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OREGON'S ASSAY SERVICE - HOW TO USE IT TO BEST ADVANTAGE

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The assay service performed by the State of Oregon Department of Geology and Mineral Industries is a cooperative arrangement. It is designed to encourage the prospector to search for mineral deposits and, then, to help him find out if he has ore worth developing. In exchange for assay data, the prospector provides the Department with certain information about the deposit that adds to the over-all knowledge of the State's mineral resources. The attached sheet entitled "Request for Sample Information" is the form on which this cooperative information is recorded.

The following paragraphs have been prepared to assist those using the Department's cooperative analysis service. Instructions are given for filling out the form and, equally important, some suggestions are offered for taking samples -- a vital operation all too often imperfectly performed.

Scope of Assay Service

The law governing this service entitles any individual, or group of two or more persons working together, to submit two samples per month for free laboratory analysis of grade and/or identity. In addition to the limitation of the number of samples that any applicant may submit, the law further stipulates that all samples must originate from prospects located in Oregon and that the applicant must furnish data regarding the location. Furthermore, in order to qualify, the applicant cannot be mining, milling, or shipping ore from the prospect, or hiring labor in development thereof. Neither can he be a mining engineer sampling the occurrence on a professional basis for evaluation purposes. Finally, because this is a publicly financed service, all information submitted regarding the prospect and all results of laboratory determinations are open to public inspection and may be published.

A more detailed account of the law is printed on the back of the form. However, the digest just given covers the basic requirements which both this Department and applicants for the service are obliged to meet when samples are submitted for analysis.

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How to Fill out the Sample-Information Form

The fill-in side of the forms contains: (1) provisions for data needed by the Department for mailing and filing purposes; (2) provisions for the information required by law in order for the applicant and the sample to qualify for the service; and (3) provision for a statement describing the analysis desired by the applicant, together with space for pertinent sample data the applicant should keep for his own records. A copy of the form will be returned to the applicant.

Clearly, the called-for information relates to data that must be available at the outset if an application is to be processed smoothly and the service made effective. It is essential, therefore, that the application forms be filled out carefully, completely, and accurately. In this respect, most of the requested data is comparatively easy to secure once an applicant understands what is needed, and why. However, to the uninitiated, certain of the requirements can be confusing; hence, those likely to prove troublesome are reviewed here in order to clarify application procedures.

Claims and ownership data: The first trouble spot on the form for some applicants is the heading calling for the "Name of the claim sampled." The intended entry here is the claim name WHEN THERE IS A CLAIM. Otherwise, if the sample originates from a tract of privately owned deeded land, the entry should be simply "deeded land." Or, if the sample originates from the Public Domain and no claim has been taken, the intended entry should be "none." In short, all that is required is a factual statement of the prevailing land status. Similarly, the appropriate entry under the "Name of property owners" is the name of the claim holder or recorded land owner WHEN THE SAMPLE ORIGINATES FROM A CLAIM OR FROM DEEDED LAND. Otherwise, the entry should be "Public Domain," "State," or "County" if the sample originates from public land.

Required location data - surveyed areas: Almost all parts of Oregon have been surveyed in accordance with standard Land Office practices, and maps showing the legal subdivisions for each county are on file in the Recorder's office at all Court Houses. In addition, the township-range-section grid is shown on all topographic quadrangle maps issued by the U.S. Geological Survey and on most land maps available from the U.S. Bureau of Land Management, the U.S. Forest Service, and other Federal and State agencies dealing with land-use problems. There are also the County and Township maps issued by commercial concerns, available for purchase in most cities and many smaller towns. Under the circumstances, it should not be difficult for an applicant to find a map showing the legal subdivision grid in his prospect area. For that matter, if a sample originates from deeded land, the required location data is already on file in the County Recorder's records. Likewise, if a sample originates from a claim, the locations

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
1069 State Office Building - Portland, Oregon 97201

REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information requested completely, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Please print your name and address in space above

Date sample is sent: _____

Name of claim sampled: _____

Name of property owners _____

Are you hiring labor? _____ Are you milling or shipping ore? _____

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County _____ Mining district _____

Township _____ Range _____ Section _____ Quarter section _____

How far from passable road and name of road _____

	Channel (length)	Grab	Assay for	Description
Sample No. 1				
Sample No. 2				

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) IMPORTANT: A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) _____

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description _____

Sample Number	GOLD		SILVER					
	oz./T.	Value	oz./T.	Value				

Report mailed _____

LAW RELATING TO FREE ANALYSIS OF ORES, MINERALS, ETC.
CHAPTER 179, Section 10, Oregon Laws 1937.

The department shall make, or cause to be made, quantitative determinations of ores and minerals when submitted for the purpose, that are from original prospects or properties within the state of Oregon, and shall mail to the sender the results obtained within 10 working days after receipt of samples; said service shall be performed by the department without charge to the sender and shall be rendered in exchange for information for the records of the department stating the name and residence of the sender together with a history of the ore or mineral, giving as nearly as possible the location from which the sample was taken, including the name of the county, and any other matters that may be beneficial touching the same. All determination shall be performed under the following rules and regulations and subject to the following restrictions:

(a) No sample submitted by engineers sampling prospects or mines for the purpose of evaluation, or submitted by operating mines milling or shipping ore, or hiring labor, shall be accepted by the department for assay and/or analysis, except they be taken in the field by members of the department's staff in conducting the work of the department within the scope of this act.

(b) The number of samples which any single person or group of persons may submit shall be limited to two in any 30 day period and all samples shall be assayed or analyzed by the department in the order received, as far as possible.

(c) All information received and results of determination sent out shall be open to public inspection and may be published by the department.

(d) Before any work is done on the material submitted, all information required must be possessed by the department and the 10 day limit for reports will count from the time such data are received by the department.

notice should be on file also and this should contain an accurate legal description if it has been executed properly. In the last analysis, therefore, the only applicant who might have to hustle a little harder than the others to get his location data is the one who secures his sample from an unlocated prospect on the Public Domain. Even for him the task should not be great.

Figure 1 shows how sections are numbered on a township and how each section is subdivided.

Required location data - unsurveyed areas: When a sample originates from some of the few unsurveyed areas remaining in the state, the only course of action is to describe the location as clearly as possible with reference to conspicuous landmarks, in the same manner that is required for claim locations. When doing this, mention first the nearest well-known landmark in order to establish the general locality and then describe the location in terms of local references. Always emphasize distances and directions. Example: Five miles northwest of Twin Lake on the east side of Bear Gulch one-half mile above the Clear Creek Junction.

Mining district: Because mineral occurrences tend to be localized in some areas and not in others, a large percentage of the samples submitted for analysis originates from certain recognized parts of the state where mining and prospecting have been historically prominent. For this reason it is a help in filing and correlating assay results to have the name of the mining district from which the samples came. However, there are no recognized mining districts in much of the state and information concerning the identify and location of those that do exist is not always commonplace. Therefore, the recommended procedure for filling out this part of the form is to name the district if you know it. Otherwise, this particular entry can be answered with a question mark, thus (?), and the Department staff can determine the district from the township-range-section data.

Channel length - grab: What is meant by these headings will be discussed later in the section devoted to SAMPLING techniques.

Description: This word appears twice on the fill-in side of the application form -- once near the mid-section portion of the form in the part to be used by the applicant, and again near the bottom of the page in the space reserved for office use. The particular "description" referred to here is the one occurring in the applicant's part of the form.

The intent of this heading is to enable the applicant to record for his own information data that will insure his relating the assay result to the proper sample. For example, if an applicant submits six samples during the course of a year from the same prospect and does NOT describe each individual sample on each application form, he may find it difficult or even impossible to determine at a later date which assay report applies to a

particular sample. This clearly makes the results meaningless if the samples originated from different parts of the prospect; hence the desirability of always describing each sample carefully.

How each applicant labels his samples will depend on the conditions existent on his prospect and the number of pits, cuts, natural exposures, and veins present. Since conditions vary at all prospects, no clean-cut rule can be given. However, the following are examples of the sort of descriptions that can be made. They apply to a season's run of samples from a prospect having two parallel veins with several pits and trenches on each:

No. 1 vein, north end of claim;
No. 1 vein, center of No. 2 cut;
No. 1 vein, east end of No. 2 cut;
Main pit on No. 2 vein, at collar;
Main pit, No. 2 vein, 6' below collar;
Re-sample, No. 1 vein, center No. 2 cut.

When samples are described in some such manner as this, there can be little or no confusion and a prospector should be able to relate each result to its proper feature on the prospect even years after the samples were taken.

Desired analysis - for recognized ores: With prospectors (and with mining engineers as well) there are two kinds of rocks and minerals -- those they recognize and are familiar with, and those that are new and strange. The ones that are familiar constitute no problem. They either rate as a common, non-commercial variety not meriting special analysis, or they signify a potential ore of certain recognized chemical substances deserving analysis. For the latter, the applicant simply states that what he wants is an assay for gold; or for copper; or for gold, silver, and copper; or for gold, silver, and tungsten; or for iron; or for chromium and iron; or for magnesium or for barium or for lime or for whatever the logical determinations should be. Definite stipulations of this kind are what should be made under the "ASSAY FOR" heading in all possible instances.

Desired analysis - for strange rocks and minerals: When an applicant is interested in a rock-mineral sample that he cannot classify and is uncertain what value, if any, it might have as an ore, the word "identify" should be written in the space provided. The material represented will then be classified and named. With this information, the applicant can then decide if the material merits additional analysis, and for what. In other words, never ask for a "complete analysis" or for "everything that is in it." Complete chemical analyses are very time-consuming and expensive to make, are beyond the capabilities of existing laboratory facilities, and are not within the scope and intent of the law under which this service is authorized. Instead, ask for an identification and be guided by the results in accordance

with the procedure described above.

Sample size - for chemical analysis and fire assay: For either type of analysis, samples are pulverized to a powder and thoroughly mixed in the laboratory. However, laboratory equipment is not designed to process large volumes of rock on a mass production basis, nor are laboratory crushers capable of handling large pieces of rock. For this reason, sample size can be described as a matter of personal discretion, within certain limits.

The first limit is that a minimum sample size of one pound is required. This much is needed to offset crushing and pulverizing wastage and to provide the required amount of pulp for assay, plus an adequate reserve if reruns are necessary. The other limit has to do with over-sized samples. The laboratory is not the place to beat large chunks of dense, hard rock to crusher-feed size with a double jack. Neither is it practicable to handle samples that are excessively bulky, even when composed of small fragments.

Ideal samples from the laboratory acceptance standpoint approximate 5 to 7 pounds in weight of dry material with no fragments in excess of 2 inches in diameter, and preferably less. Preparing and quartering samples in the field is explained under SAMPLING. In the meantime, remember that 60-pound samples of fragmented rock and melon-sized chunks of solid rock cannot be accepted.

Sample size - for identity determinations: For identification purposes, sample size depends on the nature of the material. If it is a bulk sample of strange rock to be named, a two-fisted-size chunk is ideal, and even smaller fragments can be used. All that is necessary is to package such a sample and send it to the laboratory, along with the application form requesting identity. However, if the desired identification involves small, obscure grains of some strange mineral intermixed with other minerals in a complex ore, or contained in a placer-sand concentrate, the task is more complicated because of the need to direct laboratory attention to the precise mineral to be examined. With a rock, indicate the desired mineral by penciling a circle around several typical examples. Better yet, crush the rock and separate out the unknown mineral with a pair of tweezers or by panning. For this type of identification, a couple of spoonsful of the separated unknown mineral will probably be sufficient. The same procedure is used for mineral grains in a placer sand. Separate out the strange mineral you want identified as cleanly as possible; never send in a bulk concentrate or the unpanned raw gravel.

How to Take Samples

Sampling methods: Most conventional-type ores can be analyzed with a high degree of accuracy. However, the analytical results for any given sample are meaningful for evaluation purposes only to the extent that the

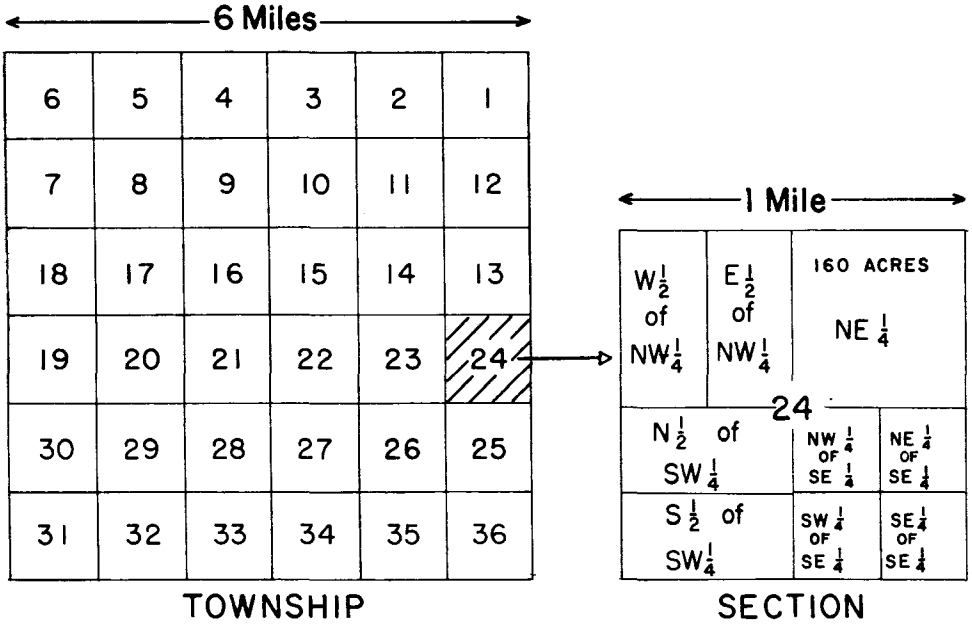


Figure 1. Township plat and section subdivisions.

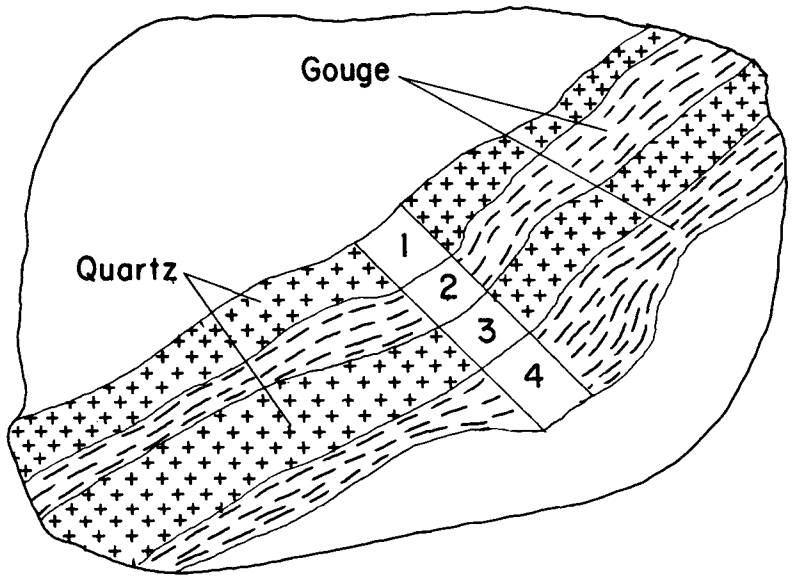


Figure 2. Channel sampling of quartz vein exposed in tunnel face. Sample 1 contains 0.18 oz. gold; sample 2 contains 0.01 oz.; sample 3 contains 0.10 oz.; and sample 4 contains 0.05 oz. A single sample across the entire width would give inaccurate results

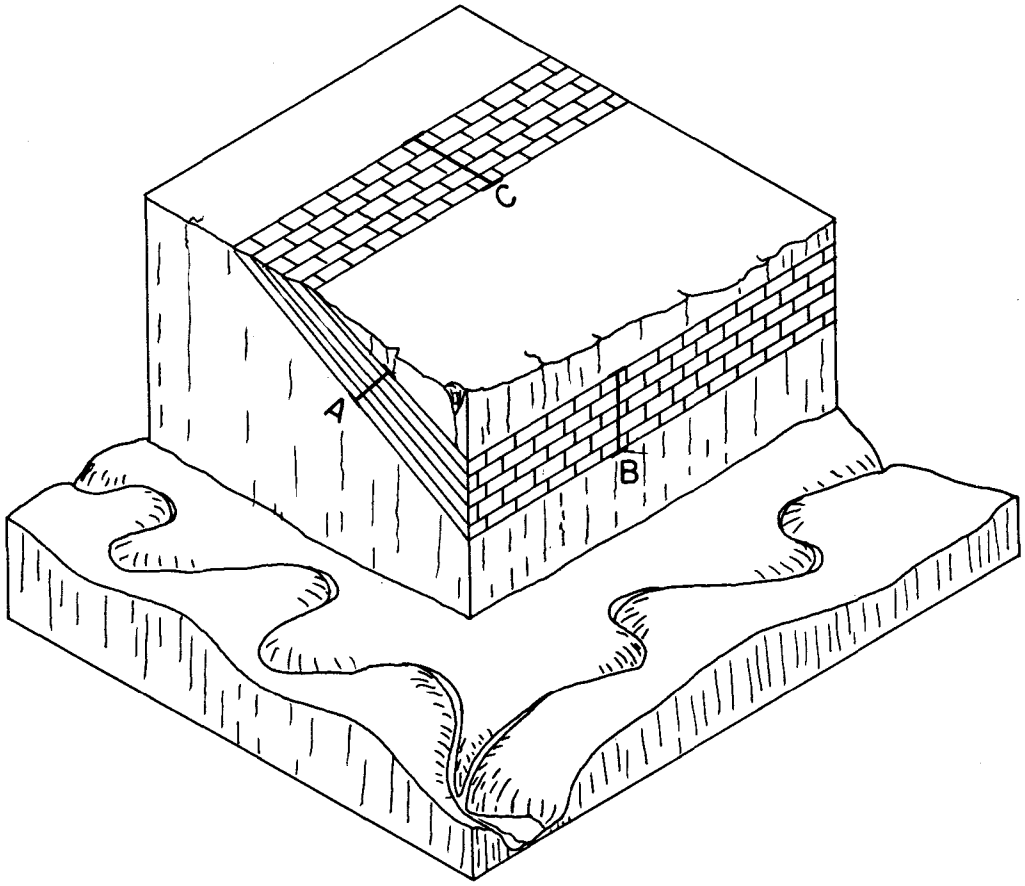
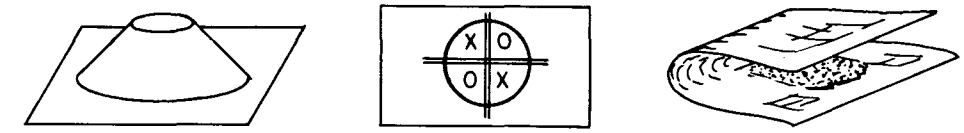


Figure 3. Channel sampling in limestone bed. A sample cut at "A" gives true width of bed. Samples taken at either "B" or "C" give measurements greater than true width but yield the same results when assayed.



(1) Flattened Cone (2) Quartering Reject x Quarters (3) Rolling

Figure 4. Cone, quarter, and roll process for reducing a bulk sample for shipment to assay laboratory.

sample is representative of the mineralization at the site from which it was secured.

The taking of a representative sample entails more than just breaking off a solitary chunk of rock from a vein, or gathering five or six chunks of rock from random locations on an exposed body of limestone. Instead, a representative sample contains fragments of all varieties of material present in the portion of the occurrence the sample is intended to cover. Furthermore, the amount of each kind of material included in the sample should be proportionate to its relative abundance in the section over which the sample was taken. For example, if a vein is made up of several bands of quartz which vary between themselves in width and in visible content of metalliferous minerals, and if these are separated in one or more places by partings of gouge and breccia, a sample composed of fragments from one of the quartz bands is in no sense of the word representative of the whole vein, any more than a dab of icing from the top of a thick layer cake is a representative sample of the whole cake. Neither is a sample representative if it includes fragments from all the quartz bands but not a proportionate amount of the gouge-breccia partings. Neither is it representative if it contains fragments from the parts that chip easily and just a few small fragments from the parts that prove difficult to break.

The above reasoning applies also to such bedded sedimentary strata as limestone, for example, in which the grade can vary from layer to layer and even within a single bed. A few chunks of material grabbed at random locations across the section are no substitute for a sample composed of fragments taken from a continuous channel or from a series of closely spaced, measured intervals.

Because mineral occurrences are likely to change in grade and character from place to place, and since significant changes are not always evident, the best possible sample that can be taken is a mined tonnage suitable for an actual mill test or a processing trial. Small, portable, hand-cut samples are the next best alternative. These can yield meaningful approximations of the chemical content of a mineral occurrence, provided they are taken properly at close intervals and in sufficient abundance to give an over-all picture.

Channel sample: By definition, a channel sample consists of all the material chipped from a groove, or channel, cut uniformly deep and uniformly wide along a course extending at right angles to the dip and strike of the occurrence being sampled. When taken properly, therefore, such a sample contains proportionate volumes of each and every kind and grade of material present in the section over which the channel extends. For this reason channel samples come closer to being representative of the occurrence than does any other form of hand-cut sample.

Figures 2 and 3 illustrate a channel cut on a typical vein. Note particularly how the course of the channel is laid out to extend at right angles

to both the dip and strike so that the channel length corresponds to the true width of the occurrence. Channel length is important in the calculation of tonnage; hence, the channel course should be determined with care and channel length recorded for all samples.

Cuts or channels can sometimes be made easily and quickly with nothing more than a sampling pick. Again, the job may be difficult and time-consuming and require a single jack and moils. The method used depends on the nature of the material being sampled and the number and frequency of natural fractures. A canvas drop cloth, a powder box, and a helper rate as supplemental tools frequently worth having along.

The size of a sample will vary quite naturally with the width or thickness of the material being sampled. Therefore, a cut on a very narrow vein will have to be much deeper and wider than one on a wide vein, if a sufficient volume of material is to be obtained. In general, a channel cut 1 inch deep by 4 or 5 inches wide will provide a sufficient sample from a vein 3 to 5 feet wide. For situations where the width of the material being sampled is so great that a single sample would be too bulky, it usually pays to divide the channel into two or more sections. However, for truly great distances such as are represented by limestone beds several hundreds of feet thick, a continuous channel is impracticable to take and the chip technique described later is an acceptable substitute.

In practice, it is frequently impossible to chip out a channel that is uniformly 1 inch deep by 5 inches wide, because some parts of a vein may be highly fractured and loose, so that an abundance of fine fragments ravel out when picked only lightly. At the same time, an adjoining part of the vein may be composed of hard, blocky material that breaks out in large chunks so that all a sampler can do is to take each chunk as it comes and trim off a segment of the margin equivalent to the width and depth of his channel. Then too, with dense, tough quartz it may be more practical to moil fragments from an area half as deep and twice as wide as the channel dimensions cut in other portions of the vein. In short, there are occasions when it takes judgment, skill, and somewhat of a sixth sense in order to secure the proper amount of material from all parts of a cut across a vein which exhibits varied physical characteristics. Care must always be taken not to include excessive amounts of material that samples easily. Conversely, care must be taken to be certain that the required amount of tough, hard-to-break material is included in the sample. Besides being tedious to break, rock of the latter sort tends to chip in fragments that fly everywhere instead of into the sample bag. Here is where it helps to have a canvas "drop cloth" under foot and an assistant to hold a powder box close to and just below the channel to catch the sample pieces.

Chip sample: Samples of this type consist of chips of rock measuring an inch or so on a side taken at regular intervals of a foot, two feet, or whatever distance seems appropriate, along a line that cuts across the strata

of a sedimentary deposit or the width of a tabular body of mineralized material in a manner corresponding to the way channel lines are laid out. Therefore, the only basic difference between channel and chip samples is that the former includes material from a continuous, ribbon-like cut, while the latter consists of fragments from measured intervals. Because of the interval, chip sampling is not appropriate for veins and vein-like kinds of mineralization. Instead, it applies to special situations where sample sections of appreciable length need to be covered. Chip sampling is employed, therefore, mostly in sedimentary and non-metallic types of mineralization where extreme differences in grade are not so likely to occur over short distances as they are in metalliferous vein-type prospects. Even so, care should be taken to select as short a chip interval as is practicable in order to insure a good density of chip coverage along the section sampled. In this connection, it pays to over-sample by having the interval shorter than necessary rather than to have it so great that it might miss an important horizon of doubtful or off-grade caliber. It pays to remember that in non-metallic mineral occurrences significant differences in the quality of the material can exist without being readily visible; this is particularly true for critical impurities which can be the all-important determining factor governing marketability and use of the material being sampled.

Site preparation prior to sampling: Small amounts of contaminating chemical substances can sometimes be detrimental to the value of an ore. When such contaminants are a normal part of the mineralization, there is nothing a prospector can do about the situation. However, needless inclusion of soil, roots, and weathered rock in a sample can result in the introduction of detrimental contaminants, depending on the nature of the sample and the intended analysis. For example, inclusion of a little soil and a few rootlets may not seriously affect the value of a sample taken from the surface exposure of a vein and assayed for copper or gold, but the specifications for limestone for the manufacture of carbide are such that just a little vegetative matter will introduce enough phosphorous into a sample to make an otherwise excellent limestone appear unsuitable for such use. Knowledge of this sort can be gained only by studying the marketability factors applicable to various minerals as governed by milling and industrial requirements. However, since the objective of sampling is to determine the grade of the typical material present in a mineral occurrence, the best practice is never to include soils, roots, and weathered rock in any sample. Neither should incrustations precipitated from mine waters be included with samples taken underground, nor the grime of powdered rock normally found in underground workings due to blasting. In other words, before any sample is taken enough digging should be done at the sample site to expose clean, uncontaminated material.

In underground situations where a vein is to be channel sampled, the removal of an inch or so of exposed material from the sample area may be

sufficient. On surface situations, however, much more digging may be necessary in order to expose uncontaminated mineralization. After all, weathering effects are not always limited to a thin veneer on an exposed rock face and soil traces and vegetation rootlets can penetrate deeply along crevices.

When chip samples are taken, especially of limestones, it is best first to chip off the exposed weathered surface at the sample site; then break out a chunk of the fresh rock and hew this down to the desired chip size. In this way, all exposed surfaces of the chip will be of fresh material.

Quartering: Samples that are heavy and bulky are difficult to handle and expensive to ship. They are also out of place in a laboratory for the reasons already cited. Nevertheless, it is often desirable and sometimes necessary to take large samples. When this is the case, such samples can be reduced in size in the field without affecting their quality, provided that the job is done properly.

The first step is to crush the entire sample, ideally to minus-$\frac{1}{4}$-inch mesh. The next step is to mix the crushed material until it is thoroughly blended. When this has been accomplished, the sample can be split down to desired size. The best way to do this is to feed the crushed material through a mechanical splitter designed expressly for the purpose. When no mechanical facility is available, the best way is to heap the crushed material into a symmetrical, cone-shaped pile (figure 4) on a suitable, smooth surface and then flatten the top somewhat by applying vertical pressure with a shovel or board. The flattened pile can then be quartered (divided into four equal parts) by slicing down through it vertically twice with a thin piece of sheet metal -- one slice at right angles to the other, with the intersection in the center of the pile. Opposite quarters can then be discarded to provide a sample one-half the size of the original. If this is still too large, it should be mixed again, and the coning and quartering process repeated. The use of a square of stout canvas for samples weighing less than 100 pounds greatly speeds the work of coning, quartering, and rolling.

No one step in this procedure is less critical than another. However, without mechanical equipment, the crushing part can be so very laborious, tedious, and time consuming that the temptation to short-cut soon becomes great. Unfortunately, the laws of statistics are such that hours of mixing will be to no avail if all large fragments in the entire sample are not first reduced to a multitude of small fragments -- the smaller the better. There are no short cuts with respect to the need of fine crushing prior to mixing, regardless of whether the crushing is done by a mechanical crusher or by elbow grease with a mortar and pestle. Nevertheless, if a sample is important enough to merit analysis, painstaking care to take it properly in the first place, and to quarter it accurately afterwards, is just as critical as painstaking care on the assayer's part when it comes to the making of his analysis in the laboratory.

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SUMMARY OF MINING LAWS*

Here are answers to some of the most frequently asked questions on mining laws:

1. How many claims can an individual locate?

There is no limit, but $100 worth of work must be spent on each claim each year to hold it.

2. What is the size of a claim?

Placer claims are 20 acres, quartz or lode claims are 300 feet wide on either side of the center line and 1,500 feet long.

3. How do I locate a quartz claim?

The following steps must be done in order and within the time given: (1) At the point of discovery post a location notice. (2) Within 30 days erect stakes at the corners and center ends of the claim. Posts must be at least 4 inches in diameter and 3 feet high. (3) Within 60 days from date of discovery dig a shaft 4 feet square and 10 feet deep or a cut 4 feet wide, 10 feet long, and 6 feet deep along the vein and file a copy of the original location notice at the county clerk's office in the county in which the claim is located.

4. How do I locate a placer claim?

(1) Post location notice at point of discovery. (2) Within 30 days claim (if area has not been surveyed) must be staked with materials similar to those used for quartz claims. Stakes must not be more than 1,320 feet apart and must be erected at corners and angles. If area has been surveyed, no stakes are required. (3) Within 60 days from date of discovery, at least 5 cubic yards of material must be excavated to expose the deposit. A copy of the location notice must also be filed, as for quartz claims.

5. What about assessment work?

At least $100 worth of work of a mining nature or of benefit to the claim must be performed on each unpatented claim each assessment year. An assessment year begins at noon September 1. Claims that side line or end line each other may have all of the assessment work concentrated on one claim, provided such work is of benefit to all of the others. Upon completion of the work a Proof of Labor should be filed.

6. How do I know whether ground is open for location?

Unless a claim is patented, $100 worth of work must be performed on it each assessment year and a Proof of Labor filed with the county recorder. This work should be quite apparent, but it must be remembered that a claimant could do his work at the beginning of an assessment year and then wait nearly two years to do some more work at the end of the following assessment year. Many claim holders do two years' work by starting late in August and continuing on into September until $200 worth of work has been done. Separate Proof of Labor filings should be made, however. If the ground shows no evidence of having been worked for several years and there are no

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* Prepared by Department staff.

records of Proofs of Labor, it is fairly safe to assume that the ground is open. Oftentimes local inquiry will help determine the status of ground in the area.

7. What is an association placer claim?

An association placer claim may be located by several locators, each of whom is entitled to an area of 20 acres. In other words, two locators may locate a 40-acre association claim, three could locate 60 acres. A maximum of eight colocators is allowed for one association placer claim. Only $100 must be expended annually on an association claim.

8. Can a claim be located on private land?

This depends on the status of the mineral rights to the parcel of land. If the surface and mineral rights have not been severed, no claim can be located. If the surface and mineral rights have been severed and the mineral rights are reserved to the federal government, it is technically possible to prospect the ground and to locate a claim. A person prospecting or locating a claim is liable for any damages to crops, livestock, etc., but the landowner must provide access to any claim that is located.

9. Can a claim be located on State land?

Some, but not all, State land is open to mineral entry. Following discovery, a location is made in the same manner as for claims on federal forests. A lease agreement must be obtained from the State Land Board, State Capitol Building, Salem, before any mining can be done.

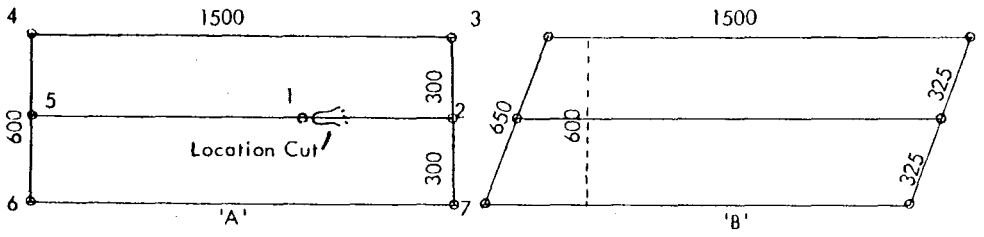
10. Can a claim be located on County land?

Following discovery and location an inquiry should be made to the County Court to determine the lease status of the land.

11. How can I patent my claim?

The best information on patenting procedures is contained in the pamphlet "Information Relative to the Procedure of Obtaining Patent to a Mining Claim" issued by the U.S. Bureau of Land Management and available from the Bureau's Land Office, 729 N. E. Oregon Street, Portland, Oregon 97232.

The accompanying diagrams show two typical plans for quartz claims. In diagram "A" the endlines are at right angles to the sidelines. In diagram "B" the endlines are at an oblique angle to the sidelines. In either case, the endlines must be parallel to each other. Note in "B" that the endlines are longer than 600 feet, but that the width of the claim is only 600 feet - the maximum permitted by law.



The location cut and the location monument (Post No. 1) must be somewhere along the center line. The distance from the location monument to the center end stake (No. 2) and also the distance from the location monument to center end stake (No. 5) must be given in the spaces provided on the claim location notice.

Adjoining claims must have their own set of claim posts, but the location notice should state that the one claim either endlines or sidelines the other.

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MINING-CLAIM DEADLINE NEARS

Time is running out for people who live on invalid mining claims and want to see if they can be permitted to stay, the U.S. Bureau of Land Management has announced.

In 1962 Congress passed a law called the Mining Claims Occupancy Act, which allowed residents five years in which to see if they can qualify for continued residence on the property, according to J. R. Welch, chief of the Bureau of Land Management's minerals staff in Portland.

Welch said that in some cases people have bought or staked mining claims and lived there without discovering valuable minerals. In such cases the claims are invalid and residence is not allowed under the general mining laws. In other instances, mining claims that might have qualified for patent have been mined out and are, therefore, no longer valid. Also, persons unfamiliar with the mining laws have purchased quit-claim deeds to unpatented mining claims, thinking they were buying full title to the lands. Actually, if the claims were invalid, they acquired no rights at all, Welch explained.

Deadline for filing applications under the Mining Claims Occupancy Act is October 23, 1967. Welch said that inquiries should be directed to BLM's State Office, 729 N. E. Oregon Street, Portland, Oregon 97232.

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NEW DRILLING PERMIT ISSUED

The Department issued Drilling Permit No. 56 to Marvin Lewis of Salem, Oregon, on June 1, 1966 for the drilling of a shallow oil-test hole in northern Polk County. The proposed test is to be located approximately 140 feet south of the Reserve Oil & Gas Co. "Bruer No. 1," which was drilled to a depth of 5,549 feet and abandoned in July 1960. Marvin Lewis retested the Reserve well in 1964 but was unsuccessful in his attempts to find production; the sands proved to be wet. The new drilling, Marvin Lewis "Crossley-Jennings No. 2," is located approximately in the NE$\frac{1}{4}$ sec. 31, T. 6 S., R. 4 W., Polk County.

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