occurrence and are an uncommon

variety. He says they are unique and distinct in that the mica, feldspar silica sand and heavy mineral constituents can be easily separated and the products of such separation result in a pure biotite mica and a feldspar silica sand that can meet the chemical specifications of the glass and ceramic industry.

Cruskie said that there were about 50,000 tons of sand in the placer claim and a great deal more of similar sand on the lode claims and another placer claim to the north held by Pierce (Tr. 283, 284). He also said that there are other comparable sands in the general location of the claim and that the sand did not have any unique special characteristics which are not found in other sand (Tr. 36, 283). Loomis was of the same opinion and also stated that similar sands are found in the general area of the claims (Tr. 89).

Pierce, on the other hand, would not agree and stated that the sand was quite special because of its composition and its physical property of being rounded (Tr. 206). He was somewhat vague, however, in attributing any particular benefit that the roundness would add in the sale of the sand. He mentioned only use in foundries and as a filler, while the major market, he said, would be in glass and ceramics (Tr. 181, 196, R. Tr. 29). Pierce also stated that on three others of his nearby claims there were about 3 to 5 million tons of this same sand (R. Tr. 94).

In explaining his proposed method of processing the materials on the claims, Pierce said he was a registered professional engineer, his business was developing new products, new deposits, and that he held a number of process patents that he had developed which "have made profitable the utilization of waste materials or improved the quality of materials which were common materials but were where we had been able to improve quality costs of production and making standard products out of them" (Tr. 199).

We find that the contestee's statement that he applied new processes to common materials and his claim that there were 3 to 5 million tons of sand nearby, when coupled with the contestant's evidence that the sand was not unique and that similar sand was found wherever there is sand or sand concentrates in the general area, to be persuasive that the sand on the Jamie claim is a common variety of sand which does not possess any unique characteristics making it locatable under the act of July 23, 1955 (*supra*).

As indicated earlier, however, locatability of the Jamie placer may be based upon a claimed discovery of mica or feldspar instead of an uncommon variety of sand. So considered the mica is insufficient for the same reason as that given for the mica recoverable from the mica schist on the lode claims.

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The picture is a little different as to the feldspar. In the lode claims there are problems of costs in the selective mining and separation of the feldspar from the rock in which it is found. For the placer the problem of separation is somewhat different although Pierce said it could be done by flotation or electrostatic means (Tr. 144). But Fiedler did not include in his production plans processing of the Jamie sands for the purpose of producing silica feldspar, and he ran no tests to separate the feldspar (Tr. 158-159). There is no real evidence as to the economic feasibility of developing the Jamie claim alone for only the silica feldspar on the claim. Thus we are unable to conclude that the present marketability at a profit test has been shown to have been met as to the Jamie placer.

Our decision in this case, as in the first *Pierce* case, is founded to a considerable extent upon our inability to give full credence to all the evidence submitted by the appellant. As in that case, appellant has presented a mass of loosely coordinated data which, taken at face value, would show assured financial success in every conceivable operation of the claims whether it be for one product, several products, or all products. The trouble is that all the figures do not hang together nor do they jibe with much of the testimony. For example, Fiedler's first production study (Ex. V), submitted at the first hearing, was based on the material on the P-6 and Z-8 claims only. He estimated that a capital investment of \$200,000 was necessary for a plant to produce mica schist, three forms of limestone, feldspar, and two forms of aplite. The operation would produce a yearly profit on sales of \$208,861, after payment of \$49,800 in royalties to Pierce. As noted earlier no provision was made for producing pure mica, only ground mica schist (Tr. 149-152). At the reopened hearing, held 6 months later, Fiedler presented a second study (Ex. R-L). This one called for a \$300,000 plant investment and included the Jamie and the P-1 Pierce mining claim. It also added the production of pure mica. Net profit per year was estimated at \$440,000 after payment of \$76,200 in royalties to Pierce.

Despite the great emphasis placed in the testimony upon the mica schist as being the predominating important material, both production schedules showed that the bulk of the production and profit would come from the limestone. The first study showed a production of 2,300 tons of limestone materials per month at a profit of \$9,827.28 (after royalty) as against production of 350 tons of mica schist per month at a profit of \$1,300 (after royalty). The second study showed a production of limestone materials of 3,900 tons per month at a profit of \$16,866.25 (after royalty) as against production of 450 tons of mica schist and mica per month at a profit of \$6,006.94 (after royalty).

Pierce tossed off figures of his own for monthly production and profit from the P-6, Z-8, and Jamie claims: 350 tons of mica schist at a profit of \$2,500; 100 tons of pure mica at a profit of \$6,000; 100 tons of exfoliated mica at a profit of \$2,200; rockwool (no tonnage) at a profit of \$1,600; 100 tons of potash spar at a profit of \$1,200; 100 tons of mica from the Jamie sand, \$1,000 profit; 1,000 tons of silspar, \$8,000 profit; 1,000 tons of foundry sand, \$4,000 profit; 1,000 tons of filler for floor tile, \$7,000 profit; white pool limestone sand (no tonnage), \$2 per ton profit; 1,500 tons of limestone roof rock, \$3,000 profit (R. Tr. 33-37).

Fiedler also talked about a \$250,000 plant for the sole purpose of separating mica from crushed rock by the flotation process and a \$60,000 to \$70,000 plant to pulverize the recovered mica (Tr. 152-153, 165, 177-178). And, as we have noted earlier, he spoke also of a single \$60,000 to \$70,000 plant just to crush mica schist for use in the manufacture of roofing paper (Tr. 161).

It seems quite clear that appellant has no firm plans for developing the claims in issue. It appears that he has merely worked up sets of figures designed to entice others to make investments on his claims. In other words, his role is that of a promoter. There is, of course, nothing wrong with that. A mining claimant is not required to develop his own claim or to invest his own money in it. He can do so or he can sell it or lease it to another for development. However, the data developed for a promotional enterprise may be suspected of excessive optimism. It seems inconceivable that with so many alleged ironclad ways of making a profit from the claims, whether the investment be small or large, nothing has been done to commence a mining operation on the claims. It would certainly seem that in the long time that the lode claims have been held, since 1948, some small demonstration of the profitability of the claims could have been made.

For the reasons stated, we find the lode and placer claims to be invalid.

As a last word, we find it unnecessary to rule upon the mineral character of the land in this proceeding.⁴

Therefore, pursuant to the authority delegated to the Solicitor by the Secretary of the Interior (210 DM 2.2A(4) (a); 24 F.R. 1348), the decision of the Office of Appeals and Hearings is affirmed.

ERNEST F. HOM,
Assistant Solicitor.

⁴ For a recent discussion of principles governing a determination of the mineral character of and see *State of California v. E. O. Rodeffer*, 75 I.D. 176 (A-30611 (June 28, 1968)).