

The (Secret) History
of Gold Prospecting
in the United States,

and the 38 states where gold
has already been found!

TIM RAPP

Award Winning, former U.S. Geological Survey Scientist,
Engineer, and Published Technical Author

**The (Secret) History of Gold Prospecting in the United States, and the 38 States Where
Gold Has Already Been Found!**

...Get an introduction to the truth about gold prospecting in the United States,

...The truth about the *EXTENSIVE* deposits of gold still waiting to be found by the educated,
small-budget prospector, and

...the secret to finding your first gold nugget *FAST!*

By **Tim Rapp**

**The (Secret) History of Gold Prospecting in the United States,
and the 38 States Where Gold Has Already Been Found!**

Copyright ©2015 Timothy R. Rapp

For requests to use this copyright-protected work in any manner, email: timr777@gmail.com

ISBN: 9781310459382 EBOOK

October 26, 2015

Published and distributed by Smashwords,

ALL RIGHTS RESERVED. No part of this book publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means - electronic, mechanical, photocopy, recording, or any other -except brief quotation in reviews, without the prior permission of the author or publisher.

Find more gold prospecting information at the author's website: "[The Essential Introduction for New GOLD Prospectors.com](http://TheEssentialIntroductionforNewGOLDProspectors.com)"

DISCLAIMER

Gold prospecting is inherently a potentially dangerous activity in which all participants willingly engage in activities that could be viewed by some as risky. This is of course true of all outdoor activities that involve digging, lifting, hiking, using hand and powered tools, working in unfamiliar surroundings, activity near water bodies or wildlife, mines or mining activities, chemical processes, etc . The information in this eBook is provided "As is" without express or implied warranty. The information contained within this eBook is strictly for educational purposes. If you wish to apply ideas contained in this eBook, you are taking full responsibility for your actions. The author has made every effort to ensure the accuracy of the information within this book was correct at time of publication, but the author does not assume and hereby disclaims any liability to any party for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from accident, negligence, or any other cause. By accepting and using this publication and the information contained herein, the user agrees to relieve the author from any liability from the use of any information contained in this publication. The user also accepts any responsibility for any liability incurred by family members or guests incurred from the use of any information contained herein.

Table of Contents

Table of Contents

Listing of eBook Figures

About the Author

Acknowledgements

Introduction to USA Gold Facts

Chapter 1 The (Secret) History of Gold Prospecting In the United States

A 51 Year Search for the Mother Lode

Chapter 2 States Where Gold Has Already Been Found!

States where there is no public record of gold having been found

Chapter 3 Some Basic Gold Facts

Difference between the “regular” ounce and the troy ounce

Chapter 4 There Has Never Been a Better Time To Prospect For Gold!

20.17 lb Alaskan Gold Nugget Found in 1998 By a Bulldozer Operator

26.7 lb Gold Nugget Found in 1989 by an Elderly Man with a Cheap Metal Detector

6.07 lb Nugget Found in 2014 Where Other Prospectors Have Been Finding Gold For 155 Years

Chapter 5 Many Tons of Gold Waiting To Be Found Isn't “Golden”!

2.0+ Billion Dollar Gold Mine discovered in Wisconsin

1.8+ Billion Dollar Gold Mine Discovered in South Carolina

3.55+ Billion Dollar Gold Mine Discovered in Nevada

Chapter 6 Today's Prospectors Have Advantages That the 1849'ers Couldn't Dream Of!

Modern conveniences make prospecting more efficient today

Technology advancements have improved the modern prospector's chances of success

Improvements in physical comfort and security

The cost of prospecting has dropped tremendously

Conclusion

Get “The Essential Introduction for New Gold Prospectors, Second Edition” for less than the ticket price of a movie!

Appendix A - Selected References

Listing of eBook Figures

Figure 1. “The logo of the Gold Prospectors Association of America”

Figure 2. A young prospector with a handful of wealth he collected while prospecting.

Figure 3. “The Carolina Gold Rush became one of the most successful industries in the 1800s”

Figure 4. A replica of Sutter’s Mill”

Figure 5. Swauk Creek, Washington State

Figure 6 The Liberty mine located in the Swauk Mining District of Kittitas County, WA

Figure 7. United States map with states highlighted where gold finds have been documented

Figure 8 Estimates by the U.S.G.S. of the numbers of tons of undiscovered gold in the United States

Figure 9 Map of the lower 48 States with gold assessment regions, and estimated undiscovered gold in tons listed

Figure 10. A composite map showing some of the gold deposits that can be found in the lower 48 states taken from gold deposit maps published by the U.S. Geological Survey.

Figure 11 Crucible with Gold in Furnace

Figure 12 Using the density differences of Gold and Pyrite to differentiate between them

Figure 13 Alaska Centennial Nugget found near the town of Ruby, Alaska in 1998, 20.17 lbs

Figure 14 Boot of Cortez Nugget found in the Mexican state of Sonora in 1989, 26.7 lbs

Figure 15 Gold nugget found in the mountains of Butte County, California in 2014, 6.07 lbs

Figure 16 Photos of Sulfide and Gold Ore from Central Wisconsin

Figure 17 The now closed Ridgeway Gold Mine of South Carolina

Figure 18 The Fortitude Mine, a Skarn gold deposit, assayed at 8.5 grams/metric tonne

Figure 19 Decalcified, silicified and strongly oxidized limestone, assayed at 0.031 oz Gold/metric tonne

Figure 20 The author’s car high up in gold country during a weekend prospecting trip

Figure 21 Found by the owner with a metal detector

About the Author

The author is an award winning former U.S. Geological Survey Scientist, a published technical author ([Report 1](#), [Report 2](#), [Report 3](#), [Report 4](#)), and a degreed engineer with 13+ years of professional experience collecting geologic data, samples and reporting on natural resources for U.S. Federal agencies, Municipalities, and Private Industry. He has training and experience in the fields of Hydrology, Geology, Physics, Chemistry, Cartography, Numerical Modeling, and Petroleum, Chemical, Civil, Mechanical, and Industrial Engineering.

Acknowledgements



Figure 1. "The logo of the Gold Prospectors Association of America"¹

The author wishes to thank the following contributors who have increased the value of this eBook to readers through their valuable technical and editorial review suggestions; Luke Blackford of Houma, Louisiana for his invaluable editorial assistance during the final stage of this book's creation, Gene Groseclose of Sandpoint, Idaho for his contributions on the modern prospector's legal and social responsibilities. [Nick Straffon, president of the Remus, Michigan Gold Prospector's Association of America](#) Chapter for his multiple valuable technical content and editorial suggestions that have been included throughout this eBook. [Larry Tobey, President of the Nye Gold Seekers](#) who provided valuable editorial review assistance to the author that improved the overall quality of this eBook. And the helpful suggestions and support of [Jim Young, President of South Mississippi Chapter-Gold Prospectors Association of America](#) & Mississippi State Director and [Tim English, local President of GPAA of Western Massachusetts](#) & State Director of the Commonwealth of Massachusetts.

Additionally, the author wishes to recognize the valuable published research of Local, State, Federal and University Geologists and Mining Professionals, and the creative labor of

Prospectors and suppliers of goods and services to the mining community whose contributions to the gold prospecting and mining industry were included in this comprehensive reference, and are referenced in the pages of this eBook and in Appendix A - Selected References.

Introduction to USA Gold Facts



Figure 2. A young prospector with a handful of wealth he collected while prospecting.

The history of gold prospecting in the United States, and the massive gold resources still waiting to be found in the lower 48 states are not known by the overwhelming majority of American citizens.

Most Americans don't know that:

- Gold has already been found in over 75% of the United States - 38 of the 50 states!
- That the U.S. Geological Survey, the premier geologic science agency of the U.S. Government conservatively estimates that there are over 13,200 metric tons of gold still undiscovered in the lower 48 states.² That is worth more than \$514 Billion dollars at the 12/3/2014 New York closing price of \$1,209.60/ounce.
- The estimate of undiscovered gold in the lower 48 states is almost 3 times the estimate of undiscovered gold in Alaska. And yet most Americans don't even think of looking for gold in the lower 48 states!
- The U.S. Geological Survey says that 77.2+ million ounces of undiscovered gold is waiting to be collected east of the Rocky Mountains (worth approximately \$92.6 Billion).
- The U.S.G.S. says that 347.2+ million ounces of undiscovered gold is waiting to be collected west of the Rocky Mountains (worth approximately \$416.6Billion).
- One of the largest gold deposits in the western hemisphere with proven gold reserves of over 100 Million+ ounces (\$67.5+ Billion) was discovered as recently as the 1960's.
- A Gold mine in Wisconsin State produced \$2.0+ Billion worth of Gold, Silver, and Copper between 1993 and 1997.
- A Gold mine in South Carolina produced approximately 1.5 Million ounces of gold between 1988 and 1998.

This free eBook has been prepared to introduce the average American to a fact that they won't hear on the evening news: with a basic introduction to the right tools and the free scientific resources available online, any American can find that gold!

The collapse of the economy in 2007 took an enormous financial toll on families and individuals. Roughly [7 million+ Americans lost their homes due to foreclosure](#) by banks.³ What if those people who lost their homes knew how to systematically locate gold in their region of the United States, and went out to find some of that gold to pay their bills? During the month of [March, 2008, gold](#) exceeded a London Fix Spot price of \$1,020/ounce and in [September of 2011 the price reached over \\$1,889/ounce](#). Just an ounce or two of gold could have paid the mortgage and all of the rest of the bills for that month. And for most Americans those ounces of gold are less than a few hours' drive away!

Do you think any of those 7 million+ Americans who lost their homes from 2007 to 2011 would have been willing to find those ounces of gold if they knew how to do it using the latest scientific tools and techniques?

Some basic gold facts: a piece of gold the size of a [standard sugar cube](#) weighs 3.06 Troy ounces, and would have been worth \$5,780 in September, 2011. A tiny gold nugget of one Troy ounce would have been worth \$1,889 during the same period! That same tiny one ounce nugget could have been sold to a jeweler for twice the market value of the gold itself.



People seeking for Gold in North Carolina.

Figure 3. "The Carolina Gold Rush became one of the most successful industries in the 1800s"⁴

The successful gold prospector needs a basic working knowledge of specific aspects of Geology, Physics, Chemistry, History, and Engineering. Modern gold prospecting is not what most people think it is. Did you know that the [first Gold Rush in U.S. history](#) happened in North Carolina in 1799? Or that one of the largest gold deposits in the western hemisphere, with proven gold reserves of over 100 million+ ounces (USD\$67.5 billion+) was only discovered as recently as the 1960's and [contains gold so fine that it can't be seen with the naked eye?](#)⁵ Or that some very successful prospectors [mine for gold with vacuum cleaners](#)? **Or where gold has been found before, it is ALWAYS found again?** The more you know about gold prospecting's current state of the art, the faster you will see the massive opportunity for literally picking up wealth and financial security off of the ground!

A hundred and fifty years ago a gold prospector truly lived a life of adventure. In addition to a working knowledge of the previously listed disciplines, the successful prospector might have to defend himself from hostile natives and bandits, a sudden blizzard, or an attack by a wild animal. Grizzly bears, cougars, and rattle snakes were not just seen in zoos. And broken bones or even a tooth ache could mark the end of the trail for the old time prospector.

Modern prospecting is not as hazardous today, but the rewards can be considerably larger!

This free eBook's topics are generally ordered as follows:

- An introduction to the author of this free eBook.
- Acknowledgements to the contributors, scientific and otherwise, who have made this book possible.
- The (Secret) History of Gold Prospecting in the United States.
- States where gold has been found and documented.
- Why there has never been a better time to prospect for gold in the lower 48 states!
- Record breaking gold nuggets collected by modern prospectors in 1989, 1998, and 2014.
- Gold is often not found "gold" colored, and it pays (BIG!) to know how to identify gold when it is found combined with other minerals!
- Reasons why gold prospecting is easier now than at any time in our nation's history!

NOTE: Additional information about Gold Prospecting research, the latest gold prospecting news, recommended tools, and special offers on gold prospecting products and services can be found at: <http://www.theessentialintroductionfornewgoldprospectors.com/>

Chapter 1 The (Secret) History of Gold Prospecting In the United States

Almost everyone knows what gold is, its common physical appearance, and how it is valued by society. And almost anyone growing up in the United States has heard of the California Gold Rush and the 49'ers who dashed to the West Coast to find their fortune.



Figure 4. A replica of Sutter's Mill"⁶

The [California Gold Rush](#) started at [Sutter's Mill](#), near [Coloma](#). On January 24, 1848 [James W. Marshall](#), a foreman working for [Sacramento](#) pioneer [John Sutter](#), found pieces of shiny metal in the [tailrace](#) of a lumber mill Marshall was building for Sutter, along the [American River](#). Marshall quietly brought what he found to Sutter, and the two of them privately tested the findings. The tests showed Marshall's particles to be gold. Rumors soon started to spread and were confirmed in March 1848 by San Francisco newspaper publisher and merchant [Samuel Brannan](#). With the news of gold, many families trying their luck at Californian farming decided to go for the gold, becoming some of California's first miners. On December 5, President James Polk confirmed the discovery of gold in an address to Congress. Soon, waves of immigrants from around the world, later called the "forty-niners," invaded the [Gold Country of California or "Mother Lode Country."](#)

What most people don't know is that there have been at least 10 other major "Gold Rushes" in U.S. history!

1. [North Carolina – 1799](#) (Figure 3)

2. [Georgia - 1828](#)
3. [Alabama 1830's](#) (in Chilton County along tributaries of Blue and Chestnut Creeks.)
4. [California - 1849](#) (the "Forty-Niners")
5. [Colorado - 1859](#) (the "Fifty-Niners")
6. [Minnesota - 1860](#) (Gold was discovered near Lake Vermilion),
7. [Nevada - 1860](#) (Aurora)
8. [Idaho & Montana - 1861-1866](#)
9. [Black Hills of South Dakota - 1874](#)
10. [Nome and Klondike, Alaska - 1899](#)

A common misconception is that after a “Gold Rush”, there is no more gold to be found.

It would be difficult to imagine an idea more flawed than this!

Because most of the gold is concealed beneath earth and rock, usually only a small percentage of the gold actually present in an area is ever found by the miners seeking it. There is one indomitable truth of gold prospecting: **“Where Gold has been found before, it is ALWAYS found again!”**

There are many examples of this presented in [“The Essential Introduction for New Gold Prospectors, Second Edition”](#) available through the [author’s website](#), but here is a classic example:



Figure 5. Swauk Creek, Washington State⁷

A 51 Year Search for the Mother Lode

George Jordin moved into the [Swauk-Liberty region \(Washington State\)](#) in 1895, accompanied by six grandsons. George initially tried his hand at placer mining, but theorized that the coarse gold in the creeks had originated from lode veins close at hand. He realized that the compressed gold recovered from Swauk Creek (Figure 5), Williams, and other streams in the area was simply mashed lode gold. He and several others set out to locate the motherlode, the source of all the placer gold.

The initial lode discoveries had been made in 1887 when Thomas Tweed and William Johnson happened across a rich pocket of gold bearing quartz. These miners built an arrastra (a simple ore crushing apparatus used by early Spanish explorers/miners and extracted 900 ounces of gold from the quartz. In the summer of 1891, Andy Flodin hit rich gold bearing bird's-eye quartz nearby. Other miners slowly worked their way eastward until a series of high grade ore strikes were made in nearby Kruger Gulch.

In 1896, in the same area, [George Verdin discovered the Wall Street Series](#), a ledge of narrow quartz veins carrying staggering amounts of "free" gold (gold unalloyed with other minerals). L.K. Hodges stated in 1897 that "George W. Verdin has taken some of the richest ore in camp from the two forks of the widest ledge of the Wall Street Series, and several thousand dollars were cleaned up from one run of an Arrastra. In 1897, the price of gold was \$20.97 per ounce. At an average December 3, 2014 gold price of approximately \$1200.00 per ounce, these miners would have processed \$138,700.00 to \$277,431.00 of gold every day or two in their crude ore refining mill!"⁸

This auspicious beginning not only launched the career of George Verdin but also focused the search of other prospectors in the area. George Jordin was now convinced that there lay, somewhere in the immediate area, a vast repository of gold ore of incalculable value.



Figure 6 The Liberty mine located in the Swauk Mining District of Kittitas County, WA ⁹

51 years after George Jordin found gold in the Swauk-Liberty region, His grandson, Clarence Jordan, after carefully studying the pattern of other gold finds in the area, was prospecting a nearby hillside. He noticed a promising looking prospect that had been passed over by numerous fine prospectors. He called it the Ace of Diamonds mine. One gold pocket alone yielded 134 pounds of gold. Estimates of the total production from his mine workings are 11,000 to 13,000 ounces of gold (\$13,305,600.00 to \$15,724,800.00 at the approximate December 3, 2014 average price of gold per ounce).¹⁰ He believed this was the "Mother Lode" that his family had been searching for since the late 1800's. The photo of Figure 6 is a typical mine in the Swauk Mining District where **George Jordin, the grandson of Clarence Jordin, located the fabulous Ace of Diamonds mine, over 51 years after the first gold had been found in the Swauk Mining District!**

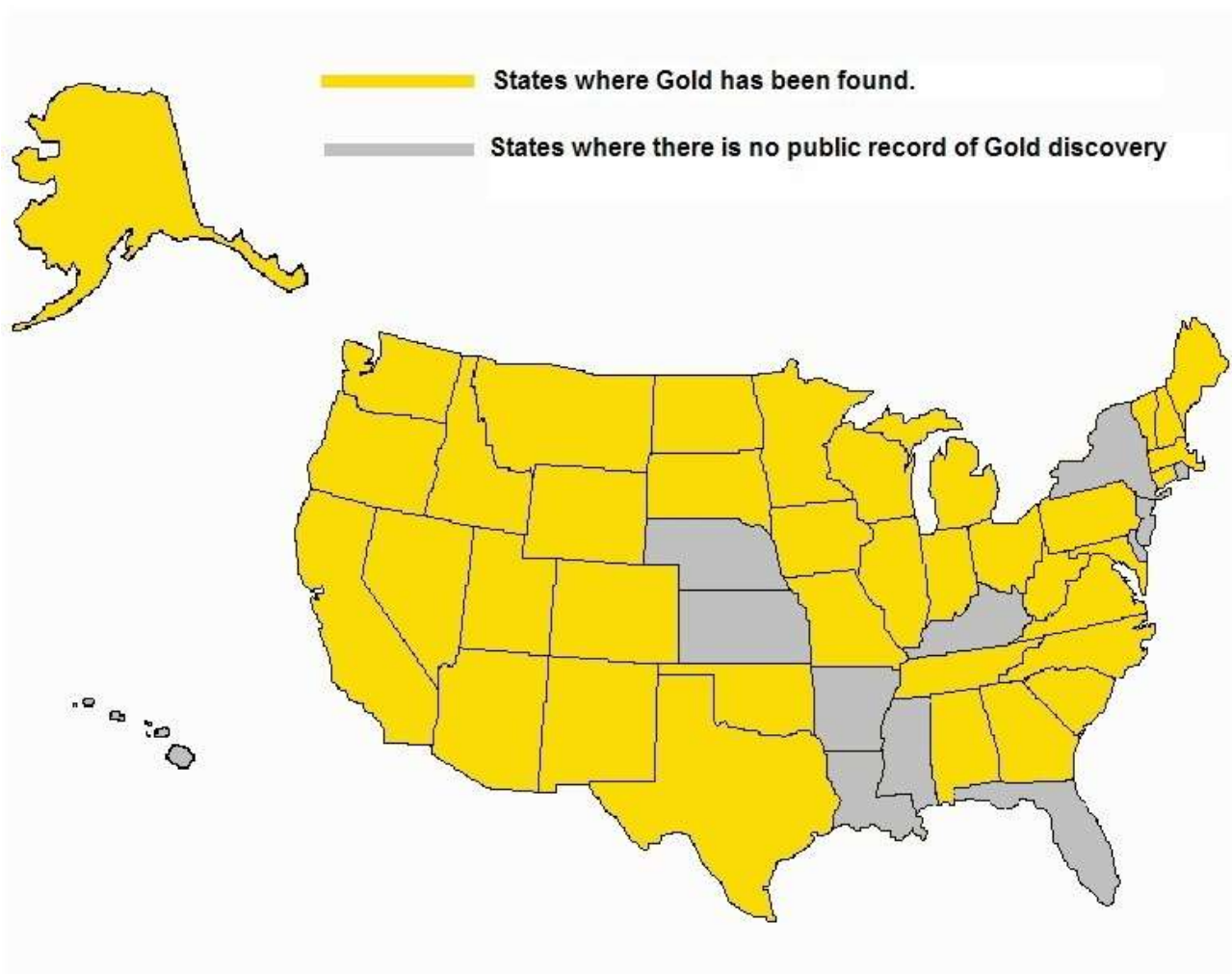


Figure 7. United States map with states highlighted where gold finds have been documented

Chapter 2 States Where Gold Has Already Been Found!

In the United States, Gold has been found and documented in 38 of the 50 states (Figure 7). Large scale commercial, corporate mining gold deposits have been found in about half of these states, **but in the other half the amounts of gold recovered are on a scale that would appeal more to the small-budget prospector**. A few tens or hundreds of ounces of gold can't justify an investment of millions of dollars in corporate mining startup costs, **but at \$1000+ per ounce these gold deposits would interest the small-budget prospector!** The states in which gold recovery has been documented includes: [Alabama](#), [Alaska](#) ([and here](#), [here](#)), [Arizona](#) ([and here](#)), [California](#) ([and here](#)), [Colorado](#) ([and here](#)), [Connecticut](#), [Georgia](#), [Idaho](#), [Illinois](#), [Indiana](#), [Iowa](#), [Maine](#), [Maryland](#), [Massachusetts](#), [Michigan](#), [Minnesota](#), [Missouri](#) ([and here](#)), [Montana](#), [Nevada](#) ([and here](#), [here](#)), [New Hampshire](#), [New Mexico](#) ([and here](#)), [North Carolina](#), [North Dakota](#), [Ohio](#), [Oklahoma](#), [Oregon](#) ([and here](#)), [Pennsylvania](#) ([and here](#)), [South Carolina](#), [South Dakota](#), [Tennessee](#) ([and here](#)), [Texas](#), [Utah](#) ([and here](#)), [Vermont](#), [Virginia](#) ([and here](#), [here](#)), [Washington](#), [West Virginia](#), [Wisconsin](#) ([and here](#)), and [Wyoming](#). **No matter where a person lives in the continental US, they are within a day's drive of a state documented to hold gold!**

NOTE: Each state name in the previous paragraph is associated with a link to a webpage documenting an example where gold has been found in each state. Click on the link to open the webpage.

For states that have recorded smaller quantities of gold recovered, the sources of gold have sometimes been attributed to [outwash from glacial sediments](#) deposited during a previous ice age. Some geologists will disparage placer deposits derived from glacial sediments as “poor” sources for placer gold, but make no mistake: the [depositional processes](#) that result in placers out west are the same ones concentrating gold deposits in the north-central portions of the US. And just like the gold streams in the Western US, in these Central and Eastern region states some gravel bars show no gold, some show a trace, and some have rich deposits. **The prospecting game is the same everywhere: systematic searching and persistence will yield results. And go first where gold has been found in the past.**

Assessment region	Gold (tons) Mean
Alaska	
Alaska Peninsula and Aleutian Islands-----	680
Brooks Range-----	54
East-central-----	660
South-central-----	1,700
Southeastern-----	100
Southwestern-----	1,100
West-central-----	18
Statewide-----	480
TOTAL, Alaska-----	4,800
 United States exclusive of Alaska	
Adirondack Mountains----	NM
Central and Southern Rocky Mountains-----	1,200
Colorado Plateau-----	NM
East-central-----	NM
Great Basin-----	3,800
Great Plains-----	NM
Lake Superior-----	880
Northern Appalachians---	220
Northern Rocky Mountains-----	1,900
Pacific Coast-----	2,100
Southern Appalachians---	1,100
Southern Basin and Range	1,800
TOTAL, United States includ- ing Alaska-----	18,000

Figure 8 Estimates by the U.S.G.S. of the numbers of tons of undiscovered gold in the United States¹¹

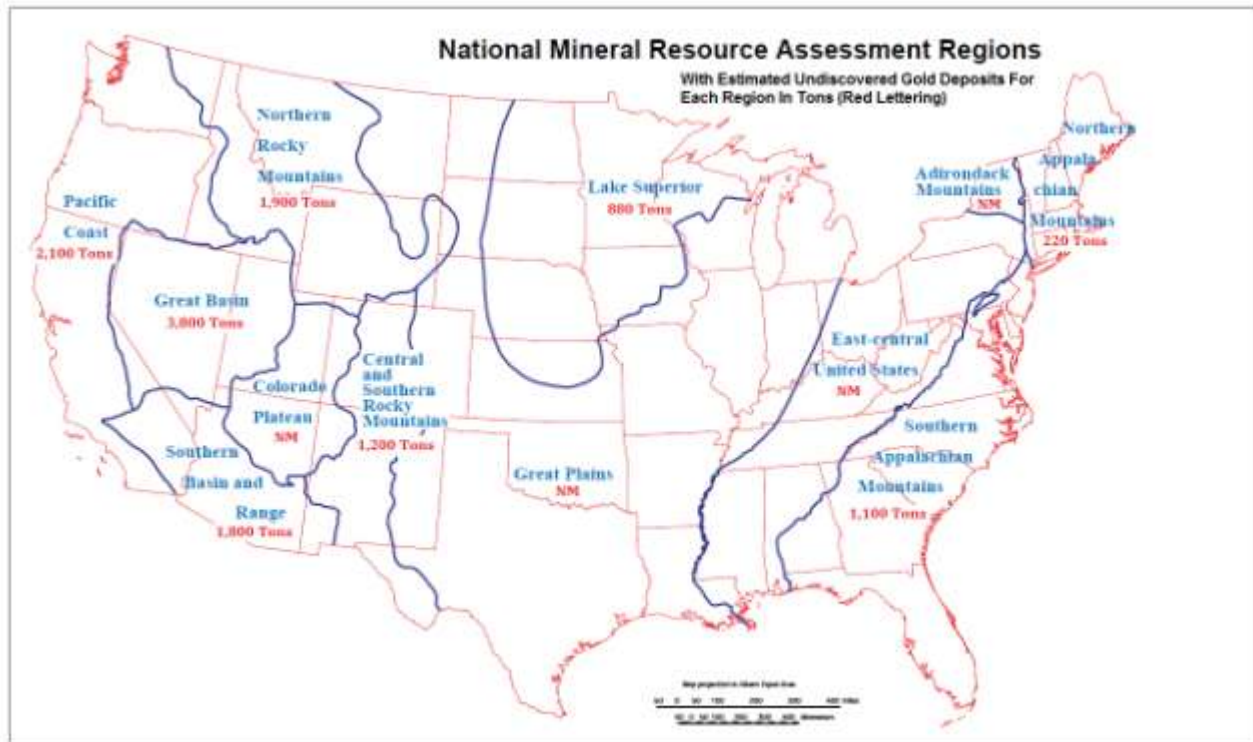


Figure 9 Map of the lower 48 States with gold assessment regions, and estimated undiscovered gold in tons listed¹²

Figure 8 is a table listing the average estimate of undiscovered gold resources for different areas in the United States. **NOTE:** These are very conservative estimates. The true quantities of undiscovered gold are certain to exceed these estimates, possibly by a large amount! Figure 9 is a map of the assessment areas that the values in the table of Figure 8 refer to. For example, The "Pacific Coast" region is listed in Figure 8 to have an estimated 2,100 tons of undiscovered gold. On the map of Figure 9, the gold assessment area labeled "Pacific Coast" includes parts of the states of California, Oregon, Washington, and Idaho. The U.S. Geological Survey's estimate for undiscovered gold for each region is posted in red text below each region title. These average estimates were derived from the cumulative probability distributions of the contained metals for each area or of the total area. "NM" means "No Metal" concentration of sufficient size and grade richness that it might, under the most favorable of circumstances, be considered to have potential for development at the **corporate scale**.¹³

NOTE: Many of the states listed in regions marked "NM" (No Metal) have documented gold finds, and links to that documentation are included in this eBook so that the reader can easily prove to themselves that gold is available in those states. These states were likely categorized as having "No Metal" by the U.S. Geological Survey because the estimated gold available was less than what is needed for "corporate scale" development. Of course if these USGS undiscovered gold estimates were published before 1960, they would not have included the [millions of produced gold, reserves, and known gold reserves of the Carlin Formation deposits in Nevada](#). So while the geologic research completed by the USGS is of the highest quality, it is subject to revision due to new data and the continued development of mining exploration technology. It is NOT the final word on the gold resources subject!

Figure 10. A composite map showing some of the gold deposits that can be found in the lower 48 states taken from gold deposit maps published by the U.S. Geological Survey.¹⁴

Gold has been found in every [region of the United States](#), in every geologic environment, and every [physiographic region](#) of the United States ([East Coast](#), [West Coast](#), and [Midwest](#)) (Figure 10). When [an ounce of gold was worth](#) \$18.93 (1833), it took quite a bit of gold to make the hard work of prospecting worth the effort. But with the price per ounce of gold hitting values like \$1209.60 (December 3, 2014) and \$1900.30 (September 5, 2011), gold deposits that weren't large enough for economic development in the past are suddenly many times more attractive now (approximately 63 to 100 times more attractive than in 1833!). And with the economically uncertain world economy, the price of gold could go way up. 2016 may be remembered as the year that gold prospectors took to the field with a vengeance. Are you ready to be remembered as a "Sixteen-er"?

Chapter 3 Some Basic Gold Facts

One cubic foot of gold weighs about 1,206 lbs.

There are an estimated 9 billion metric tons of gold in the oceans of the world.



Figure 11 Crucible with Gold in Furnace¹⁵

Gold melts at 1,945.4 degrees Fahrenheit and boils at 2,966.0 degrees Fahrenheit (Figure 11).

The [Periodic Table of Elements](#) symbol for [Gold](#) is "Au" ([Silver](#) is "Ag", [Platinum](#) is "Pt").

Gold ore with as little as 1 part gold to 300,000 parts of worthless material can be mined at a profit.

One of the largest gold nuggets ever found was turned up by a wagon wheel in Australia (1869) and weighed 159 lbs (about 2319 troy ounces, \$2,782,800.00 at the December 3, 2014 gold price!).

About 1 oz of gold can be drawn into a wire 0.000005 inch thick and 62 miles long.

Gold in the U.S. Fort Knox Bullion Depository consists of bars about the size of ordinary building bricks (7 x 3 5/8 x 1 3/4 inches) that weigh about 27.5 pounds each (about 400 troy ounces; 1 troy ounce equals about 1.1 avoirdupois ounces.) They are stored without wrappings in the vault compartments.

Aside from monetary uses, gold is used in jewelry and allied wares, electrical-electronic applications, dentistry, the aircraft-aerospace industry, the arts, and medical and chemical fields.

Gold is called a "noble" metal (an alchemistic term) because it does not oxidize under ordinary conditions. Its chemical symbol *Au* is derived from the Latin word "aurum." In pure form gold has a metallic luster and is sun yellow, but mixtures of other metals, such as silver, copper, nickel,

platinum, palladium, tellurium, and iron, with gold create various color hues ranging from silver-white to green and orange-red.

Pure gold is relatively soft--it has about the hardness of a penny. It is the most malleable and ductile of metals. The specific gravity or density of pure gold is 19.3 compared to 14.0 for mercury and 11.4 for lead.

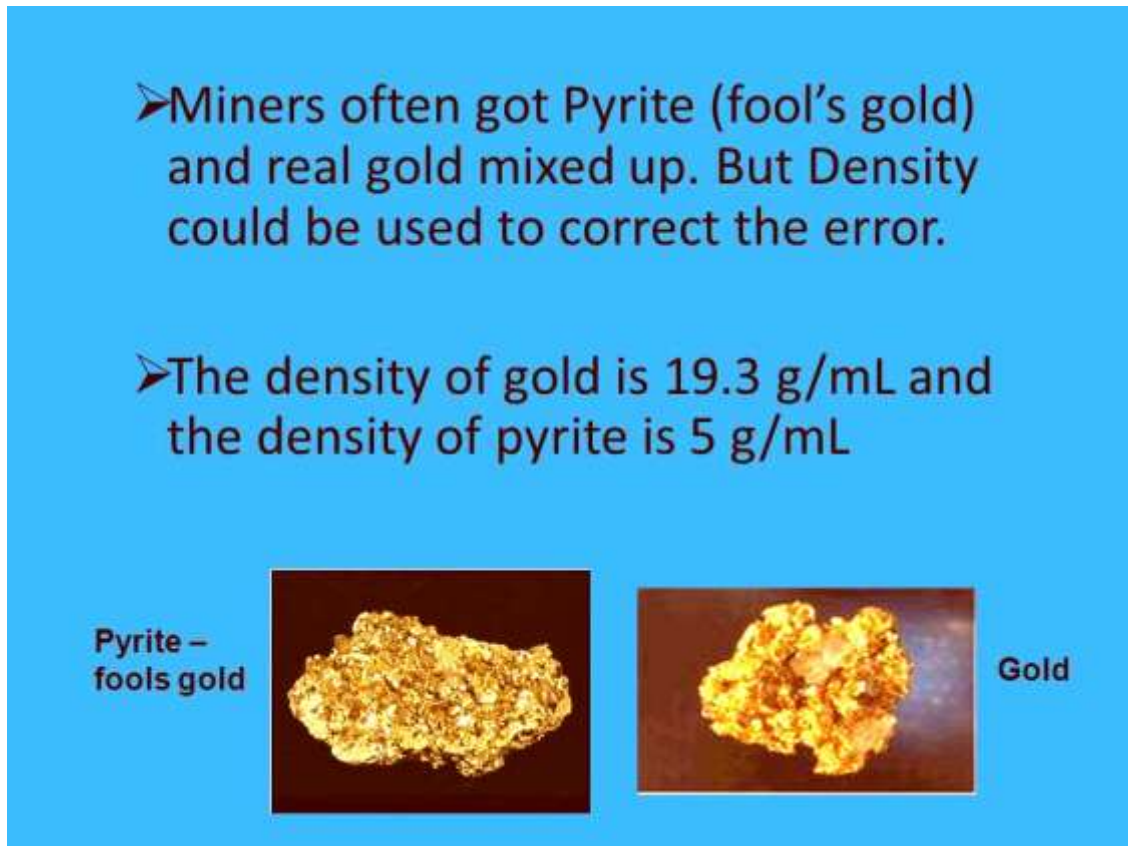


Figure 12 Using the density differences of Gold and Pyrite to differentiate between them¹⁶

Impure gold, as it commonly occurs in deposits, has a density of 16 to 18, whereas the associated waste rock (gangue) has a density of about 2.5. The difference in density enables gold to be concentrated by gravity and permits the separation of gold from clay, silt, sand, and gravel by various agitating and collecting devices such as the gold pan, rocker, and sluice box (Figure 12).

Mercury (quicksilver) has a chemical affinity for gold. When mercury is added to gold-bearing material, the two metals form an “amalgam”. Mercury is later separated from amalgam by retorting. Extraction of gold and other precious metals from their ores by treatment with mercury is called amalgamation. Gold dissolves in aqua-regia, a mixture of hydrochloric and nitric acids, and in sodium or potassium cyanide. [This solution is the basis for the cyanide process that is used to recover gold from low-grade ore.](#)¹⁷

Weights and Measures

- 24 grains = 1 pennyweight (abbreviated dwt)
- 20 pennyweights = 1 troy ounce
- 1 troy ounce = 480 grains

- 1 *avoirdupois* ounce = 437.5 grains
- 12 troy ounces = 1 troy pound
- 1 troy ounce = 31.104 grams
- 1 pennyweight = 1.552 grams
- 1 grain = 64.8 milligrams
- 1 gram = .543 pennyweights

Difference between the “regular” ounce and the troy ounce

A common unit of weight measure in the United States is the “ounce”. And most people know that there are 16 ounces in a pound. What many do not realize is that this “pound” is actually properly called an “[Avoirdupois pound](#)” and is composed of 16 *Avoirdupois* ounces. But gold is measured by the “[Troy ounce](#)”. And there are 12 Troy ounces in a “*Troy pound*”. A troy ounce and an *avoirdupois* ounce can be compared by their weight in grams. One troy ounce is defined as exactly 31.1034768 grams. An *avoirdupois* ounce is equal to approximately 28.3 grams. So **a troy ounce actually weighs more than an *avoirdupois* ounce**. But because there are only 12 troy ounces in a troy pound, and 16 ounces in an *avoirdupois* pound, **the *avoirdupois* pound is actually heavier than the troy pound**. For comparison, [the troy pound is equal to 373.24 grams and the *avoirdupois* pound is equal to 453.59 grams](#).¹⁸ The *avoirdupois* pound is approximately 1.215 times heavier than the troy pound. An explanation of these weights and measures is supplied by the [CoinNews.net website](#).

So to sum up that confusing situation:

1. A **Troy ounce** is heavier than an *Avoirdupois ounce*.
2. But an *Avoirdupois pound* is heavier than a **Troy pound**.

If you don't want to invest in a scale to measure your gold, you can get standard bottles in 2 dwt, 1/2 ounce, one ounce etc. at prospecting shops. You can use these bottles to fairly accurately estimate how much gold you have.¹⁹

An additional website with conversion factors for the gold prospector: [Gold Weight Conversions](#)

Chapter 4 There Has Never Been a Better Time To Prospect For Gold!

Most people consider the 1800's to have been the boom times for gold prospecting in the United States. Most people could probably come up with rationalizations for why this might have been, such as:

1. Fewer restrictions on mining activities,
2. A virgin land previously unexplored for mineral resources,
3. Few government controls on mining activities, etc.

But with only a little consideration, the reader will realize that early miners had to work a **lot harder** to reach their prospecting goals than today's prospector. In the late 1800's it was much harder to acquire and preserve food, medical help was primitive or non-existent, hostile Indian tribes and bandits were a constant life-threatening danger, or a relatively inconsequential work-related cut or scrape could become infected killing the unlucky miner many hundreds of miles from the nearest road or doctor.

20.17 lb Alaskan Gold Nugget Found in 1998 By a Bulldozer Operator



Figure 13 Alaska Centennial Nugget found near the town of Ruby, Alaska in 1998, 20.17 lbs²⁰

The Alaska Centennial Nugget was **found in 1998** along [Swift Creek by Barry Clay](#) as he operated his bulldozer (Figure 13). He was pushing a load of dirt with his tractor when he noticed the nugget at the top of his dirt pile he was pushing and jumped down from the cab to inspect it more closely. He immediately recognized it as a huge nugget of gold and buried it nearby for safekeeping until he came up with a plan for what to do next.²¹ It was determined later to be the largest nugget found in Alaska and the second largest documented nugget found in [North America](#). **NOTE:** the largest existing nugget found in North America is the “Boot of Cortez found in Sonora, Mexico in 1989.²²

26.7 lb Gold Nugget Found in 1989 by an Elderly Man with a Cheap Metal Detector



Figure 14 Boot of Cortez Nugget found in the Mexican state of Sonora in 1989, 26.7 lbs²³

The Boot of Cortez was **found in 1989** in the Mexican State of Sonora by a local Mexican citizen (Figure 14). He used an inexpensive metal detector from Radio Shack to locate the nugget. The Boot of Cortez was [sold at auction for \\$1,553,500 in January, 2008](#).²⁴ To date, this is the largest existing gold nugget found in North America.

6.07 lb Nugget Found in 2014 Where Other Prospectors Have Been Finding Gold For 155 Years



Figure 15 Gold nugget found in the mountains of Butte County, California in 2014, 6.07 lbs²⁵

[Butte Gold Nugget, 6.07 pounds, found July, 2014](#) in the mountains of [Butte County, California](#). [Sold for \\$400,000.00 to an anonymous collector](#) (Figure 15). The Gold Nugget Museum of Paradise, California, Butte County has an annual celebration: "[Gold Nugget Days](#)", to celebrate the finding of a **54 pound gold nugget in 1859**. The 6.07 pound gold nugget in Figure 15 was found **155 years** after the 54 pound nugget was found!

1.8+ Billion Dollar Gold Mine Discovered in South Carolina



Figure 17 The now closed Ridgeway Gold Mine of South Carolina ²⁸

The Hot Spring Au-Ag deposits of North and South Carolina have produced, and are producing significant quantities of gold. The Ridgeway mine of South Carolina produced approximately **1.5 million ounces of gold between 1988 and 1998.**²⁹ [28 tons of silver was also produced.](#) The approximate market value of the 1.5 million ounces of gold at the December 3, 2014 spot price is 1.814 billion dollars, and the 28 tons of silver at the December 3, 2014 spot price was worth 13.311 million dollars for an approximate **total combined market value of 1.828 billion dollars!**

3.55+ Billion Dollar Gold Mine Discovered in Nevada



Figure 18 The Fortitude Mine, a Skarn gold deposit, assayed at 8.5 grams/metric tonne³⁰

[The Fortitude open-pit mine](#) of northern Nevada (Figure 18) produced **2.8 million ounces of gold and 10.8 million ounces of silver** from 11 million tons of ore between 1984 to 1993, worth **3.55+ billion dollars** at December 3, 2014 commodity prices.³¹ [Skarns](#) (also called Tactites) are calcium-bearing silicate rocks.



Figure 19 Decalcified, silicified and strongly oxidized limestone, assayed at 0.031 oz Gold/metric tonne³²

Figure 19 is a sample of a Skarn type ore from the Fortitude Mine of Figure 18 containing 0.031 ounce/metric tonne Gold (1.05 gram/metric tonne).³³ It doesn't look particularly rich in gold, does it? But for the person who identified this gold mineral in the Nevada desert, it meant a 3.55+ billion dollar payday!

NOTE: The Boot of Cortez found in 1989 in the Mexican State of Sonora weighed 26.7 lbs, and was sold at auction for \$1,553,500 in January, 2008.³⁴ As nice as it would be to find a nugget the size of the Boot of Cortez, wouldn't it be nicer to know how to identify gold when it doesn't look "golden" and have a **3.55+ billion dollar payday instead?!**

Chapter 6 Today's Prospectors Have Advantages That the 1849'ers Couldn't Dream Of!



Figure 20 The author's car high up in gold country during a weekend prospecting trip

Modern conveniences make prospecting more efficient today

Today's modern prospector can get up in the morning and drive his personal vehicle 30 or 40 miles to his prospecting location (Figure 20). At the end of a long day, the prospector can drive to a nearby town, sleep in a hotel, eat at a restaurant, and then do it all over again the next day. Or he can stay in his tent/camper for days at a time with his food iced down in a cooler or small portable refrigerator, or eat canned food and energy bars. A trip to a prospecting location that might have taken an 1850's prospector a month now only takes one or two days by car.

Technology advancements have improved the modern prospector's chances of success

1800's era prospectors had to work hard to get good information on prospecting technology, geology, mineralogy, and all the other related topics necessary to find, remove, process, and market gold ore. With reference books on these technical subjects few and far between, and the number of educated people who could understand them even rarer, prospecting was not an efficient way to earn a living 150 years ago. But with today's access to the internet, huge public libraries full of an enormous variety of research materials, and modern technology like: 1.) Metal detectors, 2.) [Physical mineral separators](#) and even 3.) Plastic gold pans, the efficiency advantages of the modern prospector over the previous era's prospectors are enormous!

Improvements in physical comfort and security

The tremendous advancements in physical comfort and personal security made in the last 150 years makes it possible to focus much more energy on the objective of systematically searching and locating gold. The United States is a much more secure and safe place in which to work and play in the 21st Century. Maps, free satellite photos, and other products are available on the internet to aid the wise planning of an outing. Safety products for outdoor adventurers are reasonably priced and can be shipped directly to your door within a few days of being ordered. And while a traveler still has to be cognizant of his personal safety, security and medical assistance is often just a cell phone call away.

The cost of prospecting has dropped tremendously

The actual cost in time and money for today's prospector has dropped tremendously. A person can drive 5 hours and be prospecting at a location hundreds of miles away from their home for the cost of a tank of gas. If they sleep in a tent near their prospecting location, the additional cost of the trip will only be the gas they used to get there. The cost of food, prospecting tools, and other necessities are a fraction of what they would have cost in the 1800's (if they were even available!). So the new millennium is a GREAT time for prospecting if an individual is willing to make the small effort necessary to learn the basics of the activity.

Conclusion

This free eBook has documented 7 principal truths:

1. Gold finds have been documented in over 75% of the United States.
2. The Gold resources of the United States are extensive! This truth has been verified by the U.S. Geological Survey, the Federal Government's premier geologic scientific agency.
3. **"Where Gold has been found before, it is ALWAYS found again!"**
4. Although the widespread availability of gold is a documented part of the public record, the vast majority of Americans are not aware of its availability or the practical methods than can be used to recover it.
5. Ordinary people are having tremendous success with gold prospecting:
 - The largest existing gold nugget found in North America was discovered as recently as **1989**: The Boot of Cortez found with a cheap metal detector in the Mexican State of Sonorra and weighs 389.4 troy ounces. It was sold at auction in January 2008, for \$1,553,500.
 - The Alaska Centennial Nugget was found in **1998** along Swift Creek by Barry Clay as he operated his bulldozer. This nugget weighs 294.10 Troy Ounces.
 - The Butte Gold Nugget, 6.07 pounds, was found in July, **2014** in the mountains of Butte County, California and sold for \$400,000.00 to an anonymous collector.

NOTE: Most Americans think that all of the "Big Gold" was found in the California gold rush of 1849, or is only found by the big mining corporations. The record gold nuggets of Figure 13, Figure 14, and Figure 15 prove otherwise!

6. Literally **TONS** of undiscovered gold are combined with other minerals and don't look "golden". Successful gold prospectors understand how to identify gold when it is combined with other minerals.
7. **With modern conveniences** (good roads and the interstate highway system, relatively inexpensive transportation costs, access to free geologic research and other materials online, easy access to basic gold prospecting tools, etc.) **it has never been easier to research, plan, and execute a gold prospecting adventure!**

NOTE: This Ebook was prepared and made available for free to inform and empower Americans everywhere who were unaware of the history of gold prospecting in the United States, the vast gold resources of the lower 48 states and Alaska still waiting to be found, and the array of false beliefs that prevent Americans from trying to find the gold that might literally be lying in their backyard! If you found the information provided in this eBook to be interesting or educational, would you consider posting a review on any of the distribution networks hosting this eBook?

NOTE: This free eBook is meant to provide an introduction to the **FACTS** of the vast undiscovered gold resources of the United States, especially the lower 48 states where the majority of U.S. citizens live. The examples of historical gold information, research into gold

resources, and the examples of gold located by individuals and corporations are limited in this free eBook. The very reasonably priced “**The Essential Introduction for New GOLD Prospectors, Second Edition**”, containing 32 Chapters, 224 Figures, 268 pages, and over a thousand internet links to additional gold-locating resources provides a great deal more researched facts (with references) for the New Gold Prospector. Although “**The Essential Introduction for New GOLD Prospectors, Second Edition**” is intended to provide the serious gold prospector with the research tools necessary to succeed with their gold prospecting goals, it is also a clear and readable introduction to geology, mineralogy, locating mineral wealth other than gold, how to conduct effective technical research using the internet, and other valuable topics. As one gold prospecting expert reviewer described it, “*That is why I can foresee this book becoming **THE GOLD PROSPECTORS BIBLE.**”, and another said, “**It could easily be the text book for an undergraduate geology class for gold prospectors.**”*



Figure 21 Found by the owner with a metal detector³⁵

Get “The Essential Introduction for New Gold Prospectors, Second Edition” for less than the ticket price of a movie!

For less than the cost of the average movie ticket you can get a complete introduction to gold prospecting that gold prospecting experts typically spend their whole lives to learn: **The Essential Introduction for New GOLD Prospectors, Second Edition**, \$9.99. The 272 page

eBook can be purchased through the [author's website](#). It is also available in a high quality PDF format from the same website: www.TheEssentialIntroductionForNewGoldProspectors.com/

[Jim Young, President of South Mississippi Chapter-Gold Prospectors Association of America and also the Mississippi State Director](#) had this to say about the book: *"I am really happy to see that someone has put so much information under one cover. I have, probably, most of the information in the book already but it is scattered through many studies, research papers, government documents, and other books (the accuracy of which sometimes is questionable). That is why I can foresee this book becoming **THE GOLD PROSPECTORS BIBLE.**"*

[Nick Straffon, president of the Remus, Michigan Chapter of Gold Prospector's Association of America](#), commented in his review of the book: *"I am a recreational gold prospector with 10 years of experience in several gold bearing States, and find this book very useful and exceedingly interesting. The author amassed a cornucopia of gold prospecting information that can serve as a bible for first time weekend enthusiasts as well as many long time recreational gold prospectors. I suspect that the chapters describing the geology surrounding gold deposits will be useful even for gold mining professionals. **It could easily be the text book for an undergraduate geology class for gold prospectors.**"*

[Larry Tobey, President of Nye Gold Seekers](#) in Pahrump, Nevada, commented in his review: *"I am extremely impressed with the comprehensive coverage of the subject of gold prospecting. While this book is a fantastic tool for new gold prospectors, I believe it is very useful for even the experts. **The many links make the e-book a preferred format to expand the available knowledge base.** Hard cover books provide references, but they are not as readily available as reference links in an e-book. **Downloaded to a tablet or smart phone, the e-book is a ready reference while in the field searching for gold.** Of special interest is the coverage of basic geology and mineralogy. This is "essential" to investigate prospective areas to search for gold and possibly stake a claim. There are many methods and techniques for finding and processing gold presented in the e-book. **I recommend it highly.**"*

[Tim English, State Director of Commonwealth of Massachusetts, and local President of GPAA of Western Mass](#), commented in his review: *"I have just read a portion of this eBook and I feel that this is a book that everyone, from beginner to expert can use to their advantage. I feel this book will become a **MUST HAVE** to all past, present, and future prospectors! **No prospector should be without it!"***

It takes most prospectors many years of research to find the information in this eBook (and many don't ever find it at all!). The typical new gold prospector will learn more in 3 weeks with this eBook than they could teach themselves in 3 years of determined research. Is the \$9.99 cost for an instant download of the eBook to your computer a worthwhile investment to accelerate your path to gold prospecting success? And maybe radically change your life for the better?

13,200+ metric tonnes of gold (tonnes!) in the lower 48 states is waiting for someone to find it. Who will find those 424.4+ million troy ounces of gold?

Will it be your neighbor, or someone you work with who walks away rich?

Or will it be you?

The Essential Introduction for New GOLD Prospectors, Second Edition - Expanded and Updated

32 Chapters, 224 Figures, 272 pages, and over a thousand internet links to additional gold-locating resources!

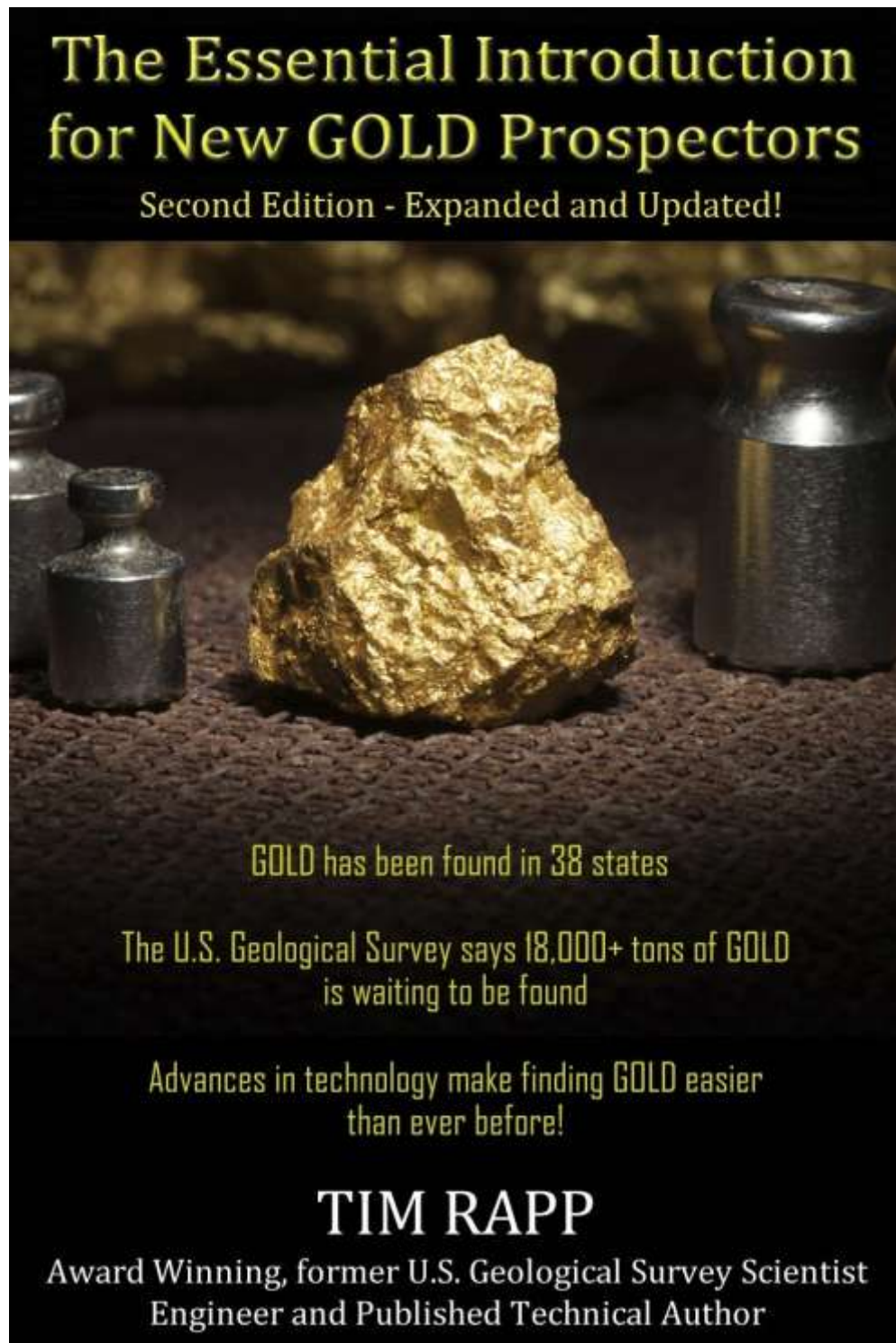


Figure 22 eBook Cover: *The Essential Introduction for New GOLD Prospectors, Second Edition* ³⁶

The eBook can be instantly downloaded through the [Author's website](#). It is also available in high quality PDF format [with additional material and document-navigation features here!](#)

A partial listing of the topics covered in the 272 page **The Essential Introduction for New GOLD Prospectors, Second Edition** (Note: less than a third of the topics covered in the eBook table of contents are presented here!):

Table of Contents

Listing of eBook Figures

Introduction

About the Author

Acknowledgements

Chapter 1 The (Generally Unknown) History of Gold Prospecting In the United States

Chapter 2 States Where Gold Has Been Found

Chapter 3 Some Basic Gold Facts

Chapter 4 There Has Never Been a Better Time To Prospect For Gold!

Chapter 5 Has All The Gold Already Been Found? Don't Believe It!

Chapter 6 An Efficient Introduction to Geology for the Modern Gold Prospector

Chapter 7 Systematically Identify Minerals like a Professional Geologist

Chapter 8 How Gold Appears When Found In Its Natural State

Chapter 9 Prospecting Strategies Used By Old-Time Prospecting Veterans

Chapter 10 Institutional Online Sources to Research Geology, Mine Locations, etc.

Chapter 11 Geologic Maps: Their Value, How to Read Them, How to Use Them

Chapter 12 Which Streams Can Be Legally Prospected For Gold?

Chapter 13 Lode and Placer Gold

Chapter 14 Where to Look For Placer Gold Locations In A Waterway

Chapter 15 Principle Physical Factors Governing Panning/Sorting Procedures

Chapter 16 Wet Panning For Gold and Other Precious Metals

Chapter 17 Criteria for Selecting a Gold Pan

Chapter 18 Dry Panning (or "Drywashing")

Chapter 19 Sluicing

Chapter 20 Dredging For Gold

Chapter 21 DryVac'ing for Gold

Chapter 22 Metal Detectors and Gold Prospecting

Chapter 23 Prospecting For Platinum in the United States

Chapter 24 Methods/Tools to Crush Ore Matrix And Reduce Particle Size

Chapter 25 Additional Gold Separation and Refining Methods for the Modern Prospector

Chapter 26 Suggested Steps to Research a New Gold Site

Chapter 27 Chapter 27 Using Free Software to Process Gold Maps like a Pro!

Chapter 28 A Basic Backpackable Prospecting Field Kit

Chapter 29 The Prospector's Code of Ethics

Chapter 30 Organizations the New Gold Prospector Can Join To Accelerate Their Success!

Chapter 31 .Government Regulations and the Modern Prospector

Chapter 32 Final Thoughts

Appendix A - Mineral Identification Chart

Appendix B - Selected References

Appendix A - Selected References

¹ <http://www.goldprospectors.org/>

² <https://pubs.er.usgs.gov/browse/usgs-publications>

NOTE: This general reference is replaced with the specific reference to this technical source material in “The COMPLETE Essential Introduction for New Gold Prospectors, Second Edition” available through the author’s website:

(<http://www.theessentialintroductionfornewgoldprospectors.com/#!online-store/c13jb>).

³ <https://bobsullivan.net/restless/7-million-americans-lost-their-homes-during-the-recession-are-they-ready-to-buy-again/>

⁴ <http://cvue6.weebly.com/conclusion.html>

⁵ http://en.wikipedia.org/wiki/Carlin%E2%80%93type_gold_deposit

⁶ <http://www.discovernortherncalifornia.com/visit-california-gold-rush-sites.html>

⁷ <http://cdnfiles.hdrcreme.com/53614/medium/swauk-creek.jpg?1373610834>

⁸ N.L. Barlee, 1999, Gold Creeks and Ghost Towns of Northeastern Washington, Pg. 180 – 185

⁹ <http://www.ghosttownsofashington.com/liberty-mine.html>

¹⁰ N.L. Barlee, 1999, Gold Creeks and Ghost Towns of Northeastern Washington, Pg. 180 – 185

¹¹ <https://pubs.er.usgs.gov/browse/usgs-publications>

NOTE: This general reference is replaced with the specific reference to this technical source material in “The COMPLETE Essential Introduction for New Gold Prospectors, Second Edition” available through the author’s website:

(<http://www.theessentialintroductionfornewgoldprospectors.com/#!online-store/c13jb>).

¹² <https://pubs.er.usgs.gov/browse/usgs-publications>

NOTE: This general reference is replaced with the specific reference to this technical source material in “The COMPLETE Essential Introduction for New Gold Prospectors, Second Edition” available through the author’s website:

(<http://www.theessentialintroductionfornewgoldprospectors.com/#!online-store/c13jb>).

¹³ <https://pubs.er.usgs.gov/browse/usgs-publications>

NOTE: This general reference is replaced with the specific reference to this technical source material in “The COMPLETE Essential Introduction for New Gold Prospectors, Second Edition” available through the author’s website:

(<http://www.theessentialintroductionfornewgoldprospectors.com/#!online-store/c13jb>).

¹⁴ <https://pubs.er.usgs.gov/browse/usgs-publications>

NOTE: This general reference is replaced with the specific reference to this technical source material in “The COMPLETE Essential Introduction for New Gold Prospectors, Second Edition”

available through the author's website:

(<http://www.theessentialintroductionfornewgoldprospectors.com/#!online-store/c13jb>).

¹⁵ <http://en.wikipedia.org/wiki/Crucible>

¹⁶ <https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcT-3pon8CdnPu4beNukT2PBD2QINl9NY8HrvXoRSuDgRGs4sR3>

¹⁷ <http://pubs.usgs.gov/gip/gold/gold.pdf>

¹⁸ https://en.wikipedia.org/wiki/Troy_weight

¹⁹ <http://www.amazon.com/Jimmy-Sierra-Product-K-GBS1-Snifter/dp/B000JLJ24K>

²⁰ https://en.wikipedia.org/wiki/Barry_Clay

²¹ <http://www.goldrushnuggets.com/alcenu.html>

²² <http://www.goldrushnuggets.com/alcenu.html>

²³ https://en.wikipedia.org/wiki/Barry_Clay

²⁴ <http://www.goldrushnuggets.com/bootofcortez.html>

²⁵ <http://bigstory.ap.org/article/7fbcc3a66c38458eb83472fe707c0854/gold-nugget-found-california-finds-secret-buyer>

²⁶ Klaus J. Schulz, 2011, Sulfide Deposits and Associated Geology in Michigan and Wisconsin, slide presentation, pg. 10.,

<http://mn.water.usgs.gov/projects/tesnar/2011/Presentations/SchulzSulfide%20deposits%20of%20Michigan%20and%20Wisconsin.pdf>

²⁷ Klaus J. Schulz, 2011, Sulfide Deposits and Associated Geology in Michigan and Wisconsin, slide presentation, pg. 10.,

<http://mn.water.usgs.gov/projects/tesnar/2011/Presentations/SchulzSulfide%20deposits%20of%20Michigan%20and%20Wisconsin.pdf>

²⁸ Klaus J. Schulz, 2011, Sulfide Deposits and Associated Geology in Michigan and Wisconsin, slide presentation, pg. 10.,

<http://mn.water.usgs.gov/projects/tesnar/2011/Presentations/SchulzSulfide%20deposits%20of%20Michigan%20and%20Wisconsin.pdf>

²⁹

<http://www.strongbowexploration.com/s/NewsReleases.asp?ReportID=489614& Title=Strongbow-Updates-Carolina-Exploration-Projects>

³⁰ <http://geology.com/usgs/gold-prospecting/>

31 <http://www.battlemtngold.com/projectnevadainfo.php>

32 <http://www.mirandagold.com/s/QwikReport.asp?IsPopup=Y&printVersion=now&XB1M=581746,581747,581748,581749,581751>

33 <http://www.mirandagold.com/s/QwikReport.asp?IsPopup=Y&printVersion=now&XB1M=581746,581747,581748,581749,581751>

34 <http://www.goldrushnuggets.com/bootofcortez.html>

35 No reference information available on location or date that the gold sample was found.

36 http://www.amazon.com/Essential-Introduction-Gold-Prospectors-Second-ebook/dp/B016D0VCMU/ref=sr_1_2?s=digital-text&ie=UTF8&qid=1444422446&sr=1-2&keywords=the+essential+introduction+for+new+gold+prospectors

And available through the author's website:

<http://www.theessentialintroductionfornewgoldprospectors.com/#!online-store/c14ab>