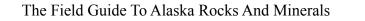
## The Field Guide to Alaska Rocks and Minerals



by Dennis Garrett

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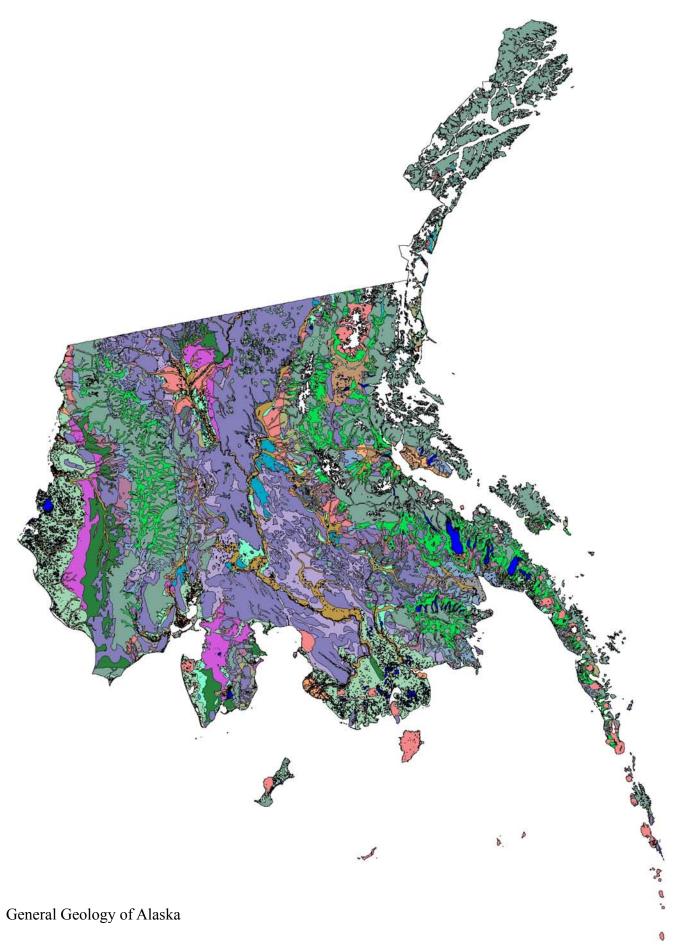
Dennis R. Garrett

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The Field Guide To Alaska Rocks And Minerals

### Preface

Alaska! That one word conjures up visions of mountains, glaciers, vast untracked forests, and mighty rivers. Alaska is varied in many ways. Aside from its' sheer vastness, which in itself assures a widely varied terrain and climatic conditions, the geologic materials that make up Alaska have been transported from exotic locations many thousands of miles away and pieced together into the land we know today. This process is continuing today, and we can expect those processes to continue long into the future.

It is due in no small part to this pieced-together geology that is Alaska that we have the opportunity to hunt for a wide variety of rocks and minerals, including precious metals, fossils, and gemstones.

I have been prospecting in Alaska since 1981, and have found numerous minerals, including gemstones and precious metals. Now I am going to share some of my secrets with you.

I have always been interested in rocks, gems, and prehistoric artifacts. As a child I dreamed of being an explorer, and as an adult I was able to live that dream. I also had the opportunity to prospect wherever I traveled, and still believe Alaska is one of the last untapped treasure houses. You see the real treasure when you look around while hunting for minerals.

In this volume our exploration will be focused mainly on South-Central Alaska. Before we begin, we'll look at the basics: where to look and what to take, both with you when you leave, and what to leave behind, what to do when you get there, and whatever else comes up. Most of the hundreds of locations described in this book are accessible from the road and trail system.

## INTRODUCTION

Some books and reports are written in technical terms using unfamiliar words, with equally detailed maps and diagrams to accompany the text. This is not one of those. Those sometimes useful if weighty works are available to anyone interested in furthering their study of minerals through their local library or other sources. Instead, this field guide will list, as briefly as possible without cutting out too much, the locations of mineral deposits, including gold, platinum-group metals, gemstones, fossils, and many others, shown on maps found throughout this book.

**How To Use This Book** The areas covered by this field guide are divided into regions, and each region is covered by one or more maps found in each section of this book. Known mineral deposit locations (including fossils) or areas are indicated on the maps by a symbol, and are referenced in the accompanying text. Additional information, such as access, land ownership (if known), history, web links, etc. is included when available.

For example:

**"Bird Creek**-Tourmaline in Pegmatite (?) Veins. Sheelite, Native Gold, Native Copper, Other. **Location:** T29N R9W Sections 21, 25, 26, 27, & 28, SM. **U.S.G.S. Maps:** Talkeetna Quad, (C-2). **Field Notes:** Access is by road, foot or 4-wheeler from upper Peters Creek. Privately-held claims in the area, mostly along creeks. Road cuts in Bird and upper Peters Creek provide numerous exposures."

In the above example, we see the name of the location ("Bird Creek"), the minerals that are found there ("Tourmaline in Pegmatite (?) Veins. Sheelite, Native Gold, Native Copper, Other"), the location "*T29N R9W Sections 21, 25, 26, 27, & 28, SM.*" (T29N R9W means Township 29 North, Range 9 West, Sections 21, etc. Seward Meridian-Other designations include the Copper River Meridian or CRM and the Fairbanks Meridian or FM). The U.S.G.S. Map (Talkeetna Quadrangle; C-2 is the "submap"), and field notes.

The maps are produced for this Guide using a GIS (Geographic Information System) program. It is expected that you would have supplementary maps if the area is far from the road. For areas adjacent to the road system, this is not as great a concern. Some places to purchase maps and GIS data on CD are listed in the appendix. A special GIS computer program on CD-ROM has been prepared to accompany this Field Guide.

Symbols indicate mineral deposits that have been worked in the past, or are well-known. Crossed picks without the colored center means the deposit is unexplored, or information is not available, and some locations are shown by a dot or other symbol. Not every location described in this book is shown on the maps, and many locations shown on the maps are not described in this Field Guide due in part to the huge volumes of data. And just because a certain mineral is not listed does not mean it has not been found at that location; it just may have not been reported. Major highways are red, trails are tan, and water is blue. The top of the maps are north.

If you purchased the GIS Edition, just place the CD-ROM into your computers CD tray and follow the on-screen instructions.

Take this book with you whenever you head into areas where you might find collecting opportunities, even just when you're driving to someplace. Extra pages are provided for your own notes.

**About the Sources of information used in this compilation**-The information used to compile this Field Guide was obtained from many different sources: old reports from Federal agencies such as the U.S.G.S. (U.S. Geologic Survey), U.S. Bureau of Mines, Alaska D.G.G.S., D.N.R., Territory of Mines, and other state agencies, from proprietary sources, and from other sources. Most of the locations have been field checked, but conditions change over time. I selected these from over 8,000 sites contained in my database.

**Acknowledgments**-This book would not have been possible but for the work of those who preceded me. Likewise, to those of you who demonstrated the need for this book and your prodding me to write it, I thank you. It is impossible to thank everyone, not only because of the sheer numbers involved, but also because many of them are dead. In some instances their work is listed in the sections following the maps and descriptions, and any omission does not imply that a certain volume or work did not provide inspiration, motivation, or information.

Speaking of inspiration, motivation, and information, without those elements from my family and friends this work would never have been.

To all of you, I cannot fully thank you.



This book is dedicated to everyone who looked at a rock, river, fossil, or mountain and wondered...

### **Getting Started**

Collecting rocks and minerals is a fun outdoor activity for the entire family, and is very inexpensive. It can easily be combined with other outdoor activities such as hiking, camping, hunting, fishing, and so on. If you're just getting started, or if you are an old rockhound, you'll find this book useful and informative.



Family "Highbanking" for Gold

In order to increase your chances of finding something when on an outing, it is good to know in what environments minerals are formed. Obviously, you also need to know where to look. That is, beyond the *locations* listed in this book: I mean *where*, specifically. Potential sites are abundant, though sometimes access can be helpful or harmful. Landslides, both where they end as well as where they begin, valley floors, glacial moraines, and in streams are all good places to look in mountainous regions, as are road cuts, mines, gravel pits, and other excavations.

Areas where mining has occurred or is occurring have tailing piles, rubble heaps, and mine dumps which have yielded spectacular specimens, including a **90 ounce gold nugget**! If you ask nicely, the mine owners will often let you prospect their tailings, and if you find something good they know to make adjustments in their operation. Places that are well-known and have good access may yield fewer specimens, depending upon the size of the area and "frequency of refreshment". That is what I call the time between floods, landslides, or other actions release fresh materials. Do not write off an area because it appears heavily collected, as natural processes release fresh material. Also look to areas adjacent, or of similar geologic composition, for unknown or unlisted areas for potential collecting locations.

You will need only a few inexpensive tools to collect your specimens. Besides whatever you normally wear and take on hiking trips (of whatever length), you'll need a hammer, preferably a rock hammer, which is pointed on one end of the head, and flat on the other, and/or a crack hammer, as well as some chisels of various sizes, safety glasses or goggles, a hand lens or other magnifying glass, a stiff brush, newspaper and cotton for packing specimens (use the cotton for very delicate ones, but don't use it on specimens that may make removal of the cotton difficult), a field notebook, map and compass, and a pack to put it all in. Extra items would include a gold pan, camera, flashlight, prybar, sluicebox, and shovel, to name but a few. Many valuable gems and minerals are found in placer deposits, and panning or sluicing is a good way to quickly find out information on the materials in the deposit and area.

Specimens are often more valuable if they are still attached to their matrix, which is the rock in or upon which they were formed, as well as when the location, circumstances, and date they were collected are known.

Whether collecting on public or private property (with the owners permission-most landowners and mining claim holders will give you permission, and there are more operators that are willing to let you mine for a fee) always remember: you are an ambassador. Don't tear up the land, fill your holes in, don't leave any trash and pack out any you find (else you may be blamed for it). Respect nature and private property, and we can help assure our future generations the same opportunities.



Magnetite Crystals in Matrix

The best times of the year for collecting is in the spring, before the vegetation gets in full swing, and in the spring or fall for gravel bars along rivers, when the water levels are lower. Collecting in higher areas is usually possible from very early spring until late fall.

When you get to the location where you wish to collect, remember a few rules to be safe by. Alaska is mostly raw, rugged, and unforgiving wilderness. Wild animals, unexpected and sudden weather changes, and other natural hazards are magnified with the distance you get from "the road". Don't dig downhill from large rocks that may become dislodged. You should always carry basic survival gear if traveling very far into the backcountry, and tell someone where you're going and how long you expect to be there. Additional items to consider are a cell phone and GPS receiver, although there is always the possibility that you can't get access. Most of the locations listed in this book are near the road and trail system, but safety is still the key.

#### **Specimens in Rock**

Many times you can find specimens in loose rock, such as talus and gravel deposits. Sometimes, however, you will need to chisel or pry them out of their surrounding rock. As an example of an exception to these rules, I once found an Alaska Jade boulder that weighed over 50,000 pounds. That stayed right there. But it is a good thing to remember that how a stone looks when it is wet is how it will look when it is polished.

"Float", the name given to pieces of geologic bodies that have been transported some distance from its' source, if only a few feet, is your guide to in-place deposits. Many lode deposits have been discovered by following the float upstream or uphill to its source. The closer one gets to the source, the less wear is evident on the rocks and minerals derived from that source.

Areas where the soil or rocks are stained with rust or other minerals (do not be confused by lichens or other plants) are of special interest, and may indicate areas of mineralization. Obvious changes in soil types or vegetation communities, including springs, may indicate a concealed ore body or mineral deposit. Clay, particularly in seams in otherwise "solid" rock, may conceal spectacular mineral specimens. The best specimens are usually found in "vugs" or cavities in the rock. Be very careful when removing them from their enclosing rock, and take plenty of time, otherwise you could destroy a very rare and valuable find. Stuff the cavity with newspaper or some similar material to protect the crystals while you chisel away the rock around it, well away from the cavity. It is a good idea to carefully record the location, and consult with experienced persons (such as a rock club) in some cases.

#### **Placer Minerals**

If you are searching in stream beds, gravel deposits, or similar loose material, the so-called "gold pan" and sluice are practically requirements. They are also relatively easy to use, although like with any instrument or tool, practice is required to become proficient.

Trying to describe the operation of the pan or sluice (I hesitate to call it a gold pan, as it easily recovers so many more minerals) is practically impossible. It's best to have someone show you, but here is how I describe it:

1. Fill the pan with material. Place the full pan under water and work the material with your fingers, breaking up any lumps and removing the larger rocks (look at them before you toss those rocks!). Some people like to use a pan with a screen in the bottom; it depends upon the user and the circumstances.

2. Pick the pan up out of the water and shake and swirl it a few times, and dip the pan in the water and repeat. What you're doing here is "desliming" the material, or removing the very fine clay and silt that will hinder recovery. Hold the pan level when you shake it.

3. When the material is loose (check with your fingers), hold the pan tilted away from you at an angle (which will vary depending upon the material you are panning) and dip it in the water. You should see the lighter colored sands washing out. Shake the pan frequently while holding it flat to settle the heavy and valuable minerals, and use your fingers to pick out or scoop (while underwater) the larger pebbles out.

4. After about one minute (when you get some practice) you should have a small amount of minerals, no more than a couple of tablespoons, concentrated in your pan. Save all of this for later study in a plastic bottle and fill the pan again. This material will be referred to as "concentrates". I'm sure if you've found any nuggets in your pan you've already picked them up and examined them, and I hope you also looked for gemstones.

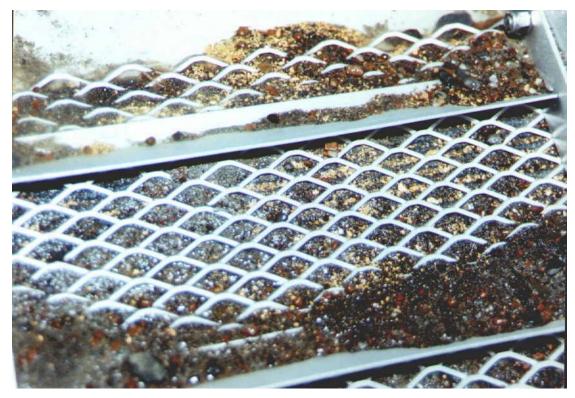
When looking for minerals in placer deposits, which are accumulations of varying amounts of clay, silt, sand, gravel, boulders, and organic material which has been transported and deposited by running water (and sometimes by wind or glaciers), you must look for areas where the minerals you seek are concentrated. For example, the ratio of gold to gravel in many placer deposits is one parts per million or less. That means that you would have to process 31.25 tons of rock for one ounce of gold, about 7,000 pans full. Most creeks contain considerably less gold, but rich pockets are known to exist in almost every gold district. The places in and along streams and rivers where heavy (and usually valuable) minerals collects are any places where the water flow changes or slackens: the inside bends of streams, around boulders and gravel bars, where the gradient of the stream changes (but usually not in the pool at the bottom of a waterfall-the turbulence grinds up most minerals), and where the stream encounters an underwater obstruction, such as a rise in bedrock.

Speaking of bedrock, the ideal bedrock is one that is rough, and has cracks to trap and hold the heavy minerals. Slate bedrock is often a significant producer of gold even in areas that have been

mined one or more times, in part because the gold tends to work its way six feet or more into the cracks in the rock. Typically, the highest concentrations of heavy minerals are found close to, on, or in some relatively impermeable layer, such as bedrock or clay layers (referred to as "false bedrock").

When you find an area that you can work placer deposits and have a reasonable expectation of recovery of some minerals, a sluice box is a necessity. Even a small, lightweight, inexpensive hand sluice will process many times the material that one can process with a pan. While both the pan and sluice are exploration tools, and not meant for serious production, the pan is a reconnaissance tool, and the sluice is intended as a follow-up, suitable for recreational mining.

Operation of the sluice is relatively simple (certainly easier to describe). The sluice is placed in the stream in an area where the water flow is sufficient to remove the lighter sands, but not so strong as to wash out the valuable minerals. The flow of water need not be strong enough to remove the larger pebbles, as you can do this with your hand. Material is shoveled into the upstream end and worked through the sluice. After a quantity of material is processed, the flow of water is shut off, and the sluice is removed from the stream. The concentrates are washed out of the sluice and the mat they typically use to trap the smaller minerals also is washed, and all the concentrates are placed in a container for panning.



Gold, garnets, pyrite, and "Black Sand" in a small sluicebox. Dutch Hills, Alaska

Placer material that is composed primarily of finer sediments, like sand and small gravel, will contain only small particles of gold, whereas coarse material, especially gravel containing large boulders, will yield the largest pieces.

#### LAND STATUS

Alaska land ownership can be generally classified in five groups: federal, state, Borough, Native Corporation, and private.

Depending upon what you intend to do, you need to obtain permission, and possibly permits, from the land owners and managers. Contact information for land management agencies and claim owners is given in the appendix.

The holder of a mining claim or leasehold location does not have exclusive right of occupancy of the surface, only the minerals. This means you can camp, pass across, hunt, or fish (if otherwise legal, of course), but the minerals belong to the claim owner. Unauthorized removal of minerals, besides being known as "claim jumping", is theft. You would be advised to consider all minerals, equipment and structures on a mining claim to be the property of someone else, and never assume a claim is abandoned-even though appearances may be to the contrary.

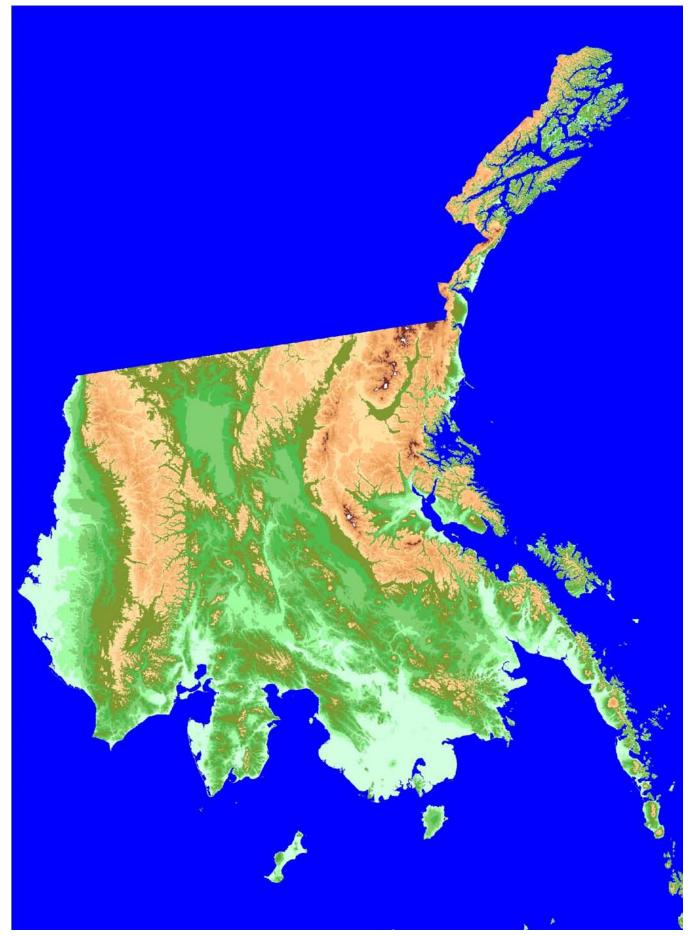


Claim Corner above The Blue Ribbon Mine, Dutch Hills.

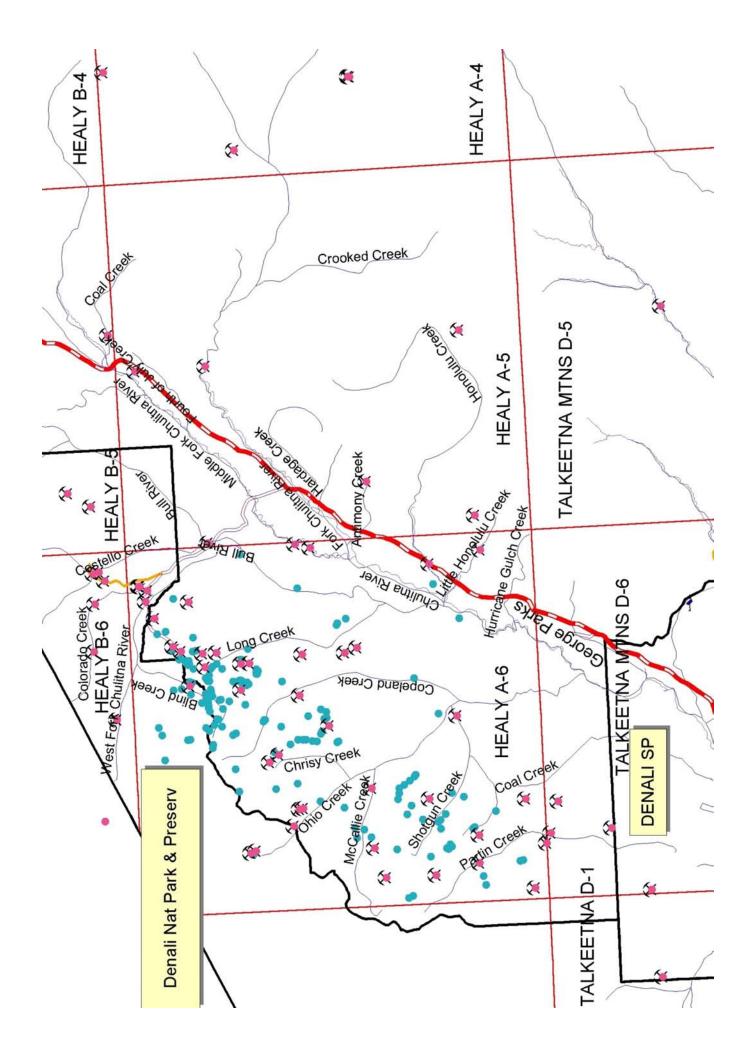
#### Disclaimer

Lastly, the inevitable disclaimer: It is your responsibility to determine the status and land ownership of the area you wish to collect, and what the laws and regulations pertinent are thereto. It is also your responsibility to act responsibly: don't tear up the land, fill in your holes, pack out your trash, and remember that Alaska's backcountry can be harsh.

NOTES:



The Field Guide To Alaska Rocks And Minerals



## **Chulitna/Parks Highway**

**Summary**-The Chulitna area is host to a wide variety of fossils and minerals, and is composed of an equally diverse assemblage of rock types. The area shown on the map features a cluster of mineral deposits and fossil locations in the left side of the area. Mineral occurrences are associated with plutonic rocks, which range from felsic to ultramafic in composition. The sedimentary rocks have a strong northeast orientation, as do the elongated bodies of intrusive rocks, and the faults that cut through them. Predominant sedimentary rock units include greywacke, sandstone, limestone, argillite, chert, and "red beds". Many streams in this area contain placer gold and other minerals.

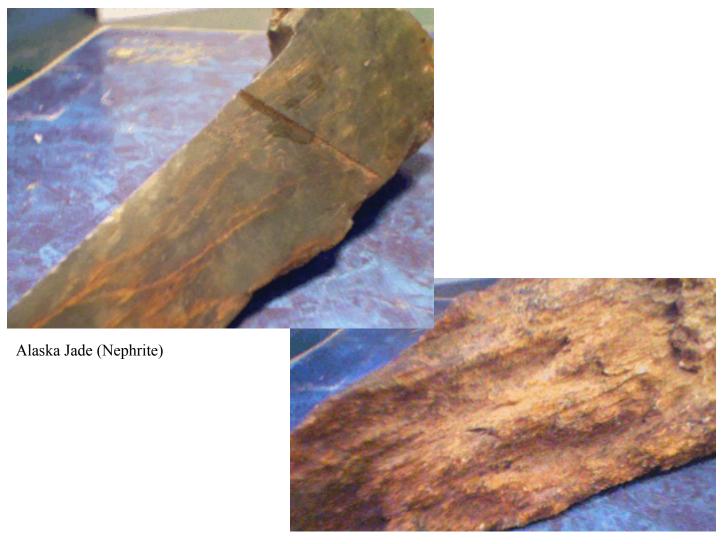
The first reported mineral discovery of any significance was reported in 1907 on Bryn Mawr Creek, of placer gold. Further up Bryn Mawr Creek from the failed placer mine, the deposit now known as the Golden Zone Mine was discovered in 1912. The mine briefly produced gold, silver, copper, and lead from its lode during the years 1941-42. East of the Golden Zone Mine is the Dunkle Coal Mine, which operated between 1940 and 1954.

Chulitna Area- (Fig. 1) Fossils, Placer and Lode Gold, Bismuthinite, Marcasite, Coal, Other. Location: See Field Notes Below. U.S.G.S. Maps: Healy Quad (A-5, A-6, B-6, & B-5;) Talkeetna D-1; Talkeetna Mountains D-5. Field Notes: Access is by foot or 4-wheeler from Parks Highway. Privatelyheld claims and private property in the area, mostly Denali State Park and Denali National Park and Preserve. Hundreds of fossil localities in this area, most only discovered in the year 2000. Fossils include ammonites, bivalves, corals, spongiforms, radiolarians, conodonts, brachiopods, plants, fish. Look for limestone, argillite, sandstone, and chert, both in exposures and in streams. Fossils have been found in Chulitna River (T22S R11W, Section 3; T20S R11W, Section 36; T22S R10W, Section 20;), Little Honolulu Creek and Parks Highway, (T21S R11W, Section 36), Long Creek (T21S R11W, Section 10 & 11-See Also Bryn Mawr Creek), Lookout Mountain (T19S R11W, Section 36), Bryn Mawr Creek (T19S R11W, Sections 34 &35; and T20S, R11W, Sections 3, 4, 5, 6, 7, & 8); Copeland Creek (T21S R11W, Section 29); On ridge between Ohio Creek and Copeland Creek (T20S R12W Sections 25 & 36, T21S R12W Section 1, T21S R11W Section 6); Shotgun Creek (T21S R12W, Sections 27, 29, 31, 32, 33, 36); On ridge between Shotgun Creek and Ohio Creek (T21S R12W, Sections 21, 22, 23, & 27); Ohio Creek (T20S R12W Section 33); On ridge between Little Shotgun Creek and Partin Creek (T21S R12W Section 31 & T22S R12W Section 5); On ridge between Partin Creek and Eldridge Glacier (T22S R13W Sections 2 & 13); McCallie Creek (T21S R12W, Sections 4, 7, & 8);

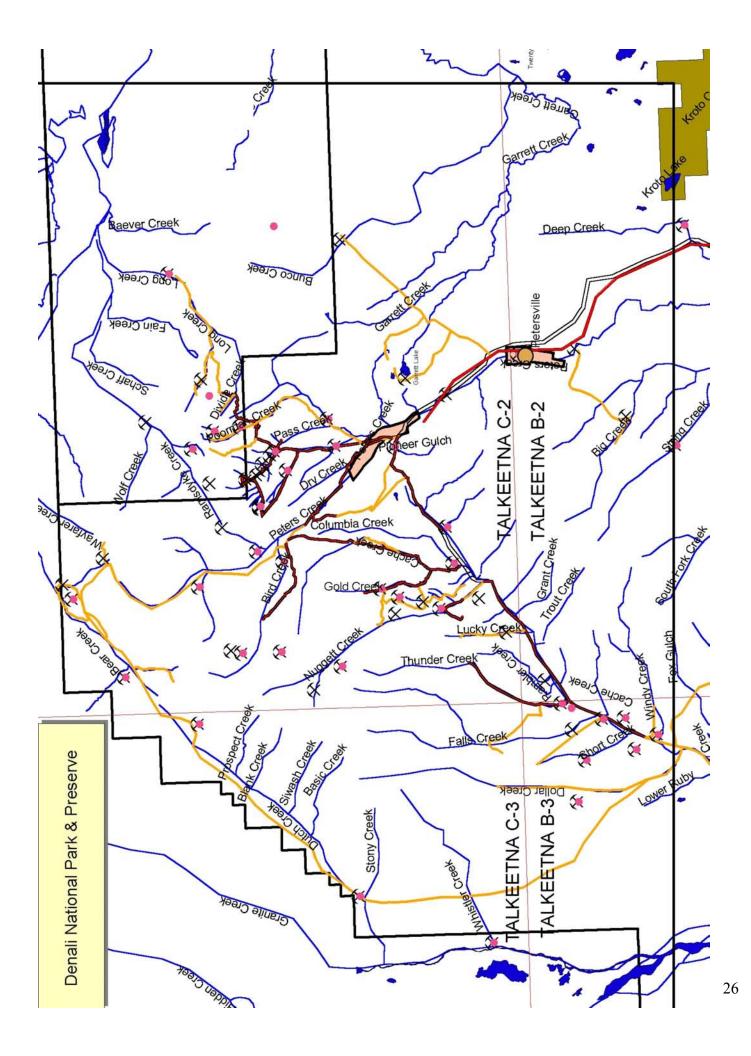
**Susitna River**-Placer gold, others. **Location:** T22N-T29N, R4W & R5W; SM. **U.S.G.S. Maps:** Talkeetna Quad, (A-1, B-1, C-1, D-1). **Field Notes:** Access is by foot, air, boat, or Parks Highway and adjoining roads and trails. Fine gold reported on bars between the Yentna River and the Indian River, coarser gold reported above the confluence of the Chulitna River.

**Talkeetna Mountains**- This information is from the BLM: "Western Talkeetna Mountains: the 1990 discovery of a skull found in a creek bed of late Cretaceous age (68-73 million years old) is an Edmontonia (a Nodosaurid Ankylosaur), a four-legged, plant eater with leathery and bony armor plates across its back; six feet tall, 23 feet long, four tons weight.

**Central-Western Talkeetna Mountains**: 1994 discovery of a 90 million year old hadrosaur (genus uncertain). This discovery includes the most bones from a single dinosaur yet found, but the skull is missing. It is the oldest hadrosaur known in Alaska. The specimen probably was a juvenile or young adult, five to six feet tall, nine feet long and 300-400 pounds." **Location:** Unknown. **U.S.G.S. Maps:** Talkeetna Mtns. Quad.(?) **Field Notes:** Exact location unknown, as it is being kept secret to prevent unauthorized removal of the fossils.



NOTES:



#### DUTCH HILLS/PETERSVILLE ROAD

**SUMMARY:** This area includes the Dutch Hills, Peters Hills, Cache Creek, and Peters Creek drainages, and formerly was one of the most significant producers of placer gold south of the Alaska Range. Predominant rocks are Jurassic to Cretaceous age slates, graywackes, and argillite, folded, faulted, and fractured, which are intruded by Late-Cretaceous Age to Tertiary-age gabbros, granitic rocks, and later gold-bearing quartz veins. Weathering and erosion during the Tertiary period created locally rich placer deposits from nearby source zones in the Dutch Hills, some remnants of which still rest upon the older rocks, and were in part subsequently reworked during and after the several glacial events, the last of which ended about 9,000 years ago.

Lying in the transition zone between Maritime and Contential climatic zones, and owing to its relative closeness to Denali (Mt. McKinley, 20, 320 ft.) the region receives an above-average annual precipitation.

Gold was first reported in the area in 1898, and mining was reported in 1906. Over 200,000 ounces of gold were reported from the area, and at least as much remains, if not more. Today a few small mining operations may be found in the area, which is popular to a wide variety of recreational users. Only the streams draining the Dutch Hills have been productive; gold-bearing



Tokositna Glacier and Denali from the Dutch Hills

lodes have been found in the Dutch Hills and not the Peters Hills.

Access to the area is via the Petersville Road, a 36+ mile road that is mostly unpaved, from its junction with the Parks Highway at mile 114.5, then along the many roads and trails, or by air to the many small strips in the area.



Alaska Range from the Petersville Road

Bear Creek/"Zoloto Prospect" - Gold-quartz veins, placer gold, platinum-group metals, other. Location: T29N R9W Sections 2, SM. U.S.G.S. Maps: Talkeetna Quad, (C-2). Field Notes: Access is by foot or 4-wheeler from upper Peters Creek, or by air from landing strips on Bear Creek. Privately-held claims in the area. Lots of tailings from mining operations and gravel bars, abundant quartz veins in outcrops, shallow depth to bedrock in places. Some parts of the trail are steep. See Also "Golden Thumb".

**Bird Creek**-Tourmaline in pegmatite (?) veins, sheelite, placer and lode gold, native copper, other. Location: T29N R9W Sections 21, 25, 26, 27, & 28, SM. U.S.G.S. Maps: Talkeetna Quad, (C-2). Field Notes: Access is by road, foot or 4-wheeler from upper Peters Creek. Privately-held claims in the area, mostly along creeks. Road cuts in Bird and upper Peters Creek provide numerous exposures. Some very rich assays have been collected from veins on Bird Creek, and on the ridge between Bird Creek and Nugget Creek. Other possibly rich mineralized dikes and veins on Upper Bird Creek, and on the ridge between Upper Bird Creek and Upper Peters Creek.

**Cache Creek Area**-Placer gold, cassiterite, radioactive minerals (thorium, uraniothorianite, monazite), garnet, zircon, ilmenite, magnetite, pyrite, sheelite, platinum-group metals. Location: T28N R9W Sections 2-10, 15-21, 29, 31, & 31; and T28N R10W, Sections 1, 12, 13, 24, 25, 26, 35, & 36; SM. U.S.G.S. Maps: Talkeetna Quad, (C-2). Field Notes: Large region that includes Cache Creek and its' tributaries, including Nugget Creek, Nugget Bench, Dollar Creek, Thunder Creek, Gold Creek. Rambler Creek, Lucky Creek, Falls Creek, Short Creek, Whistler Creek, and Windy Creek. Access is by road, foot or 4-wheeler from upper Peters Creek. Privately-held claims in the area, and private property. Privately-owned mining claims cover the area, some claim owners allow prospecting for a fee. Contact Operators such as The Cache Creek Cabins, for some of the opportunities. (See Contact Info in Appendix). Nearby is the "Petersville State Recreational Mining Area", open to the public. Look for intrusive body at head of Whistler Creek and gold/arsenopyrite bearing veins in the Dutch Hills.



Cache Creek Valley

Canyon Creek-Placer gold, platinum-group metals, cassiterite, garnet, ilmenite, zircon, magnetite. Location: T29N R8W Sections 16, 21, & 22, SM. U.S.G.S. Maps: Talkeetna Quad, (C-2). Field Notes: Access is by road, foot or 4-wheeler from upper Peters Creek, no motorized vehicles allowed in Denali State Park. Mineralized veins in upper end of creek.

"Golden Thumb"-Gold-bearing quartz veins, pyrite, arsenopyrite, other minerals. Location: T29N R9W Sections 11 & 12; SM. U.S.G.S. Maps: Talkeetna Quad, (C-2).. Field Notes: Access is by The Field Guide To Alaska Rocks And Minerals 28 foot or 4-wheeler from upper Peters Creek, or by air from landing strips on Bear Creek. Privately-held claims in the area. Pink granite outcrops in bowl near pass between Peters and Zoloto Creek. Abundant exposures of quartz veins throughout area. Granitic Intrusive. The characteristics of the Golden Thumb Lode Prospect are similar to those found in lode deposits on Bird Creek and upper Nugget Creeks. Look for a pale green dike, quartz-veined, w/iron oxide and arsenopyrite crystals to 0.5cm in diameter.

**Kahiltna River**-Placer gold, radioactive minerals (thorium, monazite), platinum-group metals, others. **Location:** T22N-T28N, R9W-R11W; SM. **U.S.G.S. Maps:** Talkeetna Quad, (A-2, A-3, B-3). **Field Notes:** Access is by foot, air, boat, or 4-wheeler. Some mining claims in the area.

**Kichatna River**-Placer gold, platinum-group metals, others. **Location:** T24N-T26N, R912W-R19W; SM. **U.S.G.S. Maps:** Talkeetna Quad, (A-4, A-5, A-6, B-6). **Field Notes:** Access is by foot, air, or boat.

**Mt. Goldie**- Gold-Bearing Quartz Veins, Arsenopyrite, Others. **Location:** T31N R9W; SM. In Denali National Park. **U.S.G.S. Maps:** Talkeetna Quad. **Field Notes:** Access is by foot. In Denali National Park and Preserve. Historic Lode mining has taken place on the property.

**Shulin Lake-** Garnets, purple zircon, diamonds, and related gemstones. **Location:** T24N R9W Sections 23, 24, 25, 26, 35 & 26, SM. **U.S.G.S. Maps:** Talkeetna Quad, (C-2). **Field Notes:** Access is by foot or 4-wheeler from Petersville Road, or by air from landing on Shulin Lake. Privately-held claims in the area. Minerals found in heavy stream concentrate may contain pyrope garnet, eclogitic garnet, and olivine. Till samples and Tertiary sandstone bedrock yielded low counts of indicator minerals, suggesting these are not the source for those found in stream samples.

West Fork Yentna River-Nickel, copper, placer gold. Location: T28N R17W Sections 14, 15, & 22, SM. U.S.G.S. Maps: Talkeetna Quad, (B-4, B-5, C-5, & C-6). Field Notes: Access is by foot, air, or boat.



Zircon, Dutch Hills, Alaska



**Upper Nugget Creek**-Abundant quartz veins with gold, arsenopyrite, other minerals. **Location:** T28N R9W Sections 4, 9; T29N R9W Sections 28, 29, 32, & 33; SM. **U.S.G.S. Maps:** Talkeetna Quad. **Field Notes:** Access is by road, foot or 4-wheeler from upper Peters Creek. Privately-held claims in the area, some owners allow prospecting.

(See Contact Info in Appendix). Old mining cuts in upper Nugget Creek provide numerous exposures. Assays up to 200 ounces of gold per ton have been obtained from arsenopyrite-bearing quartz veins.

Gold-Bearing Quartz Veins, Dutch Hills, Alaska

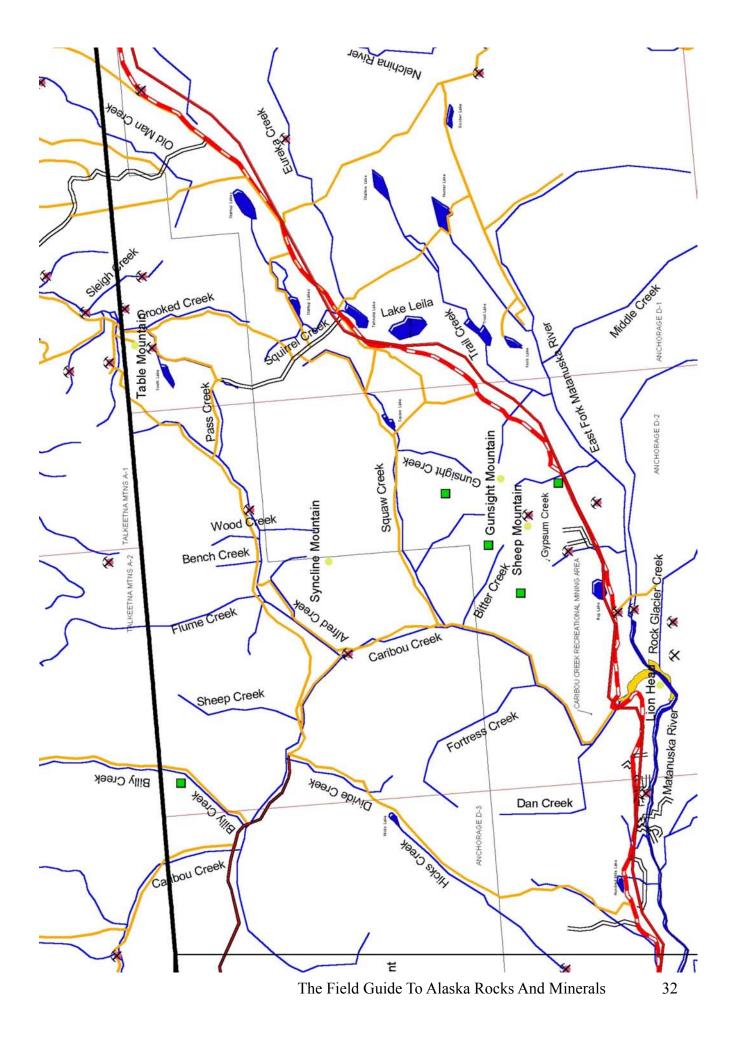
Blue Ribbon Mine/Waterstone Project-Placer and lode gold, gold crystals, cassiterite, Ilmenite, radioactive minerals, pyrite, arsenopyrite, tourmaline, zircon, platinum-group metals, guartz crystals, argillite, garnets, clay, agates, jasper, serpentine, chromite, Other. Location: T29N R9W Sections 24, 25, & 36; T29N R8W Sections 28-33; SM. U.S.G.S. Maps: Talkeetna Quad, (C-2). Field Notes: Nice yellow-clear agates; red, white, green, and yellow jaspers; serpentine; gold-bearing guartz "float", and other minerals mentioned above common along and in gravel deposits in Willow and Little Willow Creeks, present along Cottonwood, Peters, Poorman, Tokositna River, Ramsdyke Creek, Wonder Gulch, and other streams. Abundant tailings along most creeks. Privately-owned mining claims cover the area, owners allow prospecting. Contact: (See Contact Info in Appendix). Nearby is the "Petersville State Recreational Mining Area", open to the public. Access is via Petersville Road and adjoining roads and trails, or by air to Willow Creek.

Gold Nugget, Dutch Hills, Alaska





Alaska Garnets The Field Guide To Alaska Rocks And Minerals NOTES:



### EASTERN TALKEETNA MOUNTAINS REGION

#### **GLENN HIGHWAY**

Albert Creek-Placer gold, platinum-group metals, zeolites, others. Location: T22N R11W & R12W, Sections 7, 8, 11, & 12, SM. U.S.G.S. Maps: Talkeetna Mountains Quad, (A-1). Field Notes: Access is by foot or 4-wheeler. Mining claims in the area. Some placer gold and platinum-group metals has been found on other creeks in this area, namely Gold Creek, Yacko Creek, Fourth of July Creek, Daisy Creek, North Creek, Sleigh Creek, Willow Creek, Crooked Creek, and the Nelchina River, as well as Granite Creek, Roaring Creek, and Mazuma Creek to the west.

Anthracite Ridge-Fossils. Location: Mile 89.4 Glenn Highway. U.S.G.S. Maps: Anchorage Quad (D-3). Field Notes: Access is by vehicle, foot, or 4-wheeler from Glenn Highway. Try Puritan Creek Trail.

**Boulder Creek**-Fossils (ammonites, petrified wood), geodes, obsidian. **Location:** North of Chickaloon. **U.S.G.S. Maps:** Anchorage Quad, (D-3, D-4). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway.

**Caribou Creek**-Fossils (ammonites, petrified wood), geodes, Placer Gold. **Location:** From Glenn Highway north. **U.S.G.S. Maps:** Talkeetna Mtns. Quad, (A-2); Anchorage Quad (D-2, D-3). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway. Privately-held claims and private property in the area. Caribou Creek State Recreational Mining Area nearby, open to the public.

**Chickaloon Area**-Jasper, geodes, fossils, graphite, thomsonite, petrified wood, orbicular rhyolite, agate, sodalite. **Location:** Chickaloon River Trail. **U.S.G.S. Maps:** Anchorage Quad, (D-4). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway. Several abandoned coal mines in this area. Top of Puddingstone Hill said to have sodalite, cross the Chickaloon River at Ninemile Cabin.

**Jim Lake**-Chalcopyrite. **Location:** On the South side of Lazy Mtn./Matanuska Peak at about 4800' elevation. **U.S.G.S. Maps:** Anchorage Quad, (C-5, C-6). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Glenn Highway. Public and private property in the area. Chalcopyrite vein is 12" thick and runs for at least 1000 feet along a ridge southeast of Jim Lake.

**Gulch Lake**-Zeolites, prehnite crystals. **Location:** Mile 83.4 Glenn Highway about one mile east of Bonnie lake Road. **U.S.G.S. Maps:** Anchorage Quad, (D-4). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway. On steep hillside.

**Grubstake Creek**-Native copper, silver, gold, magnetite, ilmenite. Silver and gold said to be wiry and dendritic. **Location:** T12N R7E Sections 26, 34, & 25, CRM. **U.S.G.S. Maps:** Gulkana Quad, (D-1). **Field Notes:** Access is by foot, possibly 4-wheeler. Creek is a tributary of Ahtell Creek. Gold-bearing quartz, pyrite, and chalcopyrite in nearby rocks. See Also **Slope Creek**.

The Field Guide To Alaska Rocks And Minerals

Gunsight Mountain (Sheep Mountain) - Gypsum, copper, smokey quartz, zeolites, sodalite, thomsonite, agate, jasper, guartz crystals, hematite, gold, satin spar, epidote, selenite, pyrite, and fossils (shells, ferns) of the Triassic/Jurassic Talkeetna formation; Location: Mile 117-125 of the Glenn Highway. U.S.G.S. Maps: Anchorage Quad, (D-2). Field Notes: Very intense mineralization in this area. Access is by vehicle, foot, or 4-wheeler from Glenn Highway. Privately-held claims and private property in the area. Other reported minerals to be found here include Chalcocite. Bornite, Malachite, Prehnite, Zeolites, Epidote, Selenite, Satin Spar, Alabaster, native copper nuggets, Selenite, and Pyrite. To gain access to the back side of the mountain, turn north at Mile 123.3 of the Glenn Hwy, on the dirt road that leads to Belanger Pass. Proceed approximately 1 mile and turn left (west) on the Squaw Creek trail (unmarked). The next 10 miles of trail provides ready access to the gullies on the backside. The front side of the mountain is readily accessible from the Glenn and there is a four-wheeler trail on the back side that follows Squaw Creek. Hike behind Gunsite to search for marine fossils (bivalves, ammonites) of the Cretaceous Matanuska formation. Soda spar on hill east of Matanuska Glacier. Gold can be panned at the foot of the Matanuska Glacier. There is a small access fee. Green spinel, placer gold, zeolites, smoky guartz, and fossils found on Alfred Creek, access from trail at mile 117.3 Glenn Highway or Bellanger Trail, <sup>1</sup>/<sub>2</sub> mile east of Gunsight Mountain Lodge.

**Horn Mountains Area**-Gold, zeolites (*mordenite, heulandite, and laumontite*), others. **Location:** See Field Notes. **U.S.G.S. Maps:** Talkeetna Mtns. Quad, (A-1); Anchorage Quad (D-2). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway, about 12 miles north of the Tahneta Pass Lodge at mile 121 of the Glenn Highway. Privately-held claims and private property in the area.

**Kings River**-Copper, black tourmaline, rose quartz, hollandite. **Location:** 18 miles up Kings River from the Glenn Highway bridge. **U.S.G.S. Maps:** Anchorage Quad, (D-4). **Field Notes:** Access is by foot, or 4-wheeler from Glenn Highway.

**Knik River**- Many different types of rocks. **Location:** Old Glenn Highway. **U.S.G.S. Maps:** Anchorage Quad, (C-6). **Field Notes:** Access is by auto, foot or 4-wheeler from road. Privately-held claims, public areas, and private property in the area. Take the Old Glenn Highway to the Knik River. Try the North side of the bridge first.

**Long Lake**-Magnetite crystals in stream crossing Glenn Highway, may also be some in road cuts. **Location:** Not exact. **Field Notes:** Access is by vehicle, foot, or 4-wheeler from the Glenn Highway. May not be the correct Long Lake.

Matanuska River- Coal, jasper, fossils. Location: Mile 70, Glenn Highway. U.S.G.S. Maps: Anchorage Quad, (C-5, C-6, D-4, D-5, D-6). Field Notes: Access is by vehicle, foot, or 4-wheeler from the Glenn Highway.

**Muddy Creek**-Geodes, jasper, quartz crystals, scapolite, coal (jet). **Location**: Mile 94.5 Glenn Highway. **U.S.G.S. Maps:** Anchorage Quad, (D-3). **Field Notes:** Access is by auto, foot or 4-wheeler from road. Privately-held claims, public areas, and private property in the area. Take the Old Glenn Highway. Location is above 3000' elevation near head of Muddy Creek

**Sheep Creek-Gypsum Creek** Alabaster/Gypsum, quartz crystals, geodes ("Thundereggs"), fossils. **Location:** Mile 101 Glenn Highway. **U.S.G.S. Maps:** Anchorage Quad, (D-3). **Field Notes:** Access

is by foot or 4-wheeler from Glenn Highway. May be privately-held claims and private property in the area. Gypsum/Alabaster is abundant in Gypsum Creek.



Gypsum Creek

**Slide Mountain -**Marine fossils (bivalves, gastropods, ammonites) of the Triassic/Jurassic Talkeetna formation. **Location:** North of the Gelnn Highway at mile 139-143. **U.S.G.S. Maps:** Gulkana Quad, (A-6). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway. Located on the north side of the mile Glenn Highway from mile 139 to 143. This location is not far from the road. There are

two main access trails leading up the south side of the mountain from the Glenn Highway. Privately-held claims and private property in the area.



Ammonites

**Slope Creek**-Placer gold, bismuth, native copper, silver, and magnetite. **Location:** T12N R7E Section 25, and T12N R8E, Sections 30, 31, & 32. Copper River Meridian. **U.S.G.S. Maps:** Gulkana Quad, (D-1). **Field Notes:** Access is by foot. Intrusive rocks throughout these mountains. **See also Grubstake Creek.** 

**Sulfide Gulch**-Placer gold, garnet, pyrite, chalcopyrite, magnetite, zircon, and scheelite. Copper River Meridian. **Location:** T9S R5W Sections 25, & 36; T10S R5W Sections 1, 10, 11, 12, & 15. **U.S.G.S. Maps:** Valdez Quad, (A-6). **Field Notes:** Access is by foot or 4-wheeler from Richardson Highway. Tributary of Lowe River.

**Sutton**-Coal, fossils, geodes (Thundereggs), copper minerals, serpentine, pyrite, granite. Location: On the Glenn Highway north of Palmer U.S.G.S. Maps: Anchorage Quad, (C-6). Field Notes: Access is by vehicle, foot or 4-wheeler from Glenn Highway. Privately-held claims and private property in the area. Fossil ammonites, clams and plants found in roadcuts, along **Buffalo Mine Road**, near the **Matanuska River**, and along **Moose Creek**, in mudstones, shale, and conglomerates. Copper minerals found at head of **Moose Creek**. Serpentine, pyrite, and graphic granite found on east side of Granite Peak at 2,000 elevation (up **Granite Creek**).

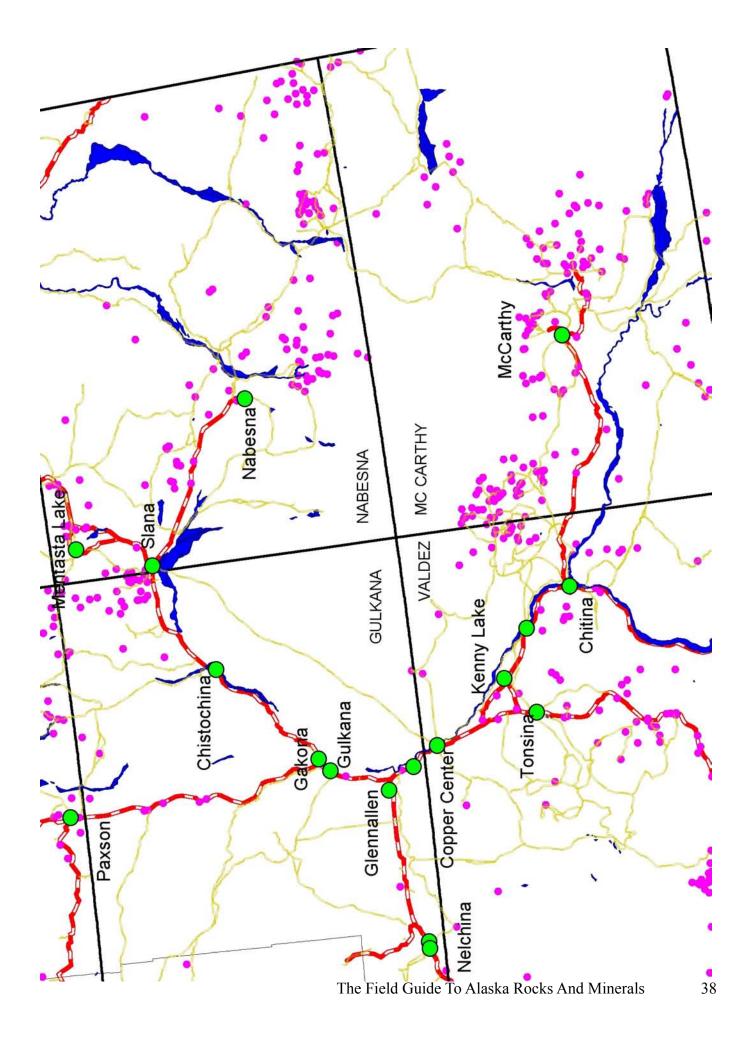
**Wishbone Hill/Coyote Lake**-Fossils, mostly plants, some (rare) snails, etc. **Location:** T19N R3E SM. **U.S.G.S. Maps:** Anchorage Quad, (C-6). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway.

**Weiner Lake**-Fossil trees, coal. **Location:** In road cut just past Weiner Lake, north side of the Glenn Highway. **U.S.G.S. Maps:** Anchorage Quad, (D-2). **Field Notes:** Access is by vehicle, foot, or 4-wheeler from Glenn Highway.

**Wolverine Creek**-Copper minerals. **Location:** Lazy Mtn. north of Palmer **U.S.G.S. Maps:** Anchorage Quad, (C-6). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Glenn Highway. Public and private property in the area.



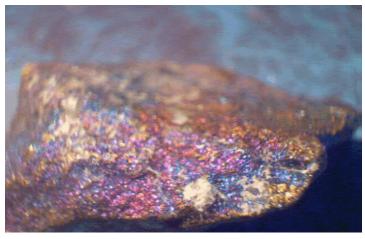
Fossil Fern



## **EAST-CENTRAL REGION**

**Summary:** This rugged region includes the world-famous Kennicott copper mine and McCarthy. In additon to native copper nuggets and the many forms copper takes, you'll find lode and placer gold, molybdenum, silver, antimony, and many other minerals, some very rare.

**Copper Center/McCarthy/Kennicott** Azurite, Malachite, Bornite, Native Copper, Hot Springs, Calcite, Obsidian, Molybdenum. **Location:** Edgerton Highway to Chitna **U.S.G.S. Maps:** McCarthy Quad, (B-4, B-5, B-6, B-7, C-5, C-6). **Field Notes:** Access is by foot or 4-wheeler from Glenn Highway. Privately-held claims and public and private property in the area. You can hike the 5 miles from McCarthy to Kennecott or take the shuttle bus (\$5) that leaves from in front of Wrangell Mountain Air in McCarthy. From the top of the mill building there is a steep trail up to the Bonanza and Jumbo mines. About 3/4 mile up the trail the trail forks. Stay right, on the main trail and continue 2 miles to reach the Bonanza mine at 6000 feet elevation. The left fork of the trail, though overgrown, leads to the Jumbo mine at 5850 feet elevation about 2-1/4 miles down the trail.



Bornite, Chalcopyrite, Other Copper Minerals

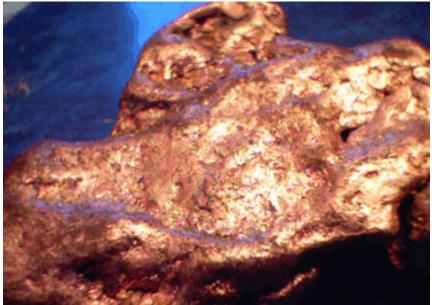
Tramways parallel these trails, and beneath the tramways specimens of azurite, malachite, and chalcocite can be found. The best collecting spots are towards the top of the mountain well above treeline. The azurite and malachite has good color and is well worth collecting. Look for dark blue covellite, a copper mineral. It is very rare, and pieces of covellite labeled as being from Kennecott are in the Eagle River Museum. Take a look at them so you have some ideas what to look for.

**Beaver Creek**-Chalcopyrite, pyrite. **Location:** T2N, T3N, R21E-R24E, CRM. (Copper River Meridian). **U.S.G.S. Maps:** McCarthy Quad, (D-1). **Field Notes:** Access is by foot. Stream flows into Canada. Minerals found in Klein Creek pluton, in veinlets and as disseminations.

**Canyon Creek**-Molybdenite, Gold. **Location:** T6S-T8S, R17E-R18E, CRM. **U.S.G.S. Maps:** McCarthy Quad, (A-3, B-3). **Field Notes:** Access is by foot. Look for boulders composed of granodiorite with quartz veins and in walls of Canyon Creek.

**Chititu Creek**-Stibnite, lead, placer gold, silver, native silver, native copper, galena, others.**Location:** T6S-T7S, R17E-R18E, CRM. **U.S.G.S. Maps:** McCarthy Quad, (B-3, B-4). **Field Notes:** Access is by foot. Description includes **Rex Creek, White Creek, Bligh Gulch, and Jolly Gulch**.

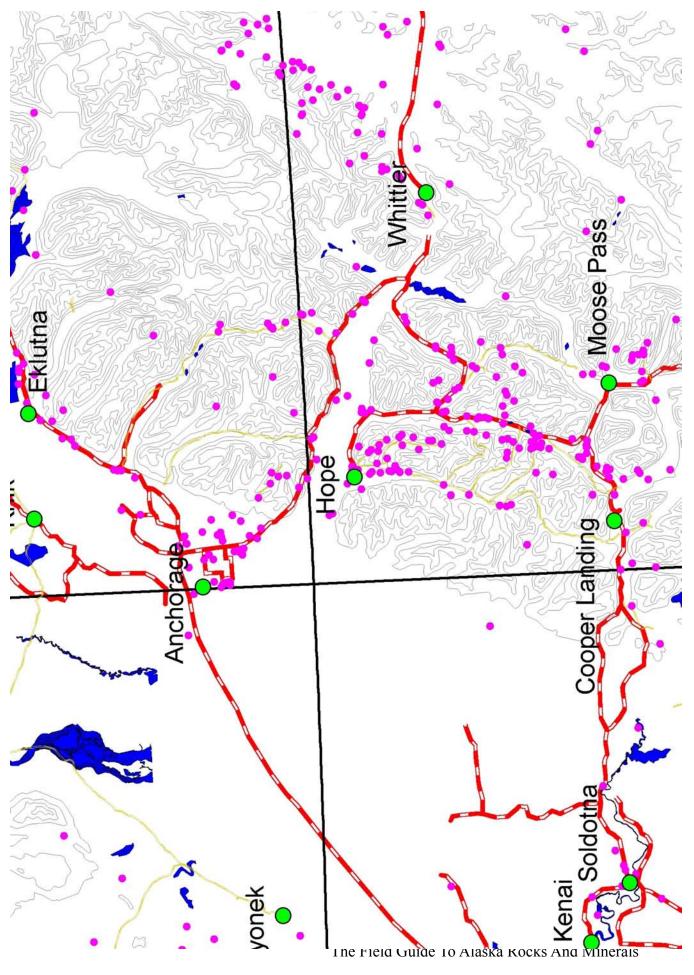
**Copper Creek**-Placer gold, native copper, native silver. **Location:** T6S R17E Sections 17, 18, 20, 29, & 32, and T6S R16E Sections 2, 11, 12, & 13; CRM. **U.S.G.S. Maps:** McCarthy Quad. **Field Notes:** Access is by foot. Description includes **Dan Creek.** Native silver and copper nuggets said to be common; one copper nugget found in Dan Creek weighed 3 tons.



Native Copper Nugget

**Slana Area**- Fossils, jade, asbestos, copper, zinc, lead, molybdenum, green garnets. **Location:** Glenn Highway. **U.S.G.S. Maps:** Gulkana Quad; Nabesna Quad. **Field Notes:** Access is by foot from the Glenn Highway. Description includes **Trail Creek** (Trilobite fossils), near the old Slana-Tok Highway crossing; look in area 400 feet west of the junction of the Slana-Tok Highway and Mentasta Road for **Jade** and **asbestos** (also in **Bartell Creek** and streams east of Bartell Creek). **Green Garnets** found around the **Nabesna Mine** on White Mountain, take the Nabesna Road to here. Molybdenum is found near the headwaters of **Rock Creek**. Lead and zinc minerals are found in the mile-long rusty area visible from the **Nabesna Road** (north of the road).

**Valdez Area**-Placer and lode gold, pyrite, galena, sphalerite, chlorite, carbonate, pyrrhotite, chalcopyrite, other. **Location:** Mineral Creek, north of Valdez, and on the road east of Valdez. **U.S.G.S. Maps:** Valdez Quad. **Field Notes:** Access is by foot or 4-wheeler from Valdez. Description includes the High Grade, Buster, Chesna, and William Quitsch prospects; and the Hercules, Cliff, and Giant Mines. Numerous other locations in this area. Private claims in area. Also check out the **Midas Mine** for pyrrhitite, apatite, gold, silver, and other minerals, at the head of **Solomon Gulch**. Crystals of quartz and calcite have been found on the beach near **Ft. Liscum**. On your way there, look for copper sulfides along **Sulphide Gulch**.



## SOUTH-CENTRAL REGION

**Eklutna Lake Area**-Red and Yellow Jaspers abundant along shore of Eklutna Lake. **Location:** North of Anchorage. **U.S.G.S. Maps:** Anchorage Quad, (B-6). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Glenn Highway to Eklutna Lake Road. Public and private property in the area. Chromite, pyrite, and nickle has been found on mountain across (south) of lake (Mt. Eklutna-one mile west of Camp Gorsuch on Mirror Lake), and dunite containing copper and chromite minerals are found between the Eklutna River and Pioneer Peak. Try access from ½ mile up Eklutna Lake Road.

**Thunderbird Falls**- Nickle, chromite. **Location:** North of Anchorage. **U.S.G.S. Maps:** Anchorage Quad, (B-7). **Field Notes:** Access is by vehicle, foot from Glenn Highway. Public and private property in the area. Old nickle mine on right side of falls. Chromite is found on hillsides above.

**Eagle River**-Placer gold, fossils. **Location:** North of Anchorage. **U.S.G.S. Maps:** Anchorage Quad, (A-6, A-7, B-7). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Glenn Highway. Public and private property in the area. **Plant fossils have been found in Tertiary coal seams on the banks of Eagle River west of the Glenn Highway. Placer and lode gold is found at head of Eagle River.** 

**Crow Creek**-Placer gold. **Location:** Girdwood. **U.S.G.S. Maps:** Seward Quad, (D-6). **Field Notes:** Access is by vehicle, foot or 4-wheeler from the Seward Highway. Public and private property in the area. Owners allow mining for a fee.

**Kenai Peninsula**-Placer gold. **Location:** South of Anchorage. **U.S.G.S. Maps:** Seward Quad. **Field Notes:** Access is by vehicle, foot or 4-wheeler from the Seward Highway. Public and private property and numerous mining claims in the area. Some owners allow mining for a fee. Panning allowed in some areas of Chugach National Forest. Four areas where you'll have the best chances are: Bertha Creek, Sixmile Creek, Resurrection Creek, and Crescent Creek.

Gold was first discovered on the Kenai in 1848 by Peter Doroshin, a Russian mining engineer. He found only a few ounces of placer gold in the upper Kenai River and his mining venture was abandoned. Doroshin firmly believed, however, that large placer gold deposits were present in the Kenai Mountains. Thirty-eight years later, he was proven correct.

In the late 1880s, after two seasons of prospecting along Turnagain Arm, a miner named King was rewarded with four pokes of gold. Other prospectors found gold on Resurrection Creek and nearby streams in 1894.

As word spread of these discoveries, prospectors began to trickle into the region. In 1895, claims were staked on Mills and Sixmile Creeks and gold was discovered near Girdwood.

From the Official Pamphlet: "Bertha Creek crosses the Seward Highway 2.6 miles south of Turnagain Pass. Lower Bertha Creek lies within a withdrawal that extends for 1,300 feet on either side of the Seward Highway from Turnagain Pass south to Petes Creek. Bertha Creek is available for recreational panning from its junction with Granite Creek upstream to the powerline crossing. Granite Creek, however, is closed to recreational mining because of its salmon spawning habitat.

The upper portion of Bertha Creek flows through a glacier-carved valley. Slate bedrock is sporadically exposed for 850 feet along the creek starting 150 feet above the Seward Highway bridge. This stretch usually gives the best panning results. A rough trail can be followed up the east side of the creek. The tan-colored clay layer on bedrock is a good bet for gold that ranges from flaky to nuggety. Single pans have produced pieces up to 1/4-inch long. The rust-colored quartz float in the stream bed occasionally contains pyrite cubes and may be the placer gold source.

Gold has also been panned from nearby Spokane, Lyon, and Tincan Creeks; the withdrawal includes the lower portions. An informal pull-off where the Seward Highway crosses Spokane Creek provides parking for one or two vehicles. Lyon and Tincan Creeks are accessed from the Turnagain Pass rest area. Parking, camping, and picnic sites are available at the Bertha Creek Campground. Motorized vehicles are restricted to established roadways in this area.

Sixmile Creek flows through a broad glacial valley with numerous gravel bars and some bedrock exposures. At mile 2.2 on the Hope Road, park at the pullout on the east side and follow a steep trail down the road embankment. Detour around the beaver ponds to Sixmile Creek. Gravel bars along this stretch of creek contain flat flour gold and occasional small flakes. Pans have produced 15-20 fine colors of flat, well-worn gold. The north end of the gravel bar is best where a side meander draining the beaver ponds returns to Sixmile Creek. Fanning of gravel on bedrock at this site can also produce gold, but the sites are best accessed during periods of low water. A rusty-colored quartz float along the creek contains pyrite (fool's gold).

Suction dredges (4-inch or smaller) are permitted from May 15 to July 15. Remember that a permit from ADF&G is required for dredging.

Good panning can be found at mile 4.3 on the Hope Road. Pull off on a short side road into the trees and follow the trail to Sixmile Creek. Gold occurs on point bars to the east and old channels next to the creek.

A 1.5-mile stretch of Resurrection Creek lies within a withdrawal and is available for recreational gold panning. This area is a favorite site for recreational mining. Suction dredges (4-inch or smaller) are permitted from May 15 to July 15 with a permit from the Alaska Department of Fish and Game. Access is by the Resurrection Creek Road out of Hope. The mining area begins at the Resurrection Pass Trail footbridge 4.5 miles from Hope. It continues upstream for 1.5 miles, excluding the patented (private land) claim. The claim boundary is 0.5 miles up the road from the footbridge and is marked with a gate. The upper portion of the withdrawal, beyond the private ground, is best accessed by taking the Resurrection Pass trail.

Fine gold can be panned from gravels along the creek between the footbridge and private land. Try for fine, flat gold near the campsite 0.25 mile above the footbridge.

Bedrock is exposed on the east canyon wall just above the campsite and just below the private lands. Both spots are good bets for gold. Rounded boulders piled along the creek are tailings from old hydraulic operations. Much of the road has been built on these tailings.

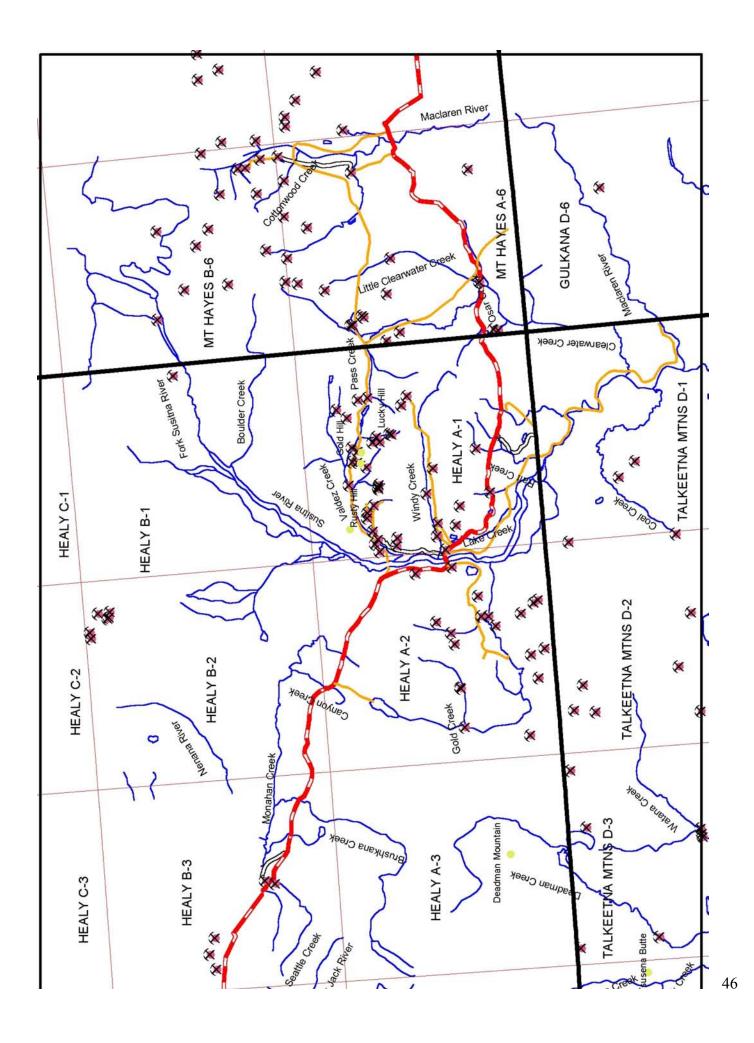
Crescent Creek from the bridge on Quartz Creek Road to its junction with Quartz Creek is available for recreational panning. Access the area by turning onto Quartz Creek Road off the Sterling Highway, 7.4 miles from the Seward-Sterling Highway junction. Bear left at intersections for

2.7 miles to the Crescent Creek bridge. Turn left past the bridge into the Crescent Creek campground. For day use, park in the day-use parking area.

Fine gold is disseminated through the clay-rich, bouldery gravels along Crescent Creek, just south of the campground. The gravels form an alluvial fan, where the creek exits nearby mountainous terrain. That creek portion, stretching for 600 feet below the bridge, produces flat to ragged, slightly crystalline, flakes up to 2 mm in size. Clay-rich gravels are best for holding gold. The south side of the creek has mining claims.

Because of king salmon spawning, Crescent Creek is only open to suction dredging from May 15 to July 15 with a free permit from ADF&G.

Old hydraulic workings on claims can be seen just south of the Crescent Creek trailhead. Respect active mining claims located on the upper portions of the creek, above the bridge."



## **DENALI HIGHWAY REGION**

This sparsely-populated region includes the Valdez Creek Mine, and is host to a geologically diverse terrain. As is true for most of Alaska, the area holds the potential for discovery. Placer gold was discovered on the alluvial fan downstream of the canyon of lower Valdez Creek (sheet 1) by a party of prospectors from Valdez on August 15, 1903. Large-scale mining began in 1984 and Valdez Creek Mining Company (VCMC), operator of the project, had produced 202,421 oz of gold by 1990.

**Accident Creek**-Galena, Sphalerite, Gold, Pyrite. **Location:** T20S R2E Sections 12 & 13 FM. (Fairbanks Meridian). **U.S.G.S. Maps:** Healy Quad, (A-1). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Denali Highway. Public and private property in the area. Look for rusty quartz veins and igneous rocks.

**Butte Creek**-Chalcopyrite, Malachite, Azurite, Bornite, Magnetite, Native Copper, Placer Gold. T20S R2W, T21S R1E, R1W & R2W, T22S R1W & R2W, FM. **Field Notes:** Access is by vehicle, foot or 4-wheeler from Denali Highway. Public and private property in the area. A tributary of the Susitna River.

**Broxson Gulch/Rainy Creek**-Gold, nickel, copper, zinc, chromite, opal, calcite, quartz crystals, other. **Location:** T18S-T19S, R8E, FM. **U.S.G.S. Maps:** Mt. Hayes Quad, (B-5). **Field Notes:** Access is by foot. Description includes Rainy Creek (Mt. Hayes Quad (B-4, B-5) T19S R10E FM.

**Denali Highway** Denali Highway (Paxson/Cantwell) - Rhyolite and jasper in Amphitheater Mountains. **Location:** From Parks Highway or Richardson Highway. **U.S.G.S. Maps:** Healy Quad, (A-1, A-2, A-3, B-1, B-2, B-3, B-4). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Richardson or Denali Highway. Public and private property in the area. Prospect roadcuts. At Paxson Mountain and mile 7 of the Denali Highway are found Epidote, calcite, chlorite, and copper minerals-look for dark-green basalt.

Jack River-Rhodonite Location: Reported on the banks of the Jack River, south of Cantwell. U.S.G.S. Maps: Healy Quad, (B-4). Field Notes: Access is by foot. Some material is gem quality.

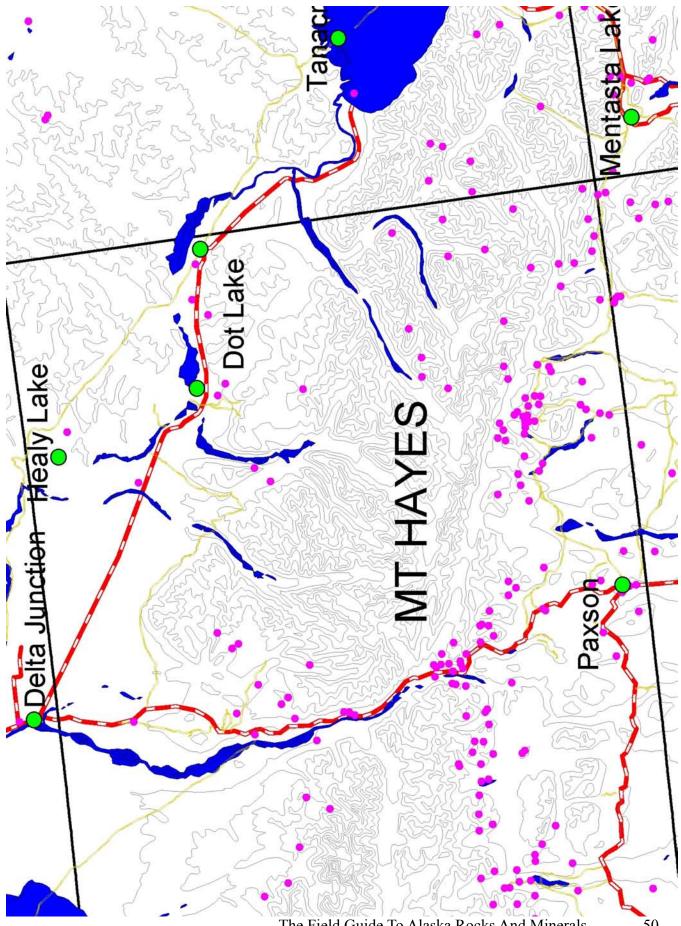
**Lucky Gulch**-Gold bearing quartz, lead, zinc. **Location:** T20S R2E, Sections 1, 12, & 13 FM. **U.S.G.S. Maps:** Healy Quad, (A-1). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Denali Highway. Public lands and private mining claims in the area. Tributary of Valdez Creek. Coarse gold, some small nuggets. Look for slate intruded by igneous rock near head of Lucky Gulch, rusty quartz veins carry some gold, sphalerite, and galena.

**Rusty Creek**-Placer gold. **Location:** T20S R2E Sections 10, 11, 15, & 22. **U.S.G.S. Maps:** Healy Quad, (B-4). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Denali Highway. Public lands and private mining claims in the area. Tributary of White Creek.

**Valdez Creek**-Placer gold, platinum-group metals, monazite. **Location:** T19S R3E Sections 28, 32, & 33; T20S R3E Sections 1, 2, 3, 4, 5, & 6; T20S R2E Sections 1, 2, 3, 4, 7, 8, 9, 10, 11, & 18; **U.S.G.S. Maps:** Healy Quad, (A-1, A-2). **Field Notes:** Access is by vehicle, foot or 4-wheeler from Denali Highway. Public lands and private mining claims in the area. Formerly the largest active placer mine in Alaska, several hundred thousand ounces of placer gold was produced before closure in the late 1990's. Gold nuggets, one in excess of 50 ounces, have been recovered from this area. White Creek/Gold Hill-Native copper, placer gold, hessite, pyrite, realgar, orpiment, arsenopyrite, magnetite, pyrrhotite, and galena in placer deposits and slate slide rock deposits. U.S.G.S. Maps: Healy Quad, (A-1). Field Notes: Access is by vehicle, foot or 4-wheeler from Denali Highway. Public lands and private mining claims in the area. Tributary of Valdez Creek.



Alaska Gold Nuggets



The Field Guide To Alaska Rocks And Minerals

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### **EAST-CENTRAL ALASKA RANGE REGION**

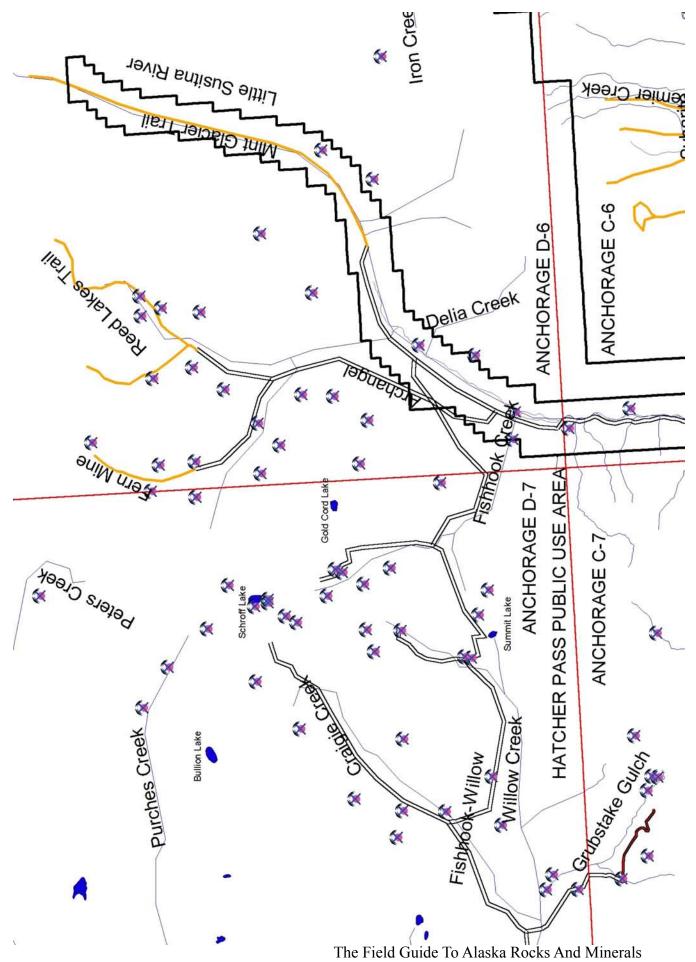
This sparsely-populated region is receiving renewed attention with the recent discoveries of major deposits of gold, platinum-group metals, copper, nickel, and other metals. There are many good potential collecting areas close to the junction of the Richardson and Denali Highways, and beside the highways themselves where roadcuts can be found.

**Eagle Creek**-Native copper, placer gold, platinum-group metals, barite, magnetite, others. **Location:** T14N R5E Sections 27, & 34; T15N R5E Sections 11, 14, 22, & 23 CRM. **U.S.G.S. Maps:** Mt. Hayes Quad, (A-1). **Field Notes:** Access is by foot or 4-wheeler. Abundance of heavy minerals make mining difficult due to clogging of sluice boxes.

**Eureka Creek, Specimen Creek, Broxson Gulch, Rainy Creek**-Placer gold, platinum-group metals, magnetite, garnet, epidote. **Location:** T18S R8E Sections 23, 25, 26, 35, & 36; T19S R8E Sections 1, 12, & 13. CRM. **U.S.G.S. Maps:** Mt. Hayes Quad, (B-5). **Field Notes:** Access is by foot or 4-wheeler from Richardson Highway. Best areas are reported on Broxson Gulch.

**Gunn Creek**-Placer gold, magnetite, garnet, sphalerite, chromite, scheelite, others. **Location:** T20S R12E Sections 1, 12, 13, 14, 19, 20, 23, 25, 26, 28, 29, & 33; T21S R12E Sections 2, & 3. CRM. **U.S.G.S. Maps:** Mt. Hayes Quad, (B-5). **Field Notes:** Access is by foot or 4-wheeler from Richardson Highway.

Limestone Creek, Slate Creek, Upper Slate Creek, Miller Gulch, Treasure Gulch-Chromite, native copper, placer gold, platinum-group metals, lead, silver, magnetite, pyrite, garnet, galena, cinnabar, epidote. Location: T22S R16E Fairbanks Meridian; Sections 23, 25, 26, 35, & 36; T19S R8E Sections 1, 12, & 13. U.S.G.S. Maps: Mt. Hayes Quad, (A-2). Field Notes: Access is by foot or 4-wheeler from Richardson Highway. Copper nuggets weighing 2-3 pounds have been recovered from Limestone Creek. Cinnabar in addition to the other minerals listed found on Miller Gulch.



# **INDEPENDENCE MINE/HATCHER PASS REGION**

Independence Mine/Hatcher Pass-lode and placer gold, Sheelite/Wolframite, orbicular diorite, silver, molybdenum, Other. Location: North of Wasilla or east of Willow U.S.G.S. Maps: Anchorage Quad (C-6, C-7, D-6, D-7). Field Notes: Access is by auto, foot or 4-wheeler from road. Privately-held claims, public areas, and private property in the area. Over 600,000 ounces of gold was mined from lode mines in this area before 1943. Orbicular diorite from above Reed Creek at the Snowbird Mine, silver said to be found at the Lonesome Mine on the Little Susitna River. The Hatcher Pass Public Use Area is open to a variety of recreational activities, including recreational mining.

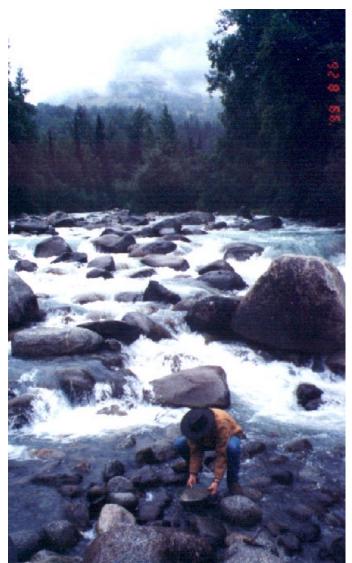


High above Hatcher Pass, detecting for gold.

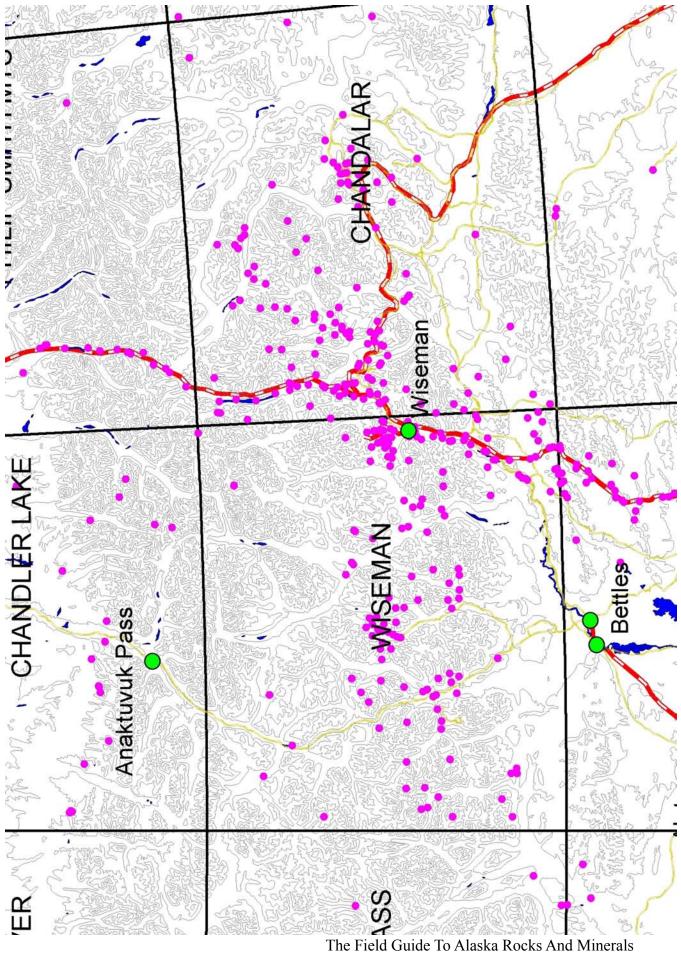
You may also pan for gold in the Independence Mine State Historical Park. Before panning please obtain an Independence Mine brochure and speak with the park staff at the mine visitors center.



Independence Mine



Panning for gold on the Little Susitna River in the Hatcher Pass Public Use Area.



**Dalton Highway-**Also known as "The Haul Road". This trip is not for the faint of heart. Facilities are rare, and very large trucks dominate the usually dusty road. You may use most any hand method, including panning, metal detecting, hand sluicing, and highbanking, without a permit, except no mining is allowed in the pipeline right-of-way (27 feet on either side of the pipeline). Private claims and private property is in the area. This information was obtained from a BLM pamphlet.

**Mile 114**-Fish Creek. Between 1 mile upstream and one mile downstream on either side of the high-way.

Mile 125-Bonanza Creek. Outside of Pipeline right of way, upstream and downstream.

Mile 134-Prospect Creek. Outside of Pipeline right of way, upstream and downstream.

Mile 135.7-Jim River. From end of road at old Prospect Creek camp area to 2 miles downstream.

**Mile 156.3**-South Fork Koyukuk River. Outside of Pipeline right of way, 1.5 miles upstream and 2 miles downstream of the bridge. Best chance for placer gold.

Mile 164.5-Middle Fork Koyukuk River. Outside of Pipeline right of way, downriver from the bridge.

Mile 170-Rosie Creek. Two small creeks one mile south of Rosie Creek on the east side of the road.

Mile 175.5-Slate Creek. State land from bridge to 1.25 miles upstream.

Mile 176-Clara Creek. Upstream 0.5 miles from east side of highway.

Mile 184-Dry Gulch. Upstream on east side of highway.

**Mile 187-**Minnie Creek. On east side of the highway, about 1.5 miles upstream on Minnie Creek and up Larson Creek to its head.

Mile 189-Bluff Gulch. Upstream of confluence with Middle Fork Koyukuk River.

Mile 190-Montana Gulch. Upstream of confluence with Middle Fork Koyukuk River.

Mile 190-Hammond River. Upstream 1 mile from confluence with Middle Fork Koyukuk River.

Mile 196-Nugget Creek. Upstream 1 mile on east side of highway.

Mile 197.2-Gold Creek. Upstream 2 miles on east side of highway.

Mile 202-Unnamed Creek. Upstream 2 miles on east side of highway.

**Mile 207-**Bettles/Dietrich River. Bettles River Upstream 2 miles. Dietrich River upstream for 2 miles to the old pipeline camp.

Mile 211-Disaster Creek. Upstream 2 miles on east side of highway.

### SELECTED ALASKA ROCKS, GEMSTONES, AND MINERALS BY LOCATION

Actinolite-Nice dark green crystals in matrix in the Brooks Range north of Kobuk.

Agate-Dutch Hills; Chickaloon area; Gunsight Mountain (Sheep Mountain), Eklutna Lake.

**Amber**-I have found a few small pieces in the Dutch Hills. Others have reported finding some along the Arctic Coast.

Antimony-Copper River/Kennicott Region; Dutch Hills.

Argillite-Dutch Hills; Talkeetna Mountains.

Arsenopyrite-Dutch Hills; Upper Chulitna area; Brooks Range; White Creek.

Asbestos - Slana Area; Brooks Range north of Kobuk.

Azurite-Copper Center/McCarthy/Kennicott area; Butte Creek.

Barite -Eagle Creek.

Basalt-Upper Chulitna area; Alaska Range; Talkeetna Mountains; Broxson Gulch.

Bismuth-Bismuthinite: Upper Chulitna Area.

Bornite -Butte Creek; Brooks Range north of Kobuk.

**Cassiterite/tin**-Common in granitic intrusives in the Upper Chulitna and Dutch Hills areas; Abundant to common in many placer deposits.

Calcite -Valdez Area. Calcite called glendonite, pseudomorph after glauberite, Camden Bay

Chalcopyrite-Brooks Range; Jim Lake; Sulfide Gulch; Grubstake Creek; Beaver Creek; Valdez Area.

Chlorite -Valdez Area; Dutch Hills; Brooks Range.

Chromite -Thunderbird Falls; Dutch Hills; Broxson Gulch; Limestone Creek; Gunn Creek.

Chrysocholla-Brooks Range north of Kobuk.

Cinnabar-Around Sleetmute; Dillingham; Kuskokwim River; Miller Gulch.

Clay-Common in all regions of Alaska; nice blue, white, and yellow clays in the Dutch Hills.

Coal-Abundant to common in the Dutch Hills; Talkeetna Mountains; Denali Highway.

**Conglomerate**-Abundant to common in the Dutch Hills; Talkeetna Mountains; Chugach Range.

Covellite-Copper Center/McCarthy/Kennicott Region.

**Diamonds**-the only known hard rock deposit of diamonds in Alaska is located near Shulin Lake. 3 diamonds were found in the sluiceboxes in the Circle District, but the source was never found, and no more diamonds or indicator minerals have been reported from the area.

**Epidote**-Gunsight Mountain (Sheep Mountain); Denali Highway; Eureka Creek; Limestone Creek; Green Monster Mountain (Southeast Alaska).

Fluorite-Kuiu Island in southeast Alaska.

**Fossils**-Abundant in the Upper Chulitna Area; Abundant to common in many areas of the Talkeetna Mountains; Slana Area; Eagle River.

**Galena** -Copper Center/McCarthy/Kennicott Region; Valdez Area; Lucky Gulch and White Creek (Valdez Creek Area); Accident Creek.

**Garnets**-Garnets of all types are abundant in Alaska placer deposits. A few locations such as the Dutch Hills and the streams and rivers that drain them may contain fine garnets. Large pieces of variable quality may be found in the Wrangell Mountains, some still in their matrix. Green garnets near Slana. Pink and rare yellow garnets in Valdez Creek Area and Dutch Hills.

**Geodes (Thundereggs)**-Abundant to common in many areas of the Talkeetna Mountains: Boulder Creek, Caribou Creek, Muddy Creek, Sheep Creek.

**Gold**-Gold may be found in many streams in Alaska. In many cases, the size or grade of the deposit precluded large-scale mining, and where mining has taken place there are areas, including tailings, where valuable minerals may be found.

**Gold Lodes** -Upper Chulitna Area; Dutch Hills; Talkeetna Mountains; Grubstake Creek; Valdez Creek Area; McCarthy Area; Prince William Sound; Fairbanks Area; Southeast Alaska; Nome; and many more.

**Gold Placers** -Upper Chulitna Area; Dutch Hills; Susitna River; Gunsight Mountain (Sheep Mountain); Valdez Creek Area; Talkeetna Mountains; Fairbanks Area; and many more.

**Gypsum**-Sheep Creek; Gypsum Creek; Pieces weighing many pounds, some very fine specimens; Gunsight Mountain (Sheep Mountain).

**Hematite**-excellent crystals in matrix in west-central Brooks Range north of Kobuk; common in placer deposits; Gunsight Mountain (Sheep Mountain).

Hessite (a silver telluride)-Valdez Creek Area.

Ilmenite-Common in placers in the Dutch Hills; Grubstake Creek.

**Jade (Nephrite)**-Found in every major mountain range in Alaska. Color varies from white to black, but is most commonly some shade of green. Often confused with serpentine.

Nice specimens from the Brooks Range between Kobuk and Shungnak.

**Jasper**-Common in placers in the Dutch Hills; near Eklutna lake, and along the Knik, Matanuska, and Susitna Rivers; in the Talkeetna Mountains; Denali Highway.

**Magnetite**-Rare to abundant in placer deposits. Long Lake; Slope Creek; Sulfide Gulch; Broxson Gulch; White Creek/Gold Hill; Eureka Creek; Gunn Creek; Limestone Creek; Grubstake Creek.

Malachite -Butte Creek; Brooks Range.

Marcasite-Upper Chulitna Area; Dutch Hills; Copper Center/McCarthy/Kennicott Region.

**Mudstone**-Nice green mudstone with yellow worm tracks in the Dutch Hills; Talkeetna Mountains; Upper Chulitna.

Molybdenum-Independence Mine area; Copper Center/McCarthy/Kennicott Region.

**Obsidian**-Copper Center/McCarthy/Kennicott Region.

Opal -Broxson Gulch.

Orbicular Diorite -Independence Mine area.

Orbicular Rhyolite -Chickaloon Area.

**Native Copper** -Abundant to common in Dutch Hills placers; rare in Peters Hills; West Fork Yentna River; Abundant to common in McCarthy area; Grubstake Creek; Gunsight Mountain (Sheep Mountain); Slope Creek; Kings River; Butte Creek; White Creek/Gold Hill; Eagle Creek; Limestone Creek Area.

Native Lead -Copper Center/McCarthy/Kennicott Region; Dutch Hills; Valdez Creek area.

**Native Silver** -Copper Center/McCarthy/Kennicott Region; Independence Mine Region; Grubstake Creek.

Nickel-West Fork Yentna River; Broxson Gulch; McCarthy Area; Thunderbird Falls; Dutch Hills.

**Platinum-Group metals** -Dutch Hills; Albert Creek; Valdez Creek Area; Broxson Gulch; Eagle Creek; Limestone Creek; Goodnews Bay; Southeast Alaska.

Pegmatites -Upper Chulitna Area; Dutch Hills; Talkeetna Mountains.

**Pyrite**-Common in placers in the Dutch Hills and elsewhere in mineralized regions of Alaska; Common in rocks in the Upper Chulitna area, the Talkeetna Mountains, the Dutch Hills, Copper Center/McCarthy/Kennicott Region, and elsewhere.

**Pyrrotite** -Valdez Area; White Creek.

**Quartz**-Common in all mountain regions of Alaska: the Dutch Hills; Upper Chulitna area, the Talkeetna Mountains, the Copper Center/McCarthy/Kennicott Region, near Broxson Gulch, and elsewhere. Smoky quartz at Gunsight Mountain (Sheep Mountain); Amethyst near Tok; Rose quartz at Kings River. Rutilated quartz near Wiseman; Japan Law quartz twin found at Green Monster Mountain (Southeast Alaska).

**Radioactive Minerals**: uranium, thorium, monazite, etc.; Common in placers in the Valdez Creek Area; Dutch Hills; Kahiltna River.

Rhodonite -Jack River; Tok Area; Kantishna.

Rhyolite -Denali Highway; Scenic Rhyolite along the Matanuska River.

Satin Spar - Gunsight Mountain (Sheep Mountain).

Selenite - Gunsight Mountain (Sheep Mountain).

Serpentine -Common in all mountain ranges in Alaska.

Scheelite -Dutch Hills; Independence Mine area; Sulfide Gulch.

Sodalite-Puddingstone Hill area; Gunsight Mountain (Sheep Mountain).

Thomsonite-Gunsight Mountain (Sheep Mountain).

Tourmaline-found in pegmatite veins and placer deposits in the Dutch Hills; Kings River.

Zeolites-Albert Creek area; Gulch Lake; Gunsight Mountain (Sheep Mountain); Horn Mountains.

**Zinc**-(Also refers to **Sphalerite**) Red Dog Mine; Valdez Area; Accident Creek; Broxson Gulch; Gunn Creek.

**Zircon**-Sulfide Gulch; Common in placers in the Dutch Hills; purple Zircons at Shulin Lake; Kahiltna River.

# **Contact Information**

NOTE: Websites, operations, and claims come and go. Some of these web links and contact information may expire by the time you read this. A good search engine, such as http://google.com can be your friend.

#### **Public Areas**

Chugach National Forest, south of Anchorage Caribou Creek Recreational Mining Area Dalton Highway-North of Fairbanks Hatcher Pass Public Use Area Nome Creek-North of Fairbanks Petersville Recreation Mining Area

#### Web Links

http://www.dggs.state.ak.us/ Alaska Division of Geological and Geophysical Surveys-online maps, publications, other data.

<u>http://www.dnr.state.ak.us/</u> Alaska Department of Natural Resources-Online maps, status plats, forms, other information.

#### http://www.dced.state.ak.us/tourism/student.htm Alaska Visitor Information and Facts

The following agencies are points of contact for land use regulations, restrictions, requirements, permits, etc.

#### **Bureau of Land Management (BLM)**

222 W 7<sup>th</sup> Ave. Suite 13 Anchorage, Alaska 99513 (907) 271-5960 Federal Land Management Agency http://www.ak.blm.gov

#### Alaska Department of Natural Resources (DNR)

550 West 7<sup>th</sup> Ave Suite 1260 Anchorage, Alaska 99501-1260 (907) 269-8400 Fax: (907) 269-8901 State Land Management Agency. http://www.dnr.state.ak.us/

#### Alaska Department of Fish and Game (AkF&G)

Habitat and Restoration Division 333 Raspberry Road Anchorage, AK 99518-1599 (907) 344-0541 phone, (907) 267-2464 fax Recreational Suction Dredging Permit Applications http://www.state.ak.us/adfg/habitat/geninfo/permitforms/dredgeregions.htm Environmental Protection Agency (EPA) 222 West 7th Avenue, # 19 Anchorage, AK 99513-7588 (907) 271-6561 http://www.epa.gov/r10earth/r10.html

#### ALASKA MINING, PROSPECTING, ROCKHOUND, AND RELATED ORGANIZATIONS

### Alaska Lapidary Society

PO Box 0863 Anchorage, AK 99511 USA

#### **Alaska Miners Association**

3305 Arctic Blvd. Suite 202 Anchorage, Alaska 99503

#### Chugach Gem & Mineral Society, Inc. PO Box 92027

Anchorage, AK 99509 USA

#### **Gold Prospectors of America-Anchorage Chapter**

Chapter meets at 7:00pm every second Thursday of the month at Denny's Restaurant, on the corner of Benson and Denali.

#### Mat-Su Rock & Mineral Club

PO Box 2534 Palmer, AK 99645

#### **Guidebooks And Reference Books For Collectors**

Arem, J.E., 1987, COLOR ENCYCLOPEDIA OF GEMSTONES (2d ed.): New York, Van Nostrand Reinhold, 288 p. Provides data and color photos for all minerals that have been cut as gems. Includes chemistry, physical properties, occurrence, rarity, and market potential. Synthetic gems are also discussed.

Arem, J.E., 1991, ROCKS AND MINERALS: Phoenix, Arizona, Geoscience Press, 160 p. Field guide intended to assist the beginner in identifying common specimens. Contains a section on basic mineralogy, identification techniques, and definitions.

Barker, R.M., 1972 (reprinted 1993), COLLECTING ROCKS: U.S. Geological Survey General Interest Publication, 11 p. Available from U.S. Geological Survey, Branch of Distribution, P.O. Box 25286 Federal Center, Denver, Colorado 80225. Free.

Chesterman, C.W., 1979, THE AUDUBON SOCIETY FIELD GUIDE TO NORTH AMERICAN ROCKS AND MINERALS: New York, Alfred A. Knopf, 850 p. Describes physical properties and identification for over 270 rocks and minerals. Contains over 800 color photos.

Ettinger, L.J., 1993, THE ROCKHOUND AND PROSPECTOR'S BIBLE\_\_A REFERENCE AND STUDY GUIDE TO ROCKS, MINERALS, GEMSTONES, AND PROSPECTING (3d ed): Reno, Nevada, Ettinger, 144 p.

Johnson, H.C., 1973, WESTERN GEM HUNTER'S ATLAS: Susanville, California, Cy Johnson and Sons, 79 p. Includes maps covering most of the western United States which show hundreds of collecting sites.

Lyman, Kennie, ed., 1986, SIMON AND SCHUSTER'S GUIDE TO GEMS AND PRECIOUS STONES: New York, Simon and Schuster Trade, 385 p. Contains hundreds of descriptions and color photographs.

O'Donoghue, Michael, 1988, GEMSTONES: New York, Chapman Hall, 500 p. Describes organic and inorganic gemstones. Also includes information on formation of gemstones, crystal structure, simple and sophisticated methods of testing, and origin of gem colors.

Prinz, Martin, and others, eds., 1977, SIMON AND SCHUSTER'S GUIDE TO ROCKS AND MINERALS: New York, Simon and Schuster, 608 p. Field guide intended as a reference to assist beginners and advanced collectors in identification of specimens. Includes hundreds of color photos.

COLLECTOR'S BOOK OF FLUORESCENT MINERALS: New York, Van Nostrand Reinhold, 320 p. Describes important collecting locations in the U.S. for fluorescent minerals. Includes mineral environment, geography, and species found at the sites. A separate section describes 230 fluorescent species. Also provides information on collecting, storing, and identification specific to fluorescent minerals.

Roberts, W.L., and others, 1990, ENCYCLOPEDIA OF MINERALS (2d ed.): New York, Van Nostrand Reinhold, 979 p. Alphabetical listing of all accepted mineral species. Includes chemical formulae, physical and optical properties, crystallography, mode of occurrence, and alternate names. Includes a

section of color photos. identification specific to fluorescent minerals.

Schumann, Walter, 1977, GEMSTONES OF THE WORLD: New York, Sterling, 256 p. Classic reference which

includes descriptions and color photos of both common and rare gemstones.

Schumann, Walter, 1992, MINERALS OF THE WORLD: New York, Sterling, 224 p. Guidebook containing descriptions of the physical and chemical properties of minerals, where they occur, and associated minerals. Includes official and alternate names of minerals.

Schumann, Walter, 1993, HANDBOOK OF ROCKS, MINERALS, AND GEMSTONES: Boston, Houghton, Mifflin, 384 p. Describes origin, structure, chemical composition, and other physical properties for hundreds of specimens. Includes discussion on basic mineralogy and hundreds of photos.

Sinkankas, John, 1959, GEMSTONES OF NORTH AMERICA (Volume I): New York, VanNostrand Reinhold, 675 p. A classic reference book. Describes physical, chemical, and optical properties of North American gemstones. Also describes properties that determine the value and commercial importance of gemstones. Gives localities for each gemstone entry.

U. S. Bureau of Mines, GEMSTONES in MINERALS YEARBOOK (annual). Preprint of current chapter available from U. S. Bureau of Mines, Publications Office, Cochrans Mill Road, P.O. Box 18070, Pittsburgh, PA. 15236. Provides data on domestic and foreign production, consumption, sources, producers, technology, prices, and uses.

#### **BOOKS FOR KIDS**

Barkan, Joanne, 1990, ROCKS, ROCKS BIG AND SMALL: Englewood Cliffs, New Jersey, Silver Press, 32 p. Intended to encourage very young children to study the earth by using their ability to observe. Introduces basic properties and uses of rocks and minerals.

Podendorf, Illa, 1982, ROCKS AND MINERALS: Chicago, Children's Press, 48 p. Introduction to the formation and identification of a variety or rocks and minerals.

Cork, Barbara, and Bramwell, Martyn, 1983, UNDERSTANDING AND COLLECTING ROCKS AND FOSSILS: Tulsa, Oklahoma, Educational Development Corporation, 32 p. Guidebook describes how to find and identify common rocks, minerals, and fossils.

Hyler, N.W., 1982, ROCKS AND MINERALS: Los Angeles, Wonder\_Treasure Books, Inc., 64 p.

#### General

U.S. Geological Survey, 1992, NATURAL GEMSTONES: U.S. Geological Survey General Interest

Publication, 16 p. Available from U.S. Geological Survey, Branch of Distribution, P.O. Box 25286, Federal Center, Denver, Colorado 80225. Free. Describes basic physical properties of a number of common gemstones.

## AUDIOVISUAL

THE EARTH EXPLORED\_103 - ROCKS AND MINERALS, 1985, 29 minutes, in color, VHS video: Public Television Videocassette Service, 1320 Braddock Place, Alexandria, Virginia 22314. (High school and up) Shows basic methods of identifying rocks and minerals. Discusses the uses and importance of minerals in everyday life.

GEMSTONES OF AMERICA, 1991, 60 minutes, in color, VHS video: STS Productions, P.O. Box 27477, Salt Lake City, Utah 84127. (High school and up) Contains footage of currently productive, important gemstone mines in the United States. Discusses geological origins of a number of gemstone deposits in the U.S. and their production.

Rock Color Chart Committee, reprinted 1991, ROCK COLOR CHART: Boulder, Colorado, Geological Society of America, size 5 1/8" by 7 1/2". Consists of 115 color chips mounted on six separate sheets. It is intended to help the user identify the range of rock colors and is based on the Munsell System.

### PERIODICALS

These journals contain information on rocks, minerals and gemstones, collecting areas, rock and mineral exhibits, club activities, lapidary processes and equipment, jewelry making, and newly published books and collecting guides.

Gems and Gemology, quarterly: Gemological Institute of America, 1660 Stewart St., Santa Monica, California 90404.

Lapidary Journal, monthly: Lapidary Journal, P. O. Box 1100, Devon, Pennsylvania 19333-0905.

Mineralogical Record, bimonthly: Mineralogical Record, Inc., 7413 N. Mowry Place, Tucson, Arizona 85741.

Rock and Gem, monthly: Miller Magazines, 4880 Market St., Ventura, California 93003.

Rocks and Minerals, bimonthly: Heldref Publications, 1319 Eighteenth Street, N. W., Washington, D. C. 20036-1802.

NOTES:

# Staking Your Claim to Alaskan Mineral Wealth by Dennis Garrett

Have you ever wanted a mining claim, but didn't know how to do it, or where to begin? This article will, hopefully, help you along.

Before we head into the bush to start staking, there are some rules you need to know, and some points you need to consider. Probably the most important is that you cannot use a mining claim as a substitute for real estate. In other words, don't think that you can just stake a claim somewhere and put up a cabin, or even live in a cabin on a mining claim that has been abandoned. You will be in trespass, and usually you will be in serious trouble for it.

The holder of a mining claim does not own the surface, the water, or even the gravel. A mining claim grants the holder with the preferential right to extract the valuable minerals within the claim, and for uses incident to that goal, such as exploration and development. The size of a mining operation is not relevant to ownership of a claim, but a mining operation or exploration towards that goal is the only legitimate use of a mining claim. And because the mining claims confers only limited mineral rights to the holder, anyone can freely cross over the claim, or fish, hike, hunt, pick berries, etc. as long as the activities do not interfere with the mining operation. Likewise, anyone removing minerals from a valid claim may find themselves arrested or sued for theft.

You'll need to know the owner of the land upon which you want to stake a claim. In Alaska, land ownership generally falls into one of these categories: federal, state, Native Corporation, and private (which includes Borough lands). The easiest way to determine land status is through the Alaska Department of Natural Resources (D.N.R.), either online or at one of their offices in Fairbanks, Anchorage, or Juneau.

Land status, i.e. who owns what, what is open to mineral entry (claim staking) and what is closed, and what stipulations and restrictions which may be in place upon those lands, will determine where or if you can stake a claim. For example, some areas are limited to "leasehold location" staking only, which is a type of mining claim, but an important distinction nevertheless. The DNR offices are also where you will obtain the forms necessary to stake and file your claim, and related information, all of which is also available online. The addresses, both physical and online, will be provided later in this article.

Status plats are maps produced by the DNR which show the status of the lands in your area of interest. Of the hundreds of millions of acres within Alaska, only about 10 percent is open to mineral entry, about 20 million acres. Much of this is already claimed, but even in popular areas there can be found some open ground (unclaimed lands). Status plats will help you determine what ground remains open.

Another consideration is economics. Currently there is a rush on tantalum and platinum prospecting in Alaska, and several projects within a days drive of our area have been discovered in areas not previously recognized or known. A potential diamond deposit near Shulin Lake south of the Petersville Road has been discovered within the last two years and currently is being evaluated.

One approach is to look in areas where mining is occurring or has taken place in the past. You can

often find areas that were mined a long time ago, and where valuable minerals still remain. Both state and federal mining laws require, as part of staking a claim, that a "discovery" be made. This discovery means that a prudent person would be justified in the expenditure of time and resources upon the claim developing the mineral potential.

When you decide where you want to stake a claim, and if you can stake a claim where you want one, you'll be ready to begin the process. Mining laws require you to actually go to the area where you want to stake a claim and, beginning in the northeast corner, place a monument. The monument (you'll need one for each corner; however multiple claims owned by the same person or company can share common corner monuments), can be a post of wood or some other material, even a rock cairn, but whatever you use must be at least 3" in diameter and at least 3 feet in height. I use 5' long by 4" diameter white PVC pipes because they are lighter to carry and animals don't rub against them like they do wood posts, and the monuments are very visible. I use 5' long pipes so that I can bury 2' in the ground, and still have 3' in height. I paint the ends orange to help the visibility in the winter, but the paint fades in time. I also write all my information, such as my name, the claim name and number, posting date, and so on right on the post in permanent marker. (NOTE: Check your regulations-certain additional stipulations may be required, such as capping the posts). The number one corner is the corner where you'll place your "location notice", which is a copy of the forms you'll be filing with the various government agencies to record your claim. I put mine in plastic bags taped to the monument. You'll need to insure that the monuments are in good shape every year. Formerly the regulations required a claim locator to brush and flag the claim lines between monuments but that requirement has been dropped.

The maximum dimensions of a state mining claim may be either 1320' by 1320' (40 acres), or 2640' by 2640' (160 acres), depending upon which type of claim you stake. Recently, the state implemented new regulations allowing the staking of a "MTRSC" claim, which stands for Merdian Township Range Section Claim, and must fit within a quarter section. Otherwise, you'll be staking a claim under the older regulations. Details of the regulations may be obtained from the DNR. Federal mining claims are 660' by 1320', or twenty acres.

After you've placed your number one monument at the northeast corner, you then work around in a clockwise direction and post the rest of your monuments. The distance between each monument depends upon the claim you're staking and the presence of preexisting mining claims and other closed lands. The accuracy of your claim staking activity need not be survey-quality, but try to be as accurate as possible. Many people have begun to use GPS devices to locate their corners, which is about as accurate as you need. Greater accuracy is not required. You can stake your claim using only a compass and topographic map. It may be valuable later on to take photos of each monument when you place them, and record the information in a waterproof field book, such as is used by surveyors. I also take soil, rock, and other samples from the hole and any interesting areas adjacent (and within my claim) to the corner, as this provides an easy reference.

Next you have 45 days to file your claim documents with the recorders office relevant to your area of interest, and with the DNR. Federal regulations are slightly different, but it is more likely you'll be staking on state lands. The DNR will have information relating to which recording district your claims are located within, but for most of the state the recorders office in your district is the place you'll be mailing or delivering the forms to, along with the requisite filing fees. You'll note that the forms you get from the DNR have 2 sheets, one for the DNR offices and one for the recorders office, which will leave you one copy short (the copy you need to place on the monument). Therefore, it is a good idea to fill out the forms and make a copy before you head into the hills, and fill in the dates when you

finish the task. You'll also need to submit a map of your claim in relation to other claims, section lines, and so on. For this many miners use copies of the status plats, which helps speed the process and avoids any ambiguity.

Filing fees and the first years rental on your claim (you really didn't think any of this would be free, did you?) will vary depending upon what type claim you staked, and on whether it is state or federal land, and how many claims you staked. Average filing fees for claims at the recorders office are \$15 each, and the rental, due within 45 days of filing the claim, will be \$25 and up. (NOTE: Fees may change).

If you're not sure that you want to stake a claim in the area, you can file a Prospecting Site, which is like a mining claim, except that it will expire in two years and can't be renewed. You can stake mining claims or convert the prospecting site to mining claims as it gives you a preferential right if you make a discovery.

Once you get the claim, the next challenge is keeping it. You have annual rental fees to pay, which begin at \$25 per claim and double every five years. And you'll file lots of paperwork with various agencies. Probably the most important is the Affidavit of Annual Labor. This document details what work you did on the claim, which is a requirement under both state and federal law to keep the claim. You'll need to do at least \$100 in labor per claim per year, but the excess may be carried over for up to four years. Meeting this requirement is easy, just be sure to file the form with the recorders office (along with the filing fee, of course) before the end of November each year.

Failure to properly stake or record a claim, or to pay fees and meet annual filing requirements will result in a loss of the claim, known as "abandonment". Once the claim is abandoned you cannot restake it for one year, during which time the ground is open to location by other persons.

Staking claims on state-selected land, that is lands upon which the state has placed a selection request but has not received title from the federal government, is risky at best. Because the state has no management authority, no mining operations on state-selected land can be permitted by the state. The best you can do is stake a claim and hope for the best.

Mining and exploration operations involving equipment larger than a 4" suction dredge require permits from various state and federal regulatory agencies. The Annual Placer Mining Application, available from the DNR Division of Mining, will satisfy the requirements of most state and federal agencies. In some cases additional permits may be required.

Lastly, if you're considering buying a mining claim, you need to be even more diligent. Every year worthless mining claims are sold by people who are unscrupulous or ignorant, and purchased by unsuspecting buyers. Investigate the claim history and status at the DNR, where you can get a factsheet titled "Investigate That Claim Before Buying". You can download this factsheet from the DNR website, and another DNR website, the Alaska Division of Geological and Geophysical Surveys, (D.G.G.S.) has geological, geophysical, and geochemical reports and maps, reports of investigations, pamphlets, factsheets, and more, most available for free download.

For more information on mining regulations, forms, factsheets, or to check on land status go online

to <u>http://www.dnr.state.ak.us</u> or in person at DNR Public Information Center, 550 West 7th Ave. Suite 1260, Anchorage, Alaska 99501-3577. They're open 10 a.m. until 5 p.m. Monday through Friday. For the Alaska D.G.G.S website go to <u>http://wwwdggs.dnr.state.ak.us/</u> or <u>http://wwwdggs.dnr.state.ak.us/</u> Libguide/Section4.htm.



Blue Ribbon Mine, Dutch Hills.

# Petersville Road Scenic Drive South Denali Safari

Submitted by Dennis R. Garrett, owner and operator of the Blue Ribbon Mine, located at the end of the Petersville Road.

Hello, I'm Dennis Garrett. I came to Alaska many years ago to find adventure, opportunity and gold. I've put up this page, which started out as a "Driveguide for the Petersville Road and South Side Denali", to help guide you around the area if this is your first visit, or open up some "new" areas you may not be familiar with even if you are an 'old-timer'.

My family and I have been operating a gold mine here in the foothills of the Alaska Range since 1992.

I'll try to cover the basics such as what to wear, what to bring, where to stay, and whatever else I can think of. To learn more about the region where our mine is located, as well as information and links on the history, other recreational opportunities, and to see more photos, go to The Alaska Freegold Co. or email me at freegold@gmail.com.

# **GETTING READY TO GO:**

Petersville Road is the "other" road to Denali, the southern gateway to Denali, certainly the road less traveled. It's a rugged mining road, designed for true explorers of Alaska who want to discover the backcountry on their own terms.

This trip will take about 1-2 hours one-way, (if you are driving) covering about 34 miles one-way. I recommend that you have a 4-wheel drive sports utility vehicle, at least after the abandoned mining



camp of Petersville, but it is not mandatory. The road conditions are usually favorable for travel between July 1 and August 31, while June and September are "iffy." Due to the area's proximity to the Alaska Range, there is usually a great deal of snow on the road beyond Mile 14 the rest of the year. (That explains the area's popularity with snowmachiners who flock to the area throughout the winter.) The road is unpaved except for the first 6 miles, and the further along you travel the greater degree of 'adventure', as I like to call it, will you encounter.

You should also travel with necessary survival equipment, including a spare tire, tow rope, raingear, wading boots, mosquito repellant and headnet, matches, food, water, blankets and other gear. I'm working on a list from which you can pick and choose, or ignore the whole thing. A cell phone, CB radio, or other communication device would also be handy, as would this book and a GPS.

More "General Information" is found at the bottom of this page. Feel free to print this page if you like.

The Field Guide To Alaska Rocks And Minerals

### IF YOU NEED SOMEPLACE TO STAY:

Trapper Creek Inn & General Store is located at Mile 114.8 Parks Highway. Further up the road, Mary's McKinley View Lodge is also available at Mile 134.5 Parks Highway. Lodging on Petersville Road includes Trapper Creek B & B (Mi. 03), Denali View Chalets (Mi. 2), North Country B & B (Mi. 2.7), Gate Creek Cabins (Mi. 10.5), McKinley Foothills B & B/Cabins (Mi. 17.2) and The Cache Creek Cabins. Most of these places have a beautiful view of Mt. McKinley (Denali).

If you prefer, you can camp in any of the numerous pullouts along the side of the road and nearly anywhere you want beyond Mile 19, where there is almost no private property, and of course on the claims. See the map for some scenic campsites. And be sure to check with the State Division of Forestry for information regarding campfires. It may also be permitted to camp in Denali State Park or Denali National park, but you'll have to determine that for yourself. If you park your vehicle so that it blocks someones driveway or the road expect it to be gone when you return. The Alaska State Troopers will tow it away for you.

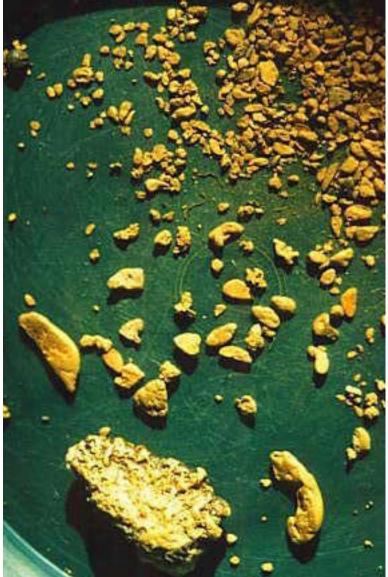
### NOW LET'S GO ... FOR THE GOLD!

To begin your road safari to gold country, travel the George Parks Highway to Milepost 114.9 where the community of Trapper Creek is located. If you don't have a full tank of gas, you can fill up in Trapper Creek. You can also visit Trapper Creek's Old Historic Post Office.

Turn onto the Petersville Road. The first few miles of this road are paved. Miners built the Petersville Road in the 1920s. You will notice many farms in the area. The farms were established by the "59ers," people who came up to take advantage of a federal land grab from 1948 through the 60s and 70s.

Mi. 0.7 Petersville Road: Trapper Creek's Spruce Lane Farms Museum and Gifts – This is an authentic log cabin museum with a view of Mt. McKinley. Here you can get some background on the area's gold mining history and the homesteader movement, with lots of rare photographs. There are local gifts for sale and you can even pet the ponies before you continue your road safari.

Mile 6: Moose Creek. Here you can stop and have a picnic lunch and check to see if there are any trout or grayling in the creek. Also, enjoy good berry picking towards summer's end.



Dutch Hills Gold

Mile 14: Kroto Creek -- a good place to park your vehicle and snowmachine trailer in the winter since this is where road maintenance ends in winter.

Various points between Mile 6 and Mile 19 offer views of the Alaska Range and tundra lakes -- some with swans, ducks, geese, moose, etc.

Mile 19: Forks Roadhouse. (Destroyed by fire 2012). The remains of an old bridge can be seen on Peters Creek behind the roadhouse. Take the right fork and continue on the Petersville Road.

At about Mile 26, you will pass through the long-abandoned mining camp of Petersville, which was also the Post Office for the mining camps in the 20s and 30s. The historic buildings are closed and off-limits, but as you may have heard there may be alleged squatters and trespassers in some of the buildings. If you prefer you can just drive through and not stop, but no one has the legal right to prevent you from camping, crossing over, and otherwise recreating on the area as you wish.

As you continue on, from Mile 28-30, you enter the spectacular Peters Creek canyon, a one-lane road that hugs one side of a deep gorge with waterfalls all around you. Views of the Alaska Range complete the picture.

One option before entering the canyon would be to turn right onto the trail at the mouth of the canyon. You'll go up to the top of the Peters Hills. This is where I have seen some of the most phenomenal views of the Alaska Range featuring Mt. McKinley, Mt. Foraker, and Mt. Hunter. You can also see stunning views of the Chugach and Talkeetna Mountains, the Matanuska-Susita Valleys, and much more -- all set in a pristine alpine tundra.

The breeze is refreshing. Surrounding you are many deep, clear lakes that were created when the ancient glaciers that sculpted this magnificent landscape sliced the top of this mountain off. Watch for migratory birds and small mammals early in the summer, and Ptarmigan and bears feeding on the berries later in the year. This is a great area to begin a mountain biking trek, as there are many rugged trails and roads in this region, and it's a great place to set up camp.

Continuing on, you'll cross Peters Creek at the bridge at Mile 32 and enter the Petersville State Recreational Mining Area, an area set aside by the State of Alaska for the citizens to pan



Old Mining Claim Corner, Peters Hills

and mine for gold. If you don't know how, it's easy to learn and fun to do. This is also another outstanding area to camp.

Just past the bridge you come to another fork: the left fork takes you to the Cache Creek area (see map); the right fork takes you to the Blue Ribbon Mine and Denali State Park. We'll go there first. If you do decide to

head down the Cache Creek Road, we recommend that you visit the Dollar Creek Ventures of George and Delores McCullogh. They have a very nice, historic mine. Call 907.733.2628 for information and reservations, or visit them on the Web at http://www.dollarcreek.com . Contact The Cache Creek Cabins for information on gold panning in this area also at www.cachecreekcabins.com.

Take the right fork, you'll travel a little ways beyond the bridge, where you'll come to the Peters Creek ford. Bears and salmon can often be seen here. The idea of crossing the creek with your vehicle may, at first, appear daunting. However, the creek is generally quite shallow, except where strong currents have cut deep channels into the gravel bed of the creek. Stay away from these areas. Instead, cross only where the water is rough, and only when the water is relatively shallow, say 2 to 3 feet. Don't hesitate or stop in mid-stream, just keep your momentum and move forward.

After crossing the creek, you encounter yet another fork: the left takes you up Peters Creek, and the right takes you to Blue Ribbon Mine. You are also leaving the Petersville State Recreation area and entering privately held state mining claims. By law, you may freely travel through, or hunt, fish, even camp on mining claims without the owner's permission. However, remember that the gold and other minerals are the property of the claim owner, and any unauthorized removal can result in criminal charges and civil liabilities. This is also true for disturbing claim markers, corners, or vandalizing equipment and camp facilities. Please respect private property.

As you continue on, the road becomes narrower, at times almost indistinct. The only evidence of a road or trail, which sometimes is swallowed up by the stream, is the occasional piece of surveyors' ribbon hanging from a branch. The seemingly impenetrable brush suddenly opens up, then as quickly, it surrounds you again. As you peer into the thick vegetation, ask yourself: Could there be a bear, moose, or other large beast-- or what other hidden treasure may be lurking in there unseen and unknown by me?

Surprised to see a mailbox way out here? It started out as a joke, and then people started leaving messages and gifts in the box, and sometimes we would leave mail in it so that anyone leaving the mine could take it to town. Speaking of 'Town,' we call our camp here "Vicinity, Alaska." It, like the mailbox, started out as a joke, as we would always hear on the radio, "The weather today for Anchorage and Vicinity is . . . ." Heh heh.

You can see for yourself why I like it here so much. Expansive vistas, lush valleys, rugged mountains, distant peaks – beckoning the wanderer in all of us. Even the names carry you back to the turn of the century, when the West was truly Wild: Nugget, Gold, and Poorman Creeks. Or, Lucky, Puzzle and Ruby Gulches.

If you listen, you can hear the songs of the birds and the sounds of the creeks carried on the breeze.

Gold was discovered in this area in 1898, and the first known mining activities began in 1906. An estimated 200,000 ounces of gold have been produced since, mostly by small-scale and hand mining. As you can see, the overall impact has been minimal, and most of the lands have been or are being reclaimed.

We exercise the utmost care and concern for the natural environment when harvesting the minerals we all need and use every day. You'll see how we have constructed wetlands and planted grasses and other plants to stabilize areas previously mined and abandoned long ago. We continue to research methods of reclamation and revegetation.

From "Vicinity," you can depart for Denali State Park, Denali National Park and Preserve, or just hang around and enjoy the scenery. To drive to the boundary of Denali State Park, go back down the hill to the sign, turn left. After about one-half mile you will see that the road becomes very steep. DO NOT ATTEMPT to drive this unless you have a 4-wheel drive vehicle in good condition and are familiar with its operation. Continue on, until you reach the crest of the hill. Then turn left and drive until you come to the "Denali State Park" sign.

A very nice trail takes off from here, and by following it for a mile or so, you can overlook the Tokositna Valley and Glacier, the Tokosha Mountains, and of course, Denali, the "Great One." (aka Mt. McKinley) In the 1920s, the world-renowned Alaskan artist Sydney Laurence painted from this vantage point. Captain James Cook walked and camped here while searching for a trail into the Interior of Alaska. Behind, to your left, the bodies of three men were found on 13 September 1939. All three, and the wife of one of the men, were murdered for their gold. The killer is even today unknown. Check out "The Mystery of the Cache Creek Murders" by Roberta Sheldon.

There is so much to see and do here, you might be asking, What's next? Well, we could go on over into Cache Creek, or to Bear Creek. But, let's save that for another day.

How about some tidbits of Geology? All the terrain you see today was created in the last 9,500 years or so. By rivers of ice, mostly. The Peters Hills, named after Henry Peters, one of the first prospectors in the area, as well as the Dutch Hills, are made of slate and other sedimentary rocks dating back to the late Jurassic and early Cretaceous Periods, about 170 to 220 million years ago. A Tertiary Age (about 65 million years old) conglomerate overlies these rocks where it hasn't been removed by erosion. Coal, bones, and some gold can be found in this formation. It is also the source of the red-brown stains you see near many streams in this area. All that remains of three great glacial epochs are the U-shaped valleys, the large areas of wetlands that are dotted with numerous small, clear lakes, and the hilly terrain characteristic of moraines.

What else is there to do? Hiking, fishing, photography, mountain biking, cultural exploration, bird watching, and wildlife and mountain viewing. You will be moved, inspired, and exhilarated. Only by visiting here will you be able to feel and experience the powerful connection with nature. Mere superlatives cannot describe, any more than even the very best photos, the grandeur of the foothills of the Alaska Range.

In order to preserve the natural environment as well as the quality of the experience, we ask that you try to minimize the impact of your visit. After all, what's the sense in trampling and overcrowding the very wilderness you've come to enjoy? Wherever you may be, please respect the environment. Don't litter. Pick up any litter you do find and pack it out. Don't take anything out you didn't bring in. And don't leave anything behind.

As you begin your return journey to civilization, consider visiting the other historic gold mining areas of the Matanuska-Susitna Valleys, for example Independence Mine, located in Hatcher Pass.

#### **Some General Information**

In order to help insure that your visit to the South Denali region is pleasant, here is a short list of tips:

Bugs, Bears, and Hiking: The best places to hike are the areas higher on the flanks of the Peters and Dutch Hills, which are free of the dense scrub growths of willow and alder. These are the areas with the least amount of bugs due to the steady breeze. In areas where there is a clear trail, please stay on the trail to minimize impact. Alpine areas are relatively fragile and slow growing. The large dug-up areas you see pockmarking the hillsides are the work of Grizzly bears digging up ground squirrels for food. To avoid conflicts with bears, make lots of noise when traveling through the thick brush, along streams, around berry bushes, and anywhere you see bear tracks or droppings. Take precautions with your food: don't store or discard food near your camp. Chances are, you will never even see a bear out here, but rest assured, they see you.

Topographic Maps: U.S.G.S. Talkeetna Quadrangle will provide excellent coverage.

Weather: The weather is subject to change rapidly due to our closeness to Denali. You could wake up to a clear, cloudless day, and temperatures could soar into the 70's, or the wind could shift, and the temperature can drop 30 degrees in a few minutes, followed by a cold, windy rain. If you expect to be more that a couple of hours away from your vehicle or camp, you would be well advised to take along a day pack with a light rain jacket or poncho, among other items.

Licenses and Permits- Check with various State and Federal agencies for information relating to fishing, hunting, and land use requirements. I don't want you to get in trouble while on your safari.

The local channel for CB radios is channel 19. Most cell phones work, but are better at the higher elevations.

More Drive Guides at http://www.alaskavisit.com/index.cfm?x=3

**About the Author:** Dennis Garrett came to Alaska as a teenager seeking to fulfill two dreams: as a soldier, and to seek adventure while exploring Alaska. He has prospected in Alaska from the back side of the Brooks Range in Arctic Alaska, to the shores of Prince William Sound, and many other places around the world. He has numerous mining claims in the south Denali area (Dutch Hills), and welcomes visitors. He has taught prospecting and recreational mining classes to adults and children, and is regularly called upon due to his extensive knowledge of Alaskan mineral deposits. He may be contacted at P.O. Box 520481, Big Lake, Alaska 99652, or via email at freegold@gmail.com

