

The Ore Bin



GOLD!
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GOLD

The price of gold has risen from \$60.35 per ounce in mid-November, 1972, to \$91.25 per ounce in mid-April, 1973. The present high price has caused considerable speculation as to the underlying reasons for the sudden increase and what effect it may have on the international monetary situation. This precious metal has been eagerly collected and mined for more than 6,000 years because of its desirable physical qualities and its relative scarcity. Although some economists refer to it as a "barbaric metal," the expanding use of gold in the electronics industry attests to the fact that it is an important contributor to our modern technological society. Because of the present great interest in gold, this issue of The ORE BIN features a wide variety of information on gold, with contributions by mining engineers, economists, and Department staff.

Sources of Gold

Gold is widely distributed in the rocks of the earth's crust but generally in very minute quantities. It can be mined profitably only where it is present in unusual concentrations.

The three principal sources of gold are: gold in placers, gold ore in lodes, and base-metal ores in which gold is a by-product.

Gold placers

Most gold placers are formed by the erosion of a surface which has outcrops of gold ore (lode gold). Weathering decomposes the rock; runoff water carries the disintegrated rock down the ravines and gullies to the creeks and down the creeks to the rivers. In the process, the rock is ground to sand and gravel.

Gold, which is resistant to chemical attack, is freed by weathering from the rock. Since its specific gravity is many times greater than that of the associated minerals, it sinks in running water and lags behind in the bed of the stream while the greater part of the sand and gravel is swept on. Thus the gold is concentrated and a placer deposit is formed.

Placer deposits are most likely to occur where the carrying power of the stream is reduced, as in sand and gravel bars or in low points or pockets in the stream bed. Irregular surfaces of bedrock beneath the stream flow aid in trapping gold particles. Fine particles of gold are carried out to ocean beaches at the mouths of streams where the combination of stream washing and wave action settle out the tiny gold fragments.

A few unusually heavy and resistant minerals commonly accumulate with gold. Magnetite is the most common. Other heavy minerals that may be present in Oregon placers are chromite, ilmenite, zircon, garnet, and a very minor amount of platinum.

Lode gold

Lode gold originates from great depth in the earth's crust. It is carried, along with other minerals, by rising hot waters emanating from a source such as a cooling magma. Under pressure, the hot solutions follow cracks or fractures formed by earth movements and travel upward until they encounter cooler rocks. Here, where temperatures and pressures are less, the minerals crystallize out of the solutions and accumulate along fracture surfaces and in voids along fractures to form veins.

Commonly the principal constituents of a fracture-filling or vein are quartz or quartz and calcite, but the vein material generally contains some copper, lead, iron, and other metal-bearing compounds. In many veins, brass-like iron sulfide or pyrite is abundant. Pyrite and iron-stained mica are sometimes mistaken for gold, hence the name "fool's gold."

The deposition of the gold is rarely uniform but varies from rich to lean. The form of deposition may be in bands, in a series of lenses separated or connected, in irregular shapes like splashes of ink on blotting paper, or at vein intersections. Visible gold is not common in an average ore, and it is necessary to sample and assay frequently and to plot the gold assays on an accurate mine map to guide the mining of the deposit.

Lode gold deposits are difficult to discover and the history of gold mining is full of the element of luck, the fortuitous circumstances which have led to the discovery of most of our famous gold-mining districts. Lode deposits do not always crop out, or only a small area may be exposed and that hard to distinguish from the surrounding rock. The presence of placer gold in a stream bed usually indicates a source in a vein or lode deposit in the vicinity.

The rarity of important finds is clearly reflected in the records of gold production; pulsations or surges are evident whenever great new gold-mining districts have been opened.

By-product gold

More than one-third of the gold produced in the United States is a by-product from mining other metallic ores. Where base metals, such as

copper, lead, and zinc, are deposited either in veins or as scattered mineral grains, minor amounts of gold are usually present. Deposits of this type are mined for the predominant metals, but during processing of the ore the gold is also recovered.

Some deposits of base metals, such as disseminated or porphyry-copper deposits, are so large that even very minor amounts of gold per ton of ore will total a substantial amount. Gold recovered from copper ore mined at the vast open-pit mine at Bingham, Utah, for example, almost equals the amount of gold produced from the largest gold mine in the United States.

The Scarcity of Gold

Gold has been sought and mined for more than 6,000 years, not just by individuals but by kings, governments, conquerors, adventurers, and corporations. All five continents and many of the world's islands have been searched and mined. The airplane, helicopter, four-wheel-drive automobile, and the shallow-draft motorboat have opened the wilderness and made it easy of access. Scarcely any virgin land or unexplored areas where gold might be found remain, except the sea floor, and it is receiving increasing attention. Gold never was plentiful in the past nor is it plentiful today.

The scarcity of gold is a continuing fact which the monetary authorities refuse to recognize. In spite of statements to the contrary, the world has never suffered from a surplus of gold, even when the discovery of great bonanzas doubled the gold stocks.

Discoveries and Production

Gold is not linked to supply and demand the way most metals are. The supply is limited and the demand unlimited. Gold production rises and falls in a series of irregular waves, depending upon the discovery of new deposits. This is a matter of historical record. If the production of the important individual gold-mining districts in the United States is plotted separately, the waves take shape and coincide with the ups and downs of the overall production. These waves are of variable magnitudes and are a function of the geology of the mining district and of the ore occurrence. The policy of gold miners is to get out the gold from a new discovery as rapidly as is consistent with maximum profit, and this policy governs production. ("What price gold," by Pierre R. Hines)

The Need for Gold

The intrinsic value of gold has always been recognized, even before gold was used in coinage, and it remains the only universally recognized standard of value in international monetary exchange. Most of the world's refined gold is absorbed by governments and central banks to provide

stability for paper currency, but the amount of gold used in the arts and industry is increasing. In addition to its use for jewelry, decorative finishes, and dentistry, its special properties have led to numerous applications in modern science and technology. Surface coatings of gold protect earth satellites from heat and corrosion, and certain electrical components and circuits of spacecraft are made of gold when extreme reliability is required.

Effect of Price Controls

In the United States, the Federal Government has long controlled the price of gold -- first by establishing its coinage value and then, in 1934, by withdrawing it from circulation as a medium of exchange and eliminating the right of citizens to buy or sell refined gold without a license.

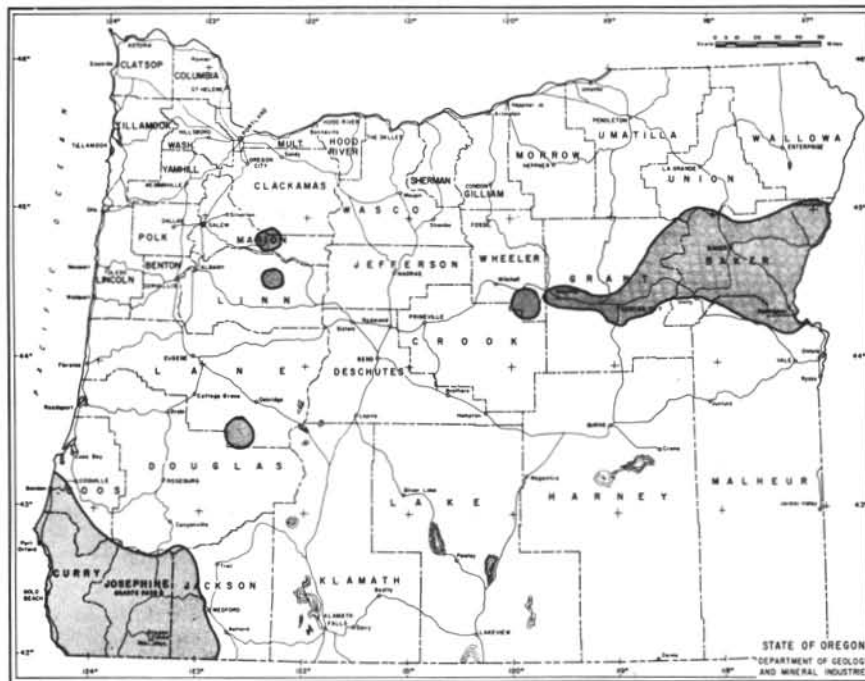
In 1792 the U.S. Treasury price for gold was set at \$19.39 per ounce. In 1834 it was raised to \$20.69 and three years later it was lowered slightly to \$20.67, where it remained for nearly 100 years. In 1934 various government decrees and legislation led to the establishment of a price of \$35.00 per ounce. As a result of the 1934 legislation, gold was withdrawn from circulation in the U.S. and it has since been unlawful for any unlicensed person or group to buy, sell, or transport gold except in its natural state.

The depression of the 1930's and the increase in the price of gold to \$35 resulted in a peak output of 4.9 million ounces of gold for the U.S. in 1940. At the beginning of World War II, however, production began to decrease because of high wages and scarcity of materials. In 1942, War Production Board Order L-208 forced all gold mines to close. Although L-208 was rescinded in 1945, most of the mines that had been productive in pre-war years could not reopen. The fixed price of gold, the high cost of materials and labor, and the prohibitive expense of rehabilitating plants and workings that had lain idle were the immediate reasons. Marginal gold mining firms that did open up went out of business eventually because of the rising costs in labor, supplies, equipment, capital, management, and taxation.

Meanwhile, the needs of the industrial sector were increasing. In 1971, industrial consumption of gold in the U.S. was up an estimated 10 per cent over the previous year. Nearly 7 million ounces of gold were imported into the U.S. in 1971 while less than 1.5 million ounces were produced in the U.S.

Soaring prices of gold on the free world market have stirred up considerable interest among prospectors and mining companies. However, it is believed by those experienced in the mining field that significant increases in production cannot be achieved unless the free market price exceeds \$100 per ounce and remains at that price.

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Generalized Map of Placer Mining Areas in Oregon



The Armstrong nugget, found in 1913 in a placer mine near Susanville, Grant County, Oregon, weighs 80.4 ounces. As a nugget it is worth many times the value of the metal. Scale is in inches.

Gold and the International Monetary System
by Ted E. Slanker, Jr., T. E. Slanker Co., Portland

The international monetary crisis has gripped the jugular of the business world and thrown the politicians, bankers, economists, and speculators into a state of confusion.

One constantly hears these questions:

Why did the currency system break down?

Have the recently made changes solved the problem for the long term?

Has gold moved into greater or lesser importance?

Where will we go from here?

This article will attempt to answer these questions, place the monetary muddle into its proper perspective, and gaze into the future and attempt to pick out tomorrow's trend.

Why?

Money and credit is the medium which business must have to efficiently trade its products. Either man trades on the simultaneous exchange of goods or money, or he depends upon the integrity of the other party to return equal value in the future on the receipt of goods today.

Real money is a direct extension of virtually any part of the commodity system. Historically, this extension is an element from the metals group and most commonly it is gold.

Credit consists of any promissory note and, in some cases, just a verbal declaration.

For a currency (credit) structure to be valid, it must be secured by a reserve asset not only to define the currency instrument but to limit the growth of the credit structure. Under a gold standard, the currency in circulation is backed in two ways: 1) Gold is held as a reserve to redeem the currency on demand in order not only to define the currency, but to limit the quantity that can be issued; 2) The currency can be created only when gold is deposited in the reserve or when secured by good inventory loans.

In today's world, most countries, including the U.S., have reserve bases to support their currencies which consist of some gold and large volumes of credit instruments. In other words, most of the free world countries have based their currency systems on foreign currencies and the debt obligations of their own or other governments.

The failure of the currency system is occurring because man has forgotten the basic principles of money and credit. He has come to the belief that the credit system can be fine tuned to provide for perpetual prosperity. This is a myth! No "politician" has ever lived who had the courage to discipline the structure in order to make it work. Many politicians have made attempts toward discipline but they or their successors have never

followed through. It is this human element which continues to unwind all of the good intentions of today's romantic economists.

Even in the present world credit structure, inflation is still being defined by Webster's dictionary as the excessive creation of credit in relation to the creation of goods. Since 1914, the supply of currency and bank demand deposits in the U.S. have been growing substantially faster than industrial production. (It has been growing twice as fast since 1967 alone.) This has been due to the Federal Reserve Board creating deposits to purchase government bonds and the relaxing of reserve requirements to allow credit instruments to act as reserves for the issuance of more credit in the domestic banking system.

Therefore, the value of the currency must decline in relation to the value of goods and in the process the holder of credit instruments of the U.S. is being cheated by the loss in their purchasing power.

The foregoing is the basis behind the continual monetary crisis the world has been witnessing for the past 16 years.

Solutions?

The recent suggestions offered by the members of the International Monetary Fund (IMF) to stabilize the crisis are: to align the currencies (devalue the dollar in relation to other currencies of the world); to have a joint float of a block of European currencies against the dollar and other currencies of the world; and to put greater emphasis on replacing dollars as reserves in the system with additional issues of the Special Drawing Rights. (SDR's are credit instruments issued by the IMF).

Not one of these suggestions grapple with the basic causes for the breakdown of the system. In fact, due to the floating nature of the system, roots have been planted for an acceleration of the basic cause for further breakdown. When one currency floats against another, the country which refrains from inflating will be the most competitive and therefore its currency will appreciate in value, thus putting its industry in a non-competitive position. Therefore, for the sake of business and full employment, the major nations of the world will try to inflate at a rate equal to the fastest inflating rate of its major trading partners. This could lead to world-wide hyperinflation.

The trend toward currency breakdown will be further emphasized by the suggestion to increase SDR's. This is just a continuation of the present trend to have reserves consisting of credit and will also lead to more inflating.

Gold?

Gold has made big headlines recently with its meteoric rise from \$60 to the \$90 per ounce level in just the last few weeks. Many people have claimed that gold is returning to its rightful place as the only reserve asset

of the international monetary system. In other words, a return to convertibility of currency into gold could be at hand.

But will our present type of government, which has fought gold and discipline since 1932, welcome its return? Probably not, for politicians want to control the expansion and contraction of currency to manipulate our financial destiny. No evidence exists that politicians are ready to give up control of the credit system without a desperate fight.

The current appreciation in the price of gold is not due to a return to gold as an official standard of value but as a barometer reflecting the rise and fall in the level of confidence the citizens of the world have for the paper currency system. Thus, the role of gold, while actually lessening officially, is in an unofficial capacity gaining more new admirers daily.

Future?

The future should bring a continuation of the past trend of government manipulation but in a much more amplified tone. The governments will continue to cycle from contraction to expansion of the credit structure in order to control the course of business, employment, and prosperity. But due to the incredible overextension of debt presently existing in the system, the government will find that its options are few because any slight slowdown may precipitate a crushing depression, while a continuation of credit expansion threatens to become a hyperinflationary spiral.

The die is cast. The world is on a one-way street to a monetary hell. Unless there is a miraculous return to reality by the politicians, economists, and bankers, the role of gold and the honest extension of credit will not come until the present system has run its course to complete destruction.

* * * * *

Current Gold Problem Reviewed*
by D. H. McLaughlin, Chairman of Executive Committee
Homestake Mining Company

Gold is an important part of the monetary reserves of every country. Until 1971 the United States stood by its obligation to redeem dollars held by foreign central banks in gold at the then official rate of \$35 per ounce. By that time, however, claims in dollars in foreign hands had amounted to \$60 to \$70 billion and the gold stock pledged to their redemption had declined to less than \$9 billion, making it apparent that the United States could not meet its obligation to pay its creditors in gold. Consequently, in August 1971 the gold window was shut. This unavoidable move was not

* Reprinted from American Gold News, v. 40, no. 3, April 1973

unlike a declaration of bankruptcy. The dollar, though still defined in gold, could no longer be converted into gold, even by foreign banks. Citizens in the United States, of course, have not had the right to redeem their dollars in gold or even to own gold since 1934.

The demand for gold that determines its worth arises from: 1) its qualities that make it uniquely valuable for many special purposes, 2) its function as a means of storing wealth, and 3) its worldwide acceptance as the basic money commodity.

The amount of gold needed each year to meet the first two demands is now approximately equal to the entire current production from the mines of the non-communist world (i.e., about 40 million ounces). Under present conditions, practically no new gold is going into the monetary reserves.

In the United States, the consumption of gold for industrial and similar non-monetary purposes is nearly four times the production from domestic mines (about 1.7 million ounces). The balance has to be imported, thereby adding something over \$486,000,000 at today's price of gold to the deficit in our balance of payments.

With the repudiation of the obligation to redeem dollars in gold, the dollar became simply another fiat currency -- i.e., a currency or paper money that has no gold backing and derives its value as money from the edict of a government or international agencies that it must be accepted by its citizens in payment of debt. Our green-backs used to have a statement on them that they were redeemable in lawful money, which by definition would be gold. Those now issued state only that "This note is legal tender for all debts public or private."

Gold alone now commands worldwide confidence as money, which is revealed by the tenacity with which all governments hold onto their gold reserves and endeavor to meet their obligations in currencies or some related device. This behavior is in accord with Gresham's Law--viz, bad money drives good money out of circulation.

The world is not likely to regain sound money again until the dollar and other currencies are redefined in gold and made convertible into gold. This cannot be done with gold at \$35 per ounce or \$42.22 per ounce, the present official price. It would require a reduction of the gold content of the dollar to at least one third of that in 1934, which would mean a so-called price of gold at \$105. This would just about match the depreciation of the dollar that has occurred in the last forty years.

With inflation continuing on a worldwide basis, any delay will make it necessary to put the "price" of gold still higher. \$105 per ounce may already be too low.

With such a write-up in the value of gold in the monetary reserves, it would be possible to re-establish convertibility of the dollar into gold and to offer to redeem in gold a significant part of the huge overhang of dollars that now menaces the monetary system of the world. Utilization of this write-up in value of gold reserves to redeem debt would keep this move

from being inflationary -- and, on the other hand, the increase in liquidity would make it possible to initiate steps to check inflation without creating a depression and unemployment on such a scale as to be socially and politically disastrous.

A bold revaluation of gold -- or in other words, a devaluation of the dollar in terms of gold -- may well be the only means our country has of checking inflation without a depression.

The market -- restricted as it is -- has already demonstrated that gold, quite apart from its monetary function, commands a substantial price. If its monetary value were re-established at a much higher level in terms of the dollar -- and the dollar made convertible -- this would amount to fixing the price for all uses of gold at the new monetary rate. An official monetary price far below the market rate is meaningless, except possibly as an artificial basis for comparison of currencies, but there will be no transactions in gold at such levels. At a properly high monetary price with governments ready to buy and sell at this rate, economies in the non-monetary use of gold would result, some gold would move out of private stock into monetary reserves, and production from mines would gradually be stimulated as existing operations were enlarged and exploration for new deposits was undertaken more intensely. With the "price" right, there would be enough gold to augment official reserves at a rate adequate to provide the world with the monetary liquidity needed for growth.

* * * * *

Government Regulations On Gold

The Department of Geology and Mineral Industries continually receives inquiries about gold regulations. The following summary of U.S. Treasury regulations, supplied by the Arizona Department of Mineral Resources, is here presented to explain the often misunderstood rules.

1. Gold may be bought and sold at any price agreed upon between the buyer and seller (usually the free market value for refined gold) provided the buyer and seller meet certain legal requirements, outlined below.
2. The United States Mint no longer buys gold (by amendment to Gold Regulations, March 17, 1968).
3. Gold may be mined without a Treasury Department license.
4. "Gold in its natural state" is defined in the Treasury Gold Regulations as being gold recovered from natural sources, which has not been melted, smelted or refined, or otherwise treated by heating or by a chemical or electrical process. Gold in its natural state may be held, purchased, sold and transported without a Treasury license regardless of the amount.
5. Gold amalgam results from the addition of mercury to gold in its natural

state for the purpose of recovering the gold. Gold amalgam produced from domestic sources may be dealt with in the same manner as gold in its natural state. In addition, gold amalgam may be heated to a temperature sufficient to separate the mercury from the gold (but not to the melting temperature of the gold), producing a material known as retort sponge, without a license by the person who recovered the gold from natural deposits in the United States.

6. Gold in its natural state and gold amalgam may not be melted, smelted, leached or refined or otherwise treated by heating or by a chemical or electrical process except for the heating of amalgam as explained above, without a Treasury Department license regardless of the quantity.
7. Up to 200 fine troy ounces of retort sponge (amalgam cake) resulting from the heating of amalgam may be held and transported by the person who mined or panned the gold, without a license. Retort sponge produced by a miner or panner may be sold to a person holding a Treasury Department license authorizing the purchase of such gold or to an unlicensed person, provided such unlicensed person does not hold at any one time over 200 fine troy ounces of gold.
8. Persons other than the miner or panner who acquire retort sponge may sell the gold only to the holder of a Treasury Department license. An unlicensed person may not retort gold purchased by him from miners or other persons.
9. Gold in a melted or treated form (except gold amalgam and retort sponge) may be sold or disposed of only by persons and concerns operating under a Treasury gold license authorizing the disposition of gold in such form.
10. Any person regularly engaged in an industry, profession, or art, who requires gold for legitimate, customary and ordinary use may, without a Treasury license, acquire gold in any form from any person authorized to hold and dispose of gold, hold, transport, melt and treat such gold and furnish melted and/or unmelted scrap to licensed scrap handlers. The maximum quantity of gold that can be so held or processed is limited to 50 fine troy ounces at any one time and 350 fine troy ounces in any one month. The Treasury gold regulations exclude the miner and panner from those persons who are regularly engaged in an industry, profession, art, etc., unless that person is the same person who produces the final industrial, professional, or art object. Example: a gold jeweler can mine and refine gold and construct gold jewelry without a license subject to the above mentioned quantities.

Additional regulations cover gold coins, gold certificates, speculative gold markets, gold securities and gold art objects.

Gold Mining in Oregon

Shortly after the discovery of gold in California in 1848, rich deposits were found at several places in southwestern and northeastern Oregon. The impact of these discoveries on the state was immediate and profound. Prior to the discovery of gold, the state lacked two necessary ingredients for development -- an abundance of wealth and an infusion of settlers who could be gainfully employed in large numbers. Gold mining stimulated every level of business activity, from basic farming to lumbering and transportation. The gold "rush" in Oregon never reached the great intensity of that in California, which in eight years established that state in a dominant position still retained today. Oregon's gold rush quickly became a way of life for many Oregonians in the southwestern counties of Jackson, Josephine, Coos, Curry, and Douglas, and the northeastern counties of Baker, Grant, Malheur, Union and Wallowa. This pattern persisted for nearly 90 years until it was extinguished by wartime directive in 1942. Since that time, gold mining has steadily waned as a commercial activity, and the fortunes of these two areas of the state have likewise suffered.

The discovery of gold in Oregon brought the first semblance of law and order to hitherto rough outposts of civilization. Each mining camp, through sheer necessity, quickly established its own laws and enforced them with alacrity. Water was vital to gold mining and water laws largely stem from those established in the early mining camps. The "miners inch," a unit for measuring flowing water in ditches and flumes, is still in use and mining districts created in the nineteenth century are still in existence in the twentieth. Along with the need for laws came the desire for culture and every mining camp worthy of the name had its opera house and knew the great and near great of the theater and entertainment world.

At first, all of the gold found in Oregon came from the stream beds. Later rich deposits of gold and platinum were found in the beach sands along the southern Oregon Coast. Eventually the gold placers were largely exhausted and miners traced the gold to outcrops in the hills. Underground mining gave the state a second economic shot in the arm, since this type of mining required vast economic expenditures in the form of shafts and tunnels, concentrating mills and smelters, and in many cases the construction of complete towns.

Today the gold camps have all but disappeared and the mines are idle. Until very recently the price for gold was far too low to generate any real interest by mining companies which, having been shut down during World War II, moved on to other fields as the cost of doing business climbed but the price of gold remained fixed by government order. It is too early to accurately assess what the high price of gold will do to the gold mining industry. It is quite possible that some old mines will be reopened and exploration for new ones will be conducted. The industry is greatly concerned over environmental considerations and the restrictions that have been



This bucket line gold dredge mined gravels along the John Day River between the towns of John Day and Mount Vernon from 1937 to 1942.



Old wooden water wheel on Salmon Creek in Baker County was used to power the Dixon gold arrastra in the early days of gold mining.

imposed by state and federal agencies. The easily mined gold has been largely worked out. New mines will be hard to find and costly to outfit and operate. Many companies have found it to be more rewarding to operate in foreign, undeveloped countries where the need for capital and job opportunities overshadows other considerations.

Quite apart from the commercial aspects of gold mining is the rapidly expanding interest by the general public in recreational gold panning and nugget hunting. Oregon has a wide variety of places where gold can be recovered in small amounts if large amounts of effort are expended. Gold has a peculiar allure for nearly everyone and the hope of finding some is strong. There is always the hope that one might just strike it rich, since great wealth can be found if one is only lucky.

Questions and Answers for the Weekend Gold Miner

For many people in Oregon, gold mining has become a recreational pursuit to be enjoyed on weekends and vacations. Answers to questions most frequently asked of the Department by "weekend miners" are given below.

The Department maintains offices at 1400 S.W. 5th Avenue, Portland, and field offices at 521 N.E. "E" Street, Grants Pass, and 2033 First Street, Baker. You are invited to visit the field offices to obtain detailed information on local gold diggings. Geologic maps, topographic maps, and a wide variety of bulletins are sold at all three of the Department's offices.

1. Where can I look for placer gold? The southwestern and northeastern corners of the State are the best, although other minor areas have some possibilities. Much of the land in these two areas is public domain and can be entered freely. The publications listed below under item no. 7 will be very helpful.
2. How do I learn to use a gold pan? Detailed directions are given in the Department's publication "Oregon's Gold Placers," which sells for 25 cents.
3. Where can I get information on skin diving for gold? Information on equipment for mining, regulations, safety factors, and where to look are given in the Department's publication "Skin Diving for Gold," which sells for 25 cents.
4. What are the rules and regulations for gold placers? The Department has available a short summary of mining law and also sells copies of the State Mining Code for \$1.25; the U.S. Bureau of Land Management distributes without charge "Staking a Mining Claim on Federal Lands." Most gold panners, however, are not interested in locating a mining claim and desire only to do some recreational panning at varied places. No permits are required and unless you unduly muddy the waters in a stream there will be no problems. Care must be taken

not to trespass on valid mining claims or private property. Good outdoor manners and a concern for the environment are essential.

5. Suppose I find some gold, what then? Placer gold is yours to keep, give away, or sell. There is no limit to the amount, but it must not be melted down (see section on "Where to Sell Gold").
6. Where can I get my samples assayed for gold? The State Department of Geology and Mineral Industries has an assay service at its Portland headquarters. Samples of black sand concentrates, raw bank run sand and gravel, or ore specimens should weigh at least one pound for best results. The charge for assaying a sample for gold and silver is \$4.00 (payment must accompany the samples). There is no charge for identifying rocks and minerals unless special tests are required. Simple tests for gold are contained in "Oregon's Gold Placers" listed below.
7. Where can I get information on old gold mines and maps of gold producing areas? Here are some selected Department publications:

Gold and Silver in Oregon, a 337-page bulletin plus maps	\$5.00
Oregon's Gold Placers, 14 pages	0.25
Oregon Mineral Deposits Map and Key, 18 pages plus map	0.45
Detailed topographic maps, 1"=1 mi., most areas available	1.00

(See also Suggested References below)

Where to Sell Your Gold

1. Raw placer gold may be sold to any willing buyer at an agreed upon price. Placer gold, if in large flakes or nuggets, usually commands a premium price, depending on size. Rock shops and manufacturing jewelers buy placer gold. Telephone directory "yellow pages" often list gold, silver, and platinum buyers.
2. Gold amalgam, or the "sponge" remaining after the mercury has been removed by retorting, is normally salable to some person or firm possessing a gold buyer's license.
3. Gold ore from quartz mines must be sent to a smelter for treatment. Smelters pay for all metals specified in their schedule. Smelter charges and freight are deducted from payments.
4. Gold jewelry and other objects containing gold, if melted down, must be sold to persons or firms possessing a gold buyer's license. Gold in this form is often heavily discounted by the buyer.
5. Gold is no longer purchased by the U.S. Mint.

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U.S. Geological Survey Information Office, Washington 20242, has following brochures for distribution without charge:

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