


The Prospector

Portland Gold Prospectors, Inc.

GPAA Portland, Oregon Chapter



Prospecting for Gold in the United States

by Harold Kirkemo  **USGS**
science for a changing world

March, 2020

Anyone who pans for gold hopes to be rewarded by the glitter of colors in the fine material collected in the bottom of the pan. Although the exercise and outdoor activity experienced in prospecting are rewarding, there are few thrills comparable to finding gold. Even an assay report showing an appreciable content of gold in a sample obtained from a lode deposit is exciting. The would-be prospector hoping for financial gain, however, should carefully consider all the pertinent facts before deciding on a prospecting venture.

Only a few prospectors among the many thousands who searched the western part of the United States ever found a valuable deposit. Most of the gold mining districts in the West were located by pioneers, many of whom were experienced gold miners from the southern Appalachian region, but even in colonial times only a small proportion of the gold seekers were successful. Over the past several centuries the country has been thoroughly searched by prospectors. During the depression of the 1930's, prospectors searched the better known gold-producing areas throughout the Nation, especially in the West, and the little-known areas as well. The results of their activities have never been fully documented, but incomplete records indicate that an extremely small percentage of the total number of active prospectors supported themselves by gold mining. Of the few significant discoveries reported, nearly all were made by prospectors of long experience who were familiar with the regions in which they were working.

The lack of outstanding success in spite of the great increase in prospecting during the depression in the 1930's confirms the opinion of those most familiar with the occurrence of gold and the development of gold mining districts that the best chances of success lie in systematic studies of known productive areas rather than in efforts to discover gold in hitherto unproductive areas. The development of new, highly sensitive, and relatively inexpensive methods of detecting gold, however, has greatly increased the

possibility of discovering gold deposits which are too low grade to have been recognized earlier by the prospector using only a gold pan. These may be large enough to be exploited by modern mining and metallurgical techniques. The Carlin mine near Carlin, Nev., is producing gold from a large low-grade deposit that was opened in 1965 after intensive scientific and technical work had been completed. Similar investigations have led to the more recent discovery of a Carlin-type gold deposit in Jerritt Canyon, Nev.

Many believe that it is possible to make wages or better by panning gold in the streams of the West, particularly in regions where placer mining formerly flourished. However, most placer deposits have been thoroughly reworked at least twice--first by Chinese laborers, who arrived soon after the initial boom periods and recovered gold from the lower grade deposits and tailings left by the first miners, and later by itinerant miners during the 1930's. Geologists and engineers who systematically investigate remote parts of the country find small placer diggings and old prospect pits whose number and wide distribution imply few, if any, recognizable surface indications of metal-bearing deposits were overlooked by the earlier miners and prospectors.

One who contemplates prospecting for gold should realize that a successful venture does not necessarily mean large profits even if the discovery is developed into a producing mine. Although the price of gold has increased significantly since 1967 when the fixed price of \$35 an ounce was terminated, the increases in the cost of virtually every supply and service item needed in prospecting and mining ventures have kept profit margins at moderate levels, particularly for the small mine operator. In general, wide fluctuations in the price of gold are not uncommon, whereas inflationary pressures are more persistent. The producer of gold, therefore, faces uncertain economic problems and should be aware of their effects on his operation.

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Secretary's Report February 16, 2020

Milwaukie Grange Hall
12015 SE 22nd Ave.
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President Mike Lewis called the meeting to order at 1:30 and then led attendees in the Pledge of Allegiance.

Attendance - 49 attendees and 3 guests were present.

Meeting Minutes - A motion was made and seconded to accept the Secretary's Report of the previous month as written and published in the February newsletter. The motion was approved by the members present.

Treasury Report - A motion was made and seconded to accept the Treasury Report for February. The motion was approved by the members present.

Sportsman's Warehouse - We had a panning demonstration there with about 8 of our members who volunteered for the event. Unfortunately, there wasn't too much activity with people because of the rainy weather. On March 14th, from 9:00 A.M until 2:00 P.M. we will be doing another demonstration at the Tanasbourne location. If anybody is interested in volunteering for this event there is a sign up sheet. On April 9th, there will also be a "Ladies Night" event in which there will be vendors and they will be giving out free stuff to ladies. Mike is going to talk to the manager and get more details about the event and see if we can participate in this as well.

Membership - It doesn't cost anything to become a member of our club. Attend 3 meetings and/or outings in a year and you will become a member. Gretchen has most of the new membership cards made for this year so check with her and see if she has yours!

Gold Show - We still need more people to volunteer for the show

this year. The more people that volunteer from our club the more we will make from the main raffle. This is very important because this is our main Fundraiser of the year! Make sure that we have your tshirt size because Jerry has to get the order in. Jerry still has tickets available for sale for anybody that needs some at \$5 each in which the club gets \$2.50 of it. Of course, if you are volunteering you will get in free but you will have to pay for parking. If you are a Veteran you will have to show your Military ID card also to get in free. Ken Didier set up some advertising for the event which includes the Channel 2 News giving some coverage on the event. The more coverage we get out there the more attendance we will get which will make the show more of a success. We got some good donations this year from Cabelas, NW Detectors and the Sportsmans Warehouse which is greatly appreciated. We also can't forget the lovely Birdhouse that Joe Wood has donated.

Club Member - It's always a pleasure when our club member Morris Sawyer makes the long trip to come and see us! As usual he comes bearing Gifts. He brought us a whole truck load of paydirt from our Tyroy claims. He also brought us some extra buckets, Elderberry Juice and some U.S. Flag beaded pins that he made. He really spoils us. Thank You Morris for everything you do for our club it is so greatly appreciated!

Garage Sale - Our August outing this year will be our Garage Sale which will be held out at Ken and Helen Burns house in Oregon City. We need good donations to make this sale a success to bring money to our club. If anybody has some good stuff

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PRESIDENT'S BLOG

March, 2020

Hello, fellow prospectors!

Thank you to all who came to the February Chapter Meeting. I appreciate everyone taking time on a Sunday to come.

Thank you too to Jim Erwin, Cindy Wright, Jerry Johns, Richard Ruth and Steve Kragerud (I apologize if I missed anyone!) for putting on the February 14th panning demonstration at the Sportsman's Warehouse on SE 82nd. Jim initiated the plan and Sportsman's Warehouse was very cooperative. Even though it rained hard all day and a cold wind blew, they had several people come by.

We are having another panning demonstration on March 14th at the Sportsman's Warehouse located at 10645 NE Tanasbourne Drive, Hillsboro. It's off of Hwy 26 – take the 185th St. exit and head south. It's just south of the freeway overpass. Set up is at 9AM, with the demonstration going from 10AM-2PM. We have a few people signed up to help – but it would be helpful to have a few more. If you would like to help, please contact me at 503-413-9283.

March has arrived and the 2020 GPAA Gold and Treasure Show is just a few weeks away. It will be at the Clark County Event Center, located at 17402 N Delfel Road, #9474, Ridgefield, WA. Show set-up will be on Friday, March 20th; the show will be March 21st and 22nd – with the "take down" after the show on the 22nd. Since the show is in Washington, Southwest Washington Gold Prospectors has the primary job of organizing the show, in conjunction with the Mid-Valley Gold Prospectors, our Chapter and the GPAA. Jerry Johns is coordinating our Chapter's participation in the show. For those of you who want to volunteer to help with the show (who haven't already signed the sign-up sheet at one of the Chapter Meetings) please contact Jerry Johns @ jerryjohns@gmail.com. Please remember this is a major project for our Chapter and also a primary source of income for the Chapter.

The next organizational meeting for the 2020 GPAA Gold and Treasure Show will be on March 7, 2020 at 1PM at Elmer's, 10001, NE Sandy Blvd, Portland, OR. We will be meeting in the private meeting room in the back.

Lastly, please note that we will have a speaker from the local fire station at the April, 2020 meeting. She will be discussing and demonstrating basic CPR and choking issues.

I hope to see you at the March 15th Chapter meeting!

Happy Prospecting!

Mike

Mike Lewis, President
Portland Gold Prospectors, Inc.

NOTES FROM THE VICE PRESIDENT

Jim Erwin

- We collected 68 pounds of canned food at January's banquet.
- I had a horse water trough lined up to buy, but bought a new one today. Would you run an ad for this one with his contact info. His name is Scott Nolan, 360-508-1668
email: dsnolan@hotmail.com \$75.00 for the unit. Scott lives in Chehalis, WA.



Special thanks to members who volunteered at the Sportsmans Warehouse panning demonstration in February

(l.to r.) Cindy Wright, Richard Ruth,
Steve Kragerud and Jerry Johns



From Dave McCracken of The New 49er Legal Fund

If you have been following along, you know that small-scale miners have submitted our third Petition to the U.S. Supreme Court. The first two were not taken up, so we really have our fingers crossed on this one.

We just received this exciting news from the prestigious law firm our industry has hired to submit an amicus (Friend of the Court) brief on our behalf:

"All – some very promising news: Today, the U.S. Supreme Court specifically requested a response from DEQ (Oregon Department of Environmental Quality), after meeting in conference about the case. (Last month, DEQ actually waived its right to file a response to the petition, but the Supreme Court has now ordered DEQ to respond.) This follows the Court's conference yesterday about our case.

Will keep you posted....

Paul Beard II, Esq.

Partner, FISHERBROYALS "

Here is a reminder that The New 49'er Legal Fund will give away 3 ounces of gold American Eagles and 10 ounces of silver American Eagles this coming Friday, 14 February. This is to raise money to help pay for this Amicus Brief and the other legal matters which small-scale miners are facing. You can find out more about how to participate right here:

<https://goldgold.com/american-gold-silver-eagles-fundraiser.html>

Thank you very much to those of you who continue to support our efforts!

Dave McCracken, The New 49'er Legal Fund

The New 49er's, 27 Davis Road, Happy Camp,
California 96039, USA



Secretary's Report continued from Page 2

bring it to our meetings and Ken will store the stuff until we have the sale in August. Remember we only want clean working items no junk please!

Demonstrations - At our upcoming April meeting we will be having a lady from the Fire Dept. demonstrating CPR and some First Aid. This will be very beneficial to our club as you never know if you get put in a position of having to try and save someone's life.

Spiral Wheel Raffle - We had the Spiral Wheel Raffle today but the winner wasn't present. The lucky person didn't have their name on their ticket but it's ticket number 797 which are the last 3 numbers.



Hopefully he or she will be at next months meeting to pick up their prize. If this is your ticket, please contact Jerry Johns at jerryjohns@gmail.com.

Raffle - The Raffle was held with \$5 and \$1 tickets. Betty Bench was the lucky winner of the Gold Nugget. Jerry Johns was the lucky winner of the Gold Bag.

The meeting was adjourned at 3:20 P.M.

Respectfully submitted
Yolande Kragerud, Secretary.



GPAA GOLD & TREASURE Shows

Hosted by GPAA & the Vancouver, Portland & Brownsville Gold Prospecting Chapters

**Buy Pre-Sale Tickets at
Half-Price (\$5) from Gold Club
Chapters. Admission Includes
a FREE Raffle Ticket!
Children Under Age 12 Are
Free & Free Entry for Active
and Veteran Military with
Proper I.D.
Pre-sale Deadline Is
March 18th.
**Vendor Spaces Still
Available.****



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**Saturday & Sunday
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10 AM to 5 PM**



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SEMINARS

**FOR TICKET & VENDOR
INFO - CONTACT:**

**SW WA Gold Prospectors
Vancouver, WA**

**Debbie Witcher
360-695-3215**



PORTLAND GOLD PROSPECTORS, INC.

MEETING DATES – THROUGH 2020 AND

PROPOSED EVENTS CALENDAR – THROUGH 06/2020

Milwaukie Grange Hall

12015 SE 22nd Avenue

Milwaukie, OR 97222

DATE:	EVENT:	TIME:	LOCATION:
MAR 7	GPAA Gold and Treasure Show Planning meeting for volunteers who are working the set-up, take-down and during the show	1pm	Elmers Restaurant 10001 NE Sandy Blvd, Portland, OR
MAR 14	Gold Panning Demonstration	Set Up 9:00 Demo 10 am-2 pm	Sportsmans Warehouse 10645 NE Tanasbourne Dr, Hillsboro Off of Highway 26 - 185th exit – go S
Mar 15	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
MAR 20	GPAA Gold and Treasure Show >>SET UP<<	8:30 pm	Clark County Event Center 17402 N Delfel Rd, #9474 Ridgefield, WA.
MAR 21 and 22	GPAA Gold & Treasure Show Volunteers will be needed after the show to help with the tear down	10 am-5 pm	Clark County Event Center
APR 11	Cape Disappointment Outing You need a Day Use Pass and a copy of the latest WA Fish and Wildlife Pamphlet – there is a link to the pamphlet in the chapter Newsletter.	10 am	Cape Disappointment State Pk, WA Go to campground loops 1-60 Park near restrooms and walk west.
Apr 19	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
May 16	Upper Clackamas or Molalla River Outing Additional specifics to be determined.		
May 17	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
May 30 To Jun 14	Tyroy Outing More information will be provided as we get closer to the date.		Chapter Claim Near Baker City, Or
Jun 21	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
Jul 19	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
Aug 16	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
Sep 20	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
Oct 18	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
Nov 15	Chapter Meeting	1:30 pm	Milwaukie Grange Hall
Dec 20	Chapter Meeting	1:30 pm	Milwaukie Grange Hall

Please Remember All Events Are Subject To Change Due To Weather Or Other Circumstances

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Today's prospector must determine where prospecting is permitted and be aware of the regulations under which he is allowed to search for gold and other metals. Permission to enter upon privately owned land must be obtained from the land owner. Determination of land ownership and location and contact with the owner can be a time-consuming chore but one which has to be done before prospecting can begin.

Determination of the location and extent of public lands open to mineral entry for prospecting and mining purposes also is a time consuming but necessary requirement. National parks, for example, are closed to prospecting. Certain lands under the jurisdiction of the Forest Service and the Bureau of Land Management may be entered for prospecting, but sets of rules and regulations govern entry. The following statement from a pamphlet issued in 1978 by the U.S. Department of the Interior and entitled "Staking a mining claim on Federal Lands" responds to the question "Where May I Prospect?"

There are still areas where you may prospect, and if a discovery of a valuable, locatable mineral is made, you may stake a claim. These areas are mainly in Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Louisiana, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Such areas are mainly unreserved, unappropriated Federal public lands administered by the Bureau of Land Management (BLM) of the U.S. Department of the Interior and in national forests administered by the Forest Service of the U.S. Department of Agriculture. Public land records in the proper BLM State Office will show you which lands are closed to mineral entry under the mining laws. These offices keep up-to-date land status plats that are available to the public for inspection. BLM is publishing a series of surface and mineral ownership maps that depict the general ownership pattern of public lands. These maps may be purchased at most BLM Offices. For a specific tract of land, it is advisable to check the official land records at the proper BLM State Office.

Successful gold mining under present conditions is a large-scale operation, utilizing costly and sophisticated machinery capable of handling many tons of low-grade ore each day. The grizzled prospector with a burro is no longer a significant participant in the search for mineral deposits, and the small producer accounts for only a minor share of the total production of metals including gold.

Some degree of success in finding gold still remains

for those choosing favorable areas after a careful study of mining records and the geology of the mining districts. Serious prospecting should not be attempted by anyone without sufficient capital to support a long and possibly discouraging campaign of preliminary work. The prospective gold seeker must have ample funds to travel to and from the region he selects to prospect and to support the venture. He must be prepared to undergo physical hardships, possess a car capable of traveling the roughest and steepest roads, and not be discouraged by repeated disappointments. Even if a discovery of value is not found, the venture will have been interesting and challenging.

Locations of important gold-producing districts of the United States are shown in some of the reports of the Geological Survey listed at the back of this pamphlet. Geological agencies of the principal gold-producing States where additional information may be obtained also are listed. Information may be obtained, too, from U.S. Bureau of Mines State Liaison offices located in the capital cities of most States.

Placer Deposits

A placer deposit is a concentration of a natural material that has accumulated in unconsolidated sediments of a stream bed, beach, or residual deposit. Gold derived by weathering or other process from lode deposits is likely to accumulate in placer deposits because of its weight and resistance to corrosion. In addition, its characteristically sun-yellow color makes it easily and quickly recognizable even in very small quantities. The gold pan or miner's pan is a shallow sheet-iron vessel with sloping sides and flat bottom used to wash gold-bearing gravel or other material containing heavy minerals. The process of washing material in a pan, referred to as "panning," is the simplest and most commonly used and least expensive method for a prospector to separate gold from the silt, sand, and gravel of the stream deposits. It is a tedious, back-breaking job and only with practice does one become proficient in the operation.

Many placer districts in California have been mined on a large scale as recently as the mid-1950's. Streams draining the rich Mother Lode region--the Feather, Mokelumne, American, Cosumnes, Calaveras, and Yuba Rivers--and the Trinity River in northern California have concentrated considerable quantities of gold in gravels. In addition, placers associated with gravels that are stream remnants from an older erosion cycle occur in the same general area.

Much of the gold produced in Alaska was mined from placers. These deposits are widespread,

occurring along many of the major rivers and their tributaries. Some ocean beach sands also have been productive. The principal placer-mining region has been the Yukon River basin which crosses central Alaska. Dredging operations in the Fairbanks district have been the most productive in the State. Beach deposits in the Nome district in the south-central part of the Seward Peninsula rank second among productive placer deposits of Alaska. Other highly productive placers have been found in the drainage basin of the Copper River and of the Kuskokwim River.

In Montana, the principal placer-mining districts are in the southwestern part of the State. The most productive placer deposit in the State was at Alder Gulch near Virginia City in Madison County. Other important placer localities are on the Missouri River in the Helena mining district. The famous Last Chance Gulch is the site of the city of Helena. There are many districts farther south on the headwaters and tributaries of the Missouri River, especially in Madison County which ranks third in total gold production in the State. Gold has been produced at many places on the headwaters of the Clark Fork of the Columbia River, particularly in the vicinity of Butte. Placer production from the Butte district, however, has been over-shadowed by the total output of byproduct gold recovered from the mining of lode deposits of copper, lead, and zinc.

Idaho was once a leading placer-mining State. One of the chief dredging areas is in the Boise Basin, a few miles northeast of Boise, in the west-central part of the State. Other placer deposits are located along the Salmon River and on the Clearwater River and its tributaries, particularly at Elk City, Pierce, and Orofino. Extremely fine-grained (or "flour") gold occurs in sand deposits along the Snake River in southern Idaho. Placers in Colorado have been mined in the Fairplay district in Park County, and in the Breckenridge district in Summit County. In both areas large dredges were used during the peak activity in the 1930's.

The most important mining regions of Oregon are in the northeastern part of the State where both lode and placer gold have been found. Placer gold occurs in many streams that drain the Blue and Willamette Mountains. One of the most productive placer districts in this area is in the vicinity of Sumpter, on the upper Powder River. The Burnt River and its tributaries have yielded gold. Farther to the west, placer mining (particularly dredging) has been carried on for many years in the John Day River valley.

In southwestern Oregon, tributaries of the Rogue River and neighboring streams in the Klamath

Mountains have been sources of placer gold. Among the main producing districts in this region are the Greenback district in Josephine County and the Applegate district in Jackson County.

Minor amounts of placer gold have been produced in South Dakota (the Black Hills region, particularly in the Deadwood area, and on French Creek, near Custer) and in Washington (on the Columbia and Snake Rivers and their tributaries).

In addition to these localities, placer gold occurs along many of the intermittent and ephemeral streams of arid regions in Nevada, Arizona, New Mexico, and southern California. In many of these places a large reserve of low-grade placer gold may exist, but the lack of a permanent water supply for conventional placer mining operations requires the use of expensive dry or semidry concentrating methods to recover the gold.

In the eastern States, limited amounts of gold have been washed from some streams draining the eastern slope of the southern Appalachian region in Maryland, Virginia, North Carolina, South Carolina, Georgia, and Alabama. Many saprolite (disintegrated somewhat decomposed rock that lies in its original place) deposits in this general region also have been mined by placer methods. Small quantities of gold have been mined by placer methods in some New England States. Additional placer deposits may be discovered in the East, but prospecting will require substantial expenditures of time and money. The deposits probably will be low grade, difficult to recognize, and costly to explore and sample. Moreover, most of the land in the East is privately owned, and prospecting can be done only with the prior permission and agreement of the land owner.

Lode Gold

Lode gold occurs within the solid rock in which it was deposited. Areas likely to contain valuable lode deposits of gold have been explored so thoroughly that the inexperienced prospector without ample capital has little chance of discovering a new lode worth developing. Most future discoveries of workable lode gold ore probably will result from continued investigations in areas known to be productive in the past. The districts in which such new discoveries of gold may be possible are too numerous to be listed in detail in this pamphlet. Some of the famous districts are: in California, the Alleghany, Sierra City, Grass Valley, and Nevada City districts, and the Mother Lode belt; in Colorado, the Cripple Creek, Telluride, Silverton, and Ouray districts; in Nevada, the Goldfield, Tonopah, and Comstock districts; in South Dakota, the Lead district in the Black Hills; and in Alaska, the Juneau

and Fairbanks districts. Deposits in these districts generally are gold-quartz lodes.

Prospecting for lode deposits of gold is not the relatively simple task it once was because most outcrops or exposures of mineralized rock have been examined and sampled. Today's prospector must examine not only these exposures, but also broken rock on mine dumps and exposures of mineralized rock in accessible mine workings. Gold, if present, may not be visible in the rock, and detection will depend on the results of laboratory analyses. Usually, samples of 3 to 5 pounds of representative mineralized rock will be sent to a commercial analytical laboratory or assay office for assay. Obviously, knowledge about the geological nature of gold deposits and particularly of the rocks and deposits in the area of interest will aid the prospector.

There are many publications of interest to those seeking more information about gold. The following list is representative. Anyone contemplating a prospecting venture or mining operation should consult some or all of these and other publications as well to become better informed on this fascinating and challenging subject. Many papers, maps, and articles on gold and related heavy metals were published on the results of investigations conducted in the mid- to late-1960's by the U.S. Geological Survey and the U.S. Bureau of Mines. Titles and instructions for ordering many of these appear in the publication catalogs of each agency. Some may be out of print but may be consulted in libraries of the two agencies, and in many city, college, and university libraries.

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* U.S. GOVERNMENT PRINTING OFFICE:
1991-287-748

This publication is one of a series of general interest publications prepared by the U.S. Geological Survey to provide information about the earth sciences, natural resources, and the environment. To obtain a catalog of additional titles in the series "General Interest Publications of the U.S. Geological Survey," write:

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