

JULY 2022 ~ Issue #9

Golden Shovel

INSIDE

State of the Association

President's Message

Editorial: Mitch's Musings

Mitch Mortenson shares his findings on the missing MIN files.

The Nugget King

Luigi Gino Del-Ciotto reports on the state of mining for small and mid scale miners coast to coast.

In Memory of

Richard Wallace January 2, 1948 - June 21, 2022

Nuggets of History

Saint Louis Daily Globe 1897, Golgotha of the Pacific- San Nicolas Island and the Wild woman Juana Maria

James Douglas Secret Mission to Find Gold

Daniel Marshall tells about two expeditions that crossed Vancouver Island from East to West

Snowshoes and Gold

Exploring the history of the Douglas Vein. Mitch Mortensen presents the history on the Douglas Vein and the legendary names attached to it

Business Directory

Resource Directory

Golden Shovel

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The *Golden Shovel* is published quarterly by the
Omineca Mining Association, Box 948, Mackenzie BC, V0J 2C0.

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MISSION

- Provide awareness and increase knowledge of mining, including various types of mines and mining practices.
- Promote the OMA objective of facilitating a balance where industry and the environment can prosper, where a governing practice of scientific fact is the law of the land, and development is tempered with reclamation.
- Feature stories about those who sought their fortune in mining— some made their fortune in gold, others found adventure, and the lucky ones found both.

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STATE OF THE ASSOCIATION

Met With Minster Ralston!

Mitch Mortenson

We are still here and doing our best. This edition of the *Golden Shovel* is late due to a few things.

I did make a trip to the Legislative Assembly back in late April to meet with our minister of mines. This was behalf of a number of fellow miners having problems with the ministry. It was made possible by Tom Shypitka making the request in the Legislative Assembly. April 27,

If I could just put on the record.... If the minister would afford maybe 15 minutes with a constituent. It's a placer miner. He's going to be in the area on Thursday. I don't know if that's possible, if one of his mining staff can actually hear him out. If the minister can make 15 minutes of his time, that would be great. I can provide the contact information and all that stuff if there's any interest there.

The Minister Responded

Just to respond to the member's request that I or ministerial staff meet with a constituent, the placer miner. Certainly, we will definitely do that, for sure.

Gas was at record prices, so I walked on the ferry and took the bus into Victoria. It was a positive meeting with the Minister and Mines Critic Tom Shypitka. However, I am still waiting for results on some items discussed.

I did the trip largely on my own dime driving from Mackenzie to Chilliwack return. I am grateful to those who donated to the cause. When I started this effort, it was with the intention of bringing people together. Although I have experienced some success, I have also fallen well short of where I have wanted the association to be at this time. There is only so much I can do on my own. The association is meant to thrive on individual and corporate memberships. Please spread the word. Any and all donations are welcomed and appreciated. We were unable to get another "Crash The Creek" Competition going this year. Perhaps next year?

I am pleased to share our efforts have caught the attention of the Kootney bix.. [Gold miner Mitch Mortenson is the perfect advocate for placer mining in B.C.](#)

As a member of the OMA, you can consult and get professional advice on meeting the challenges of your project.

We invite you to voice your concerns about the industry, and to share your stories, letters, and pictures of glitter and gold. Thank you!

PRESIDENT'S MESSAGE



Mark Oldenburg

With the cost of everything, especially fuel rising drastically its more important than ever to mine smarter.

For those new to the game, buying a claim, wash plant and excavator and getting to work is just not going to pan out (pun intended). Its more important than ever to treat placer mining as a business, because it is. Far fewer people get rich at this game than go broke, and in a very short time. The old saying, test, test, then test some more applies more to this industry than just about any other. Before you even start do you have the money set aside to complete the reclamation work even if you don't find any gold? Do you have sufficient funds to work through the overburden on your way to the pay

layers? Do you even know where the pay layer is or if it exists at all? Perhaps most important of all, if you have pay have you calculated the value per yard of what you plan to mine? You not only need to know what its going to cost you to mine, but you must know the expected return in gold before you can make a decision to go ahead. This is all information that you can calculate ahead of time, and while mining is full of surprises, using a structured businesslike approach gives you the best opportunity to succeed. Take the time to construct a model detailing a mining feasibility plan. In placer mining this feasibility plan is based on working averages from your testing. Some tests will show high results while others will show low results. A working average makes it possible to create your feasibility plan.

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Its All A Conspiracy!



Mitch Mortensen

Back in 2005 the mineral titles went online. The digital age in mining had begun. No longer were we staking claims with post and tags and no longer was history confined to the archives spread throughout the province

in obscure government buildings.

Online mapping and staking also produced a location for what are called Min files. The Minfile system was the first nonfinancial data base in the government of BC. This is during the 1970's when it was on the main frames. In those days you would call the ministry and they would print you a minfile on a dotmatrix printer with a tractor feed. These Minfiles are technical reports written by claim owners that contain information specific to an area and are located on the mineral title online maps appropriately. Anyone can access this information, but its value is to whomever stakes a mineral or placer claim in that area.

The information contained in these min files can be extensive. These reports show the geology and history of the province. The whole point of these reports being made public is for people to do research on their claim and use that information to further their mineral/placer exploration.

Mineral/placer Exploration is very much like working a mystery. It is a process of elimination. Through the min files a miner can read the past and learn what they did to do something new. Each new venture recorded as a min file adds to the historical record. It also adds to the potential for a future claim owner to make their own discovery.

I use the Minfile system regularly. Then one day I looked at one of my claims on mineral titles and the min file associated with the area was gone!

In speaking with other claim owners, we all agreed it seems a bit suspicious. With the outrageous politics in the industry, its a plausible argument this was just one more tactic the government was doing to harm the miner. Why were min files disappearing? Are they closing out information like they are closing out ground for staking?

I contacted a Mineral Resource Geoscientist employed by the ministry in the geological survey department, and he

helped me understand enough to share the following with you

I was able to provide him with the min file number and he was able to locate the min file where it was supposed to be. However, he is viewing it on MapPlace2, another government online mapping program.

I asked why the location associated with the Minfile were not located accurately to where the work was performed. His response was that it had to do with updating. Larger projects pegged on Minfile can be (in my case) based on a drill hole location in 2009. This location can change later on as the project moves. The ministry doesn't necessarily follow the project. They follow where there's mineralization found. This is an old issue as the argument is

"well it should be over here" and the response is "that is where there are working now in 2022 but in 2009, they were working somewhere else as part of that project".

Sometimes the ministry will add something new to the file or keep it as that one. When you go through the Minfiles information and supporting documentation such as assessment work reports you can see they were in a number of places. You can see 3 or 4 different soil grids, a couple geophysical things, and that is why you need to check deeper.

Then there Minfiles that will show discovery outcrops with a whole bunch of work done nearby. Everybody thinks that the work location is the project. However, the ministry tries to tie the Minfile to a point on the ground where you could walk up and beat it with a hammer and you would be at the point of that mineral occurrence vrs a geophysical target in a different location that you cant put your hand on it.

An example is Eskay creek. A lot of the original work was done in the 1930's. The work was done in this one area that everyone was looking at and nobody came up with anything but then when a few of the companies backed off and tried to drill underneath they hit something else. That is Eskay creek as we know it now. That is how it can evolve over time where some of the original showings are not something people are working today. This can present a discrepancy.

Mineral titles seem to have a lot of trouble with MinFile. They are either using older versions or whatever scripting

they use forgets things. It's a technical issue. Government has several types of data sets with multiple versions of software. The Technical points are Software A and Software Z don't talk to each other anymore so there is a loss of connections. They had to do a major upgrade to MapPlace1 because the software and servers were just out of date and would not function properly. Hence MapPlace2. People like to use mineral titles online and stake accordingly but then they get on the ground and find that they don't have what they thought they had. Mineral titles tend to have older data whereas MapPlace2 is more current.

MapPlace2 is a viewing platform <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/mapplace>

Go to MapPlace2 and click on mineral titles located in the Legend column. Those claims are what they were yesterday. At midnight the Ministry takes a snapshot of mineral titles and then that becomes the mineral titles for the day. Tomorrow they will take a snapshot at midnight and then there will be a new representation of the mineral titles the following morning.

Mineral titles is always yesterdays claims at the end of the day at midnight. When you click on a mineral title you go directly to the mineral titles data base, and you see all the current information. Who staked it, when it was staked, what the transactions are, when is it good till, all that information. That's mineral titles data and you're looking at the same stuff the ministry is looking at.

When you are reviewing a Minfile be sure to review the supporting information in the Bibliography. If you're looking for location information, always check the Minfile detail report for two things.

Where did the location information come from and what is the confidence of that location?

It can vary from within 500 meters to one side of the mountain or the other. Those that are that far away tend to be older showings where not a lot of work was done or poor documentation was made. The Ministry does its best but with 18,000 mineral occurrences, and the few people available, it is difficult to keep up to all the changes. They are about six months behind in uploading information to Mineral Titles

MapPlace2 is designed for extracting information for tenure holders to make their own maps. You can view it, search it, and filter it to your needs.

In response to my question about removing Minfiles, the ministry does not like removing a Minfile. They may leave the point where it is on the ground. Maybe add a new name to it or something that will reflect the latest information. If a project shifts off to where that's going to be happening then it will get a new location but it will also get a new number with its new name and new information.

When a Minfile is removed it is based on new information presented by one of the ministry's geologists in the field. This is when they recognize that something is just not the way it is and should be removed. These are decisions made from the field.



QUOTE OF THE ISSUE

Gold is a treasure, and he who possesses it does all he wishes to in this world, and succeeds in helping souls into paradise.. Christopher Columbus

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The Current State of Mining For Small To Mid Scale Miners



Luigi Gino Del-Ciotto

Canada! To the mind of a person whom is a prospector or dreams of making their own metal or mineral strike, the image that probably

comes to most of those minds run along the lines of, vast, wild, virgin territory, untapped reserves! After all the fantasizing is over, reality starts to set in, and questions start to form. Things like, "Am I allowed to dig for minerals in Canada freely"? Or, what are the initial costs for start up? Can I stake my own personal claim? What are the laws that surround Mineral staking? And the list goes on. The current state of small to midscale mining in Canada is a very broad subject that I would like to cover. To do so, I think it best that I break up this vast country into Territories and Provinces. The laws of the land vary in each one and I feel this is the best way to help you get started with probably one of your first questions... Where do I start in this vast wild and almost untouched land? As well, I will report on several basic factors that affect the state of small to mid scale mining in each area, covering such subjects as how to stake a claim or even if you can stake a claim. What are the available and most valuable minerals to chase in each region we will cover, as well as Provincial and Territorial laws surrounding the staking and working of claims or open crown land. Crown land is land owned by the federal government and by extension the Crown of England as Canada is a part of the British Commonwealth. 90% of Canada's land mass is controlled by the Crown.



Iron Electrolytic- Wikipedia



Natural Copper - Wikipedia



Cobalt Electrolytic - Wikipedia

Once we have covered these points I will do my best to offer a few references and points of exploratory interest in each region. This article will not only help those whom are considering entering the incredible world of mineral and metals prospecting, but I'd like to pique the interest of new people and show them that Canada is alive and full of opportunity for those who dare to venture into the Great White North! We will start our exploration of this huge landmass starting with the eastern end of the country known as the Maritimes working our way west towards the province of BC and the Yukon Territory. So, let's get to it.

First, we will start with our eastern most province, the province of Newfoundland. The province is not well known for placer mining activity and even I am only finding scant details regarding it but there seems to be confirmation that there are placer mining opportunities to be discovered there. This makes sense too as the land is sparsely populated comparatively to other provinces. There are several lode gold occurrences in the province with several viable mines running. Currently there is no placer staking system in place, but the province does have mineral staking procedures. Newfoundland has a digital staking process rather than the old school style of physically staking a claim via setting up border posts on all four corners and registering the location of the corners with the government. My home province of BC has a similar system in place, so I can give a rough rundown on how this works. Essentially the province has been gridded up into 500 meters by 500-meter sections. Mineral claims are staked online by accessing the staking section of the Province's Mineral Rights Administration System (MIRIAD). It is required that all persons or corporations who intend to stake claims be registered in MIRIAD (no cost to register). Any natural person 19 years of age or

In Canada

older, or a corporation, has the right to stake. A mineral claim grants the exclusive right to explore for all minerals. The cost to stake one claim is \$60, of which \$10 is a recording fee and \$50 is a refundable security deposit. Payment must be made online by credit card. Further information is available from the Manager of Mineral Rights. Opportunities for hard rock mineral exploration seem to be very abundant in Newfoundland and Labrador.

Opportunities for Copper and Iron Deposits, Copper mostly in the mainland portion of Newfoundland and iron ore in the Labrador region of the province. There are opportunities to find cobalt mines, do not let this little-known metal fool you it is very valuable, at the time of writing it was valued at \$42.18 per pound!

Then there is our favorite of course! You're asking by now, where is the gold at? There are known deposits at Baie Verte found by Enos England in the early 1900's or near Mings Bight where a commercially viable gold mine is currently running. Hammerdown near King's Point or the Nugget Pond Mine near Snooks Cove are other viable prospects in the province. All in all little prospecting has really been done in the province of Newfoundland and Labrador comparatively to the west and who knows what other opportunities may exist in this the eastern most province of Canada, to date there are about 100 known gold bearing



Ming's Bight - Wikipedia



Worlds Largest Lobster PEI - Wikipedia

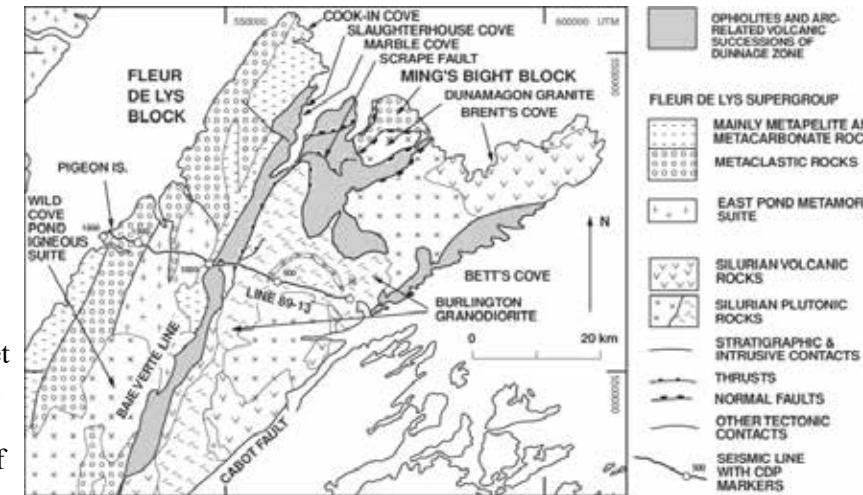
locations found in modern days, so the ground is open and the competition is light, Newfoundland and Labrador may just be worth a look.

Next up is the province of Prince Edward Island, it is Canada's smallest province and unfortunately has no regulations or claims process nor significant mineral deposits of note although there is some mention of small

amounts of gold and other minerals present, just not in quantities that would justify exploration. The province is more noted for it's incredible lobster fishing and beach front property.

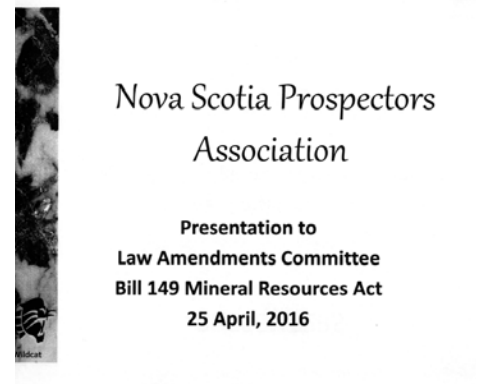
Not far from Prince Edward Island is the province of Nova Scotia another island province but larger in size compared to Prince Edward Island.

My research shows that there are abundant placer gold mining opportunities as well as claim staking and the possibility to start commercial mining leases. On the down side it seems the fees are extremely high for claim yearly maintenance fees and strangely go up as time goes on instead of down! There seems to be a strong and health prospector's association there called the Nova Scotia Prospectors Association. There are over 60 historical gold districts located in this province, both hard rock and placer gold as well there are opportunities for other economic minerals such as cobalt with which we discussed earlier in the Newfoundland



Geological Map of Baie Verte Peninsula Western Newfoundland

-Public domain



Nova Scotia Prospectors Association

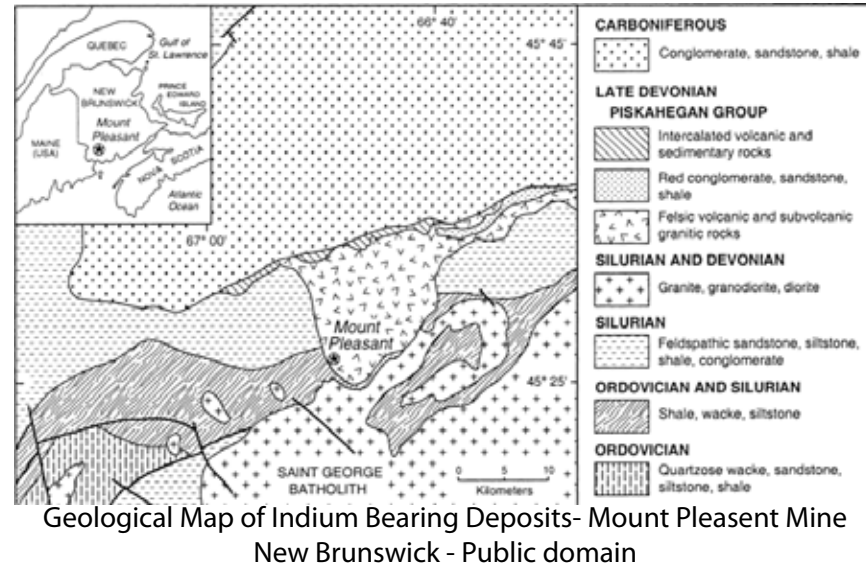
Presentation to
Law Amendments Committee
Bill 149 Mineral Resources Act
25 April, 2016

Nova Scotia Prospectors Association

THE NUGGET KING

segment of this article. Salt, coal, gypsum, zinc and rare earth elements / metals are also present in commercial grades making Nova Scotia a very well-rounded place for prospecting in a very compact province comparatively to the rest of the country.

The last of the Maritime provinces of Canada is New Brunswick, another mineral rich island province boasting many commercially viable minerals and metals including lead, silver, significant gold, cadmium, bismuth, antimony and copper! There is ongoing exploration going on for Indium, a rare earth metal with very high values of near \$300 dollars a pound. Staking claims in New Brunswick is done on the digital format using similar grid systems to Newfoundland, Ontario, and BC. I have gone through their fee schedules and comparatively to BC, they are good! My only complaint is the annual license fee of 100 dollars but their renewal fees and work in lieu of cash requirements for renewals are very easy to accomplish. There are no placer claims available, everything is covered under a mineral prospector's license. There are several established rock hounding and prospecting clubs in the province and some of the hard rock gold pictures I have seen on the club websites are spectacular. My research has this prospector sold on exploring New Brunswick some day. The government seems reasonable and willing to work with people willing



to invest in larger ventures within the province. This concludes the Maritime provinces section of my report on the current-status of small and midscale mining in Canada.

Now we move onto mainland Canada and the mighty francophone province of Quebec, the second largest of Canada's provinces and territories. Quebec is a vast province with all mining opportunities running on all cylinders on the commercial scale. Quebec has over 350 surface mines and produces about 7.7 billion dollars annually in industrial metals. It is Canada's 2nd largest gold producer; it is rich in rare earth elements counting among one of the world's premier sources for them. Platinum in nickel ore form is abundant as well. Quebec is proving to be rich in diamonds too. So, opportunity is not an issue in this province but beyond the major cities, you should be warned that

the temperatures can become very frigid as this is the true Canadian North as you have probably read in history books. This is where the Hudson's Bay Company got its start with fur trapping, blazing trails across the entire country that would be later utilized in the country's many gold and silver rushes! Regarding small scale and hand mining in the province of Quebec. Prospecting in the province requires a prospecting license at a cost of about \$40 per year and must be carried on your person while prospecting and presented for inspection on demand from



Malagash Salt Mine - Nova Scotia Archives



Drummond Colliery Disaster 1873 - Nova Scotia - Wikimedia Commons



Zinc Mine Nova Scotia - Wikipedia

THE NUGGET KING



Platinum Nugget - Wikipedia



Nickel - Wikipedia



Ekati Diamond Mine NWT - Wikipedia

mining officials. Claim fees are very reasonable prices and staking is done in the tradition physical claim staking format. Claim fees start at about \$33 Canadian funds for claims under 25ha. Fees vary north or south of the 52nd degree of latitude with the lower portion of the province costing a fair amount less to stake than the mineral rich north of Quebec. Small scale commercial mining is openly invited in the province, with the typical permitting and regulatory processes you will find in most mineral rich provinces and territories. In all, Quebec is a vast province with many areas with scant exploration on the ground done, so if you're the adventurous type and want to go after a truly valuable virgin deposit, Northern Quebec may be where you want to go especially if you reside on the eastern seaboard of the North American continent. Next up is the northern Territory of Nunavut, the last of the eastern provinces and territories we will be covering here. This is truly an opportunity for those of you who fancy yourself an equal to the prospectors of the Klondike. This is truly unexplored territory. With the melting of the polar ice sheet in the north more and more virgin ground is being exposed every year, there is only one, you heard me, one gold mine in the entire territory which is very rich in both the famous ultra clear Canadian diamonds and gold. Lots of it too. The

territory welcomes prospectors and even offers support to encourage exploration! There are prospecting classes specific to the territory as well as 8,000-dollar grants to prospect in the region! Prospecting licences are required and cost a measly 5 dollars a year! Sure, the mining season may be short, and the conditions may be harsh, but the fact is we are far better equipped today than our forbearers were, and this is the opportunity of a lifetime for those who wish to enter their names into the records of historical prospectors and miners! The land is Inuit controlled so you will be working very closely with the first nations Inuit population there as well as the federal government as Canadian territories have more federal involvement than the provinces and fall under federal mining regulations. If you intend to go to Canada's far north, you will have to be a die hard professional with considerable outdoors skills as well as the money for the gear you will need to survive in the Canadian Arctic regions. Claim staking is done in the traditional format, with one small twist, as Nunavut is located north of the boreal forests or tree line, there are no trees, so you will have to erect your own posts or build rock cairns on the four corners that are 3 feet wide by 18 inches high. If you should make a strike you will probably find if you respect the protocols and native populations and



Cadmium - Wikipedia



Bismuth- Wikipedia



Antimony - Wikipedia

laws, the territory is open for business and will assist you in opening your operation.

Next door to the territory of Nunavut to the west is the Northwest Territories, the region has been explored since the gold rush days of the late 1800's in and around 1898, gold was discovered near Great Bear Lake in the Yellowknife Bay area touching off a gold rush and the establishment of the city of Yellowknife, Northwest Territories. The area has seen a vast number of gold mines open and close, commercial mines are not as common as they once were, but opportunities for prospectors willing to brave Canada's northern territories are there. More recently in the early 1990's very high quality Canadian diamonds were discovered in vast quantities with numerous mines in operation currently. Like Nunavut the Northwest Territories offer prospecting courses and grants to get prospectors out to explore this vast region that also has a lot of virgin land opening due to the retreating northern ice. Prospecting licenses are required for very nominal fees and claims are charged out by the hectare with 20ha being the minimum size. Costs are 25 cents in the first year, 50 cents a hectare for the 3rd-5th years and 1 dollar per hectare after that for renewals. The region has other opportunities as well, it is rich in copper, silver and cobalt as well it is a very rich source of uranium! Like Nunavut this territory is for those who wish to pursue a professional career in prospecting in an area that has seen only scant exploration although a bit more than their neighbor Nunavut to the east. So, if you have the funds for Northern travel and survival this is an opportunity to do something truly historic as new diamond discoveries are happening right now!

We will now move southeast to the province of Ontario, home of Canada's capital, Ottawa. This is Canada's 2nd largest province and 4th largest land mass by border. Only Quebec, the territory of Nunavut and the Northwest Territories are larger. It is an extremely mineral rich province with opportunities to find gold, nickel, cobalt, platinum group metals, salt and structural materials. As well the petroleum industry is alive and well in the province. Ontario has been host to many gold rushes some rivalling the California gold rush in size and production. gold, nickel, cobalt, platinum group metals, salt and structural materials. Gold mines are located within the province of Ontario with production totalling 160,000,000 troy ounces of gold. Canada's largest gold mine located in Northern Ontario produces over 650,000 ounces yearly! The state of small-scale mining in the province is in a state of flux. Prospectors are now adjusting to using the mining lands administration system (MLAS) The province is still in the process of migrating data from the old government system to the new MLAS system. The province has



North of 60 - Photo by Mitch Mortensen, Oct 1998



The First Uranium Mine in Canada

During an expedition in 1900 along the east arm of Great Bear Lake, Northwest Territories, James McIntosh Bell and Charles Camsell, both of the Geological Survey of Canada, noted the presence of iron, copper, uranium, and cobalt in the vicinity of Echo Bay. Bell made these findings public in 1901 in the Survey's annual report.

Thirty years later, prospector Gilbert LaBine used this information to discover the high-grade uranium and silver deposits at what would become the Eldorado Mine, Canada's first uranium mine. The mine began production as a radium mine in 1932, extracting radium from the uranium ores. Radium was highly valued at the time, with an average price of (US)\$60,000 per gram.

In 1942, the company secured a contract with the United States military to supply uranium for the Manhattan Project, which produced the first atomic bomb. The Canadian Government expropriated Eldorado Mine in 1944 and renamed it Eldorado Mining and Refining Limited. This crown corporation became heavily involved in creating uranium exploration and mining advancements, in addition to medical, military, and energy applications of radioactive materials.

switched to claim to a digital staking system online, very similar to the system in place in some Maritime provinces and British Columbia. I have had difficulty in locating data on new fee structures but imagine it will be like the systems in place in other provinces. There is virtually no placer mining in the province for the exception of places like Lake of the Woods that have large quantities of glacial gold bearing till streams have run through and has concentrated the gold. Other minerals of interest would be platinum group metals associated with nickel ore mostly found in great quantities in the Timmins area of the province where many mines are running today. Amethyst is also abundant in the Thunder Bay region which has become very famous for it's deposits which I have witnessed up to several feet wide just crossing bush roads that people drive over, it is quite amazing. Ontario also has a budding diamond industry with some locations recently having been found. It is a vast and well populated province that should offer all the amenities a prospector

may need. The hunting and fishing are also incredible there I can speak from experience.

We now move further west towards the heartland of Canada, the Canadian Prairies, home of wheat, cattle, abundant oil and of course minerals in copious quantities for those willing to search for them. The first prairie province on our trek westward is Manitoba province of 100,000 lakes! (only 10,000 are named!) The fishing in this province and hunting are on par with the best the country has to offer and prospecting in the province of Manitoba from what my research shows me is welcomed, prospecting licenses are only a 1-time life time fee of just 15 dollars. There are also fees for claim tags and maps, but they are also nominal at \$7.50 and \$4 each respectively. Minerals and metals available to prospect are abundant in this province and they include the following, base and precious metals, such as nickel, copper, zinc and gold. ... Mineral resources with potential for future economic development include diamonds, platinum-group



Amethyst - Wikipedia



Titanium - wikipedia



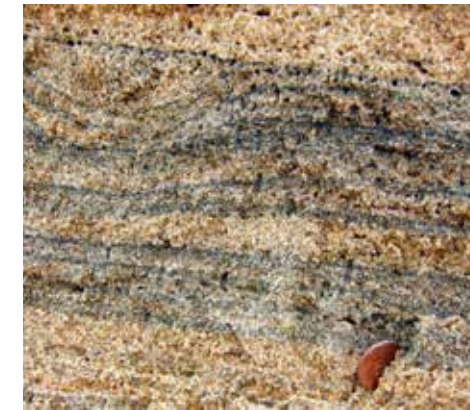
Vandium - wikipedia

metals, rare earth elements, titanium, vanadium, chromite, silica and potash. About diamonds, I am not a diamond prospector, but I have researched the subject extensively. If you have ever flown over the province and observed the thousands upon thousands of lakes below, you will notice a very large number of them are almost perfectly circular. If you have done your studies on Canadian diamond deposits, they are found in what are called kimberlite pipes, which are ancient, extinct volcano chutes laden with diamonds. The circular nature of many of these lakes suggests that the potential for there to be many of these volcanic chutes in the province very likely, and with the presence of diamonds being confirmed, the likelihood of such discoveries being common place in the province is likely when you examine the short 30-year history of major diamond discovery in Canada. As far as placer gold in Manitoba you will be hard pressed to find any for the exception of anomalous spots. The southeastern portion of the province that abuts western Ontario is the location of the first gold rush in Manitoba due to its proximity to Ontario's gold rich Canadian Shield. The gold in Manitoba is hard rock in nature and there are many gold mines in the northern areas of the province above the lakes, but in the southern portions of the province for the exception of the southeast corner, gold is unlikely to be found. Manitoba although in the bottom half in relation to size for Canadian provinces and territories, it is still a huge place almost exceeding the state of Texas in size! With an unpopulated area this large the opportunities are enormous among the proven norther gold reserves. Just remember to bring a rifle for protection as the Churchill area of Manitoba is polar bear country.

Next up is the next province to the west and probably the most difficult to spell, Saskatchewan. Saskatchewan may mostly be known for its endless wheat fields and cattle, but the fact is it is the 4th largest mineral and

metal powerhouse in Canada. There are a wide range of economic metals to prospect for. Northern Saskatchewan carries the world's highest-grade uranium deposits making up 22% of the worldwide supply. As well in the northeast sector of the province there is a burgeoning diamond mining industry as the area is proving to be very rich. In addition to this and petroleum products the provinces mineral wealth includes, salt, zinc, copper and nickel/pgm deposits and of course there is gold. Gold in the province of Saskatchewan is abundant in both hard rock and placer form especially in the northern reaches of the province. The North Saskatchewan River was home to the first gold rushes in the province back in 1866. The gold is very fine otherwise known as flour gold. The placer gold is glacially deposited and does not come from lode, although very rich lode deposits occur near Lake Athabasca. There are no placer mining licenses in the province only mineral licensing that covers all minerals and methods of extraction. On public or in Canada what is known as Crown lands you may pan for gold without a prospecting license, only hand panning is allowed, but here is the kicker, and this is the reason why prospectors get frustrated with our bureaucrats whom have no clue what we do. In the province of Saskatchewan, you can hand pan without a license on Crown Lands, but you're not allowed to use a shovel or any other tool to extract your gravels, only your gold pan, that's it. So, to use a shovel in the province you must have a prospecting license and a claim. Claim staking is on the digital format with online grid staking. I had a lot of difficulty locating information on the fee structure within the province but obviously there is one in place and mining does occur on a very large scale in Saskatchewan.

The last of the three prairie provinces is Alberta, when most hear the name of this province they think oil. But this province is not a one trick pony. Alberta has extensive oil and tar sands deposits, among the largest in the world, but



Silica Sand - Wikipedia



Potash - Wikipedia



Chromite - Wikipedia

THE NUGGET KING

it also has massive coal deposits as well as potash that are major economic drivers in the province. As well and of more interest to our audience is the budding diamond industry with mining occurring for top quality Canadian diamonds in the Fort McMurray area. The province is not known for any lode gold deposits of major significance unless you count the Lost Lemon Mine of gold mining lore. Gold is to be had in this province though and in decent quantities. The North Saskatchewan River, the Athabasca, Peace and Red Deer River systems are among the larger placer gold bearing systems in the central and northern parts of the province. The gold like the province next door is very fine flour type gold. The Edmonton area holds a Klondike festival every year to celebrate its history of the smaller gold rushes that occurred when



North Saskatchewan River - Wikipedia

men were hopeful to find the source of the eroded flour gold Alberta's rivers contained on their way to the Yukon Territory and the Klondike. This is the starting point of the Klondike Trail of gold rush history! Hand panning in the province of Alberta requires no licence and is open on Crown land, as well if you wish to use a rocker box or sluicing system to recover gold you must buy a provincial prospecting licence for \$50 good for 5 years. This will allow you to occupy any placer gold location that is open to the public for 14 days. There is a vibrant prospecting community in Alberta with many group digs and associations to join. To my knowledge there is no small-

scale claim staking in Alberta for minerals although the opportunity to prove viable deposits and acquire a mineral lease or purchase the mineral rights to the land is possible.

We are nearing the end of our tour of the Canadian provinces and territories and the current state of small scale mining within them, but we have saved the best for last. In our final two segments we will cover the state of small scale mining in Canada's two most famous mining districts. First the Province of British Columbia, well

known for numerous large gold rushes and mineral wealth that can just boggle the mind. Mining accounts for nearly 9 billion dollars a year in revenues to the province and employs over 28,000 people in 150 different communities. The main commodities are coal, zinc, copper, gold, silver

and molybdenum. The port city of Vancouver is the world leader for exploration companies, numbering over 700. There is over 650 million dollars worth of gold mined annually in BC. Placer gold and lode gold prospecting are abundant in many regions of the province with many commercial placer mines and hard rock gold mines in operation, especially in the Cariboo and Atlin regions of the province. Hand panning in BC requires no license on open ground and there are reserved areas for hand panning activities in many areas of the province. To prospect using other tools such as rocker boxes, high bankers and



Athabasca River - Wikipedia



Peace River - Wikipedia



Red Deer River - Wikipedia

THE NUGGET KING



Emerald - Wikipedia



Ruby - Wikipedia



Unworked Jade - Wikipedia

sluices you must acquire a Free Miners License at a cost of \$25 per year. The province has a well established digital staking system that has been in place for almost 20 years. Fees for filing claims in the first year are generally under 100 to 200 dollars and after the first-year work can be recorded in lieu of cash renewals for up to 10 years on a standard unpermitted claim. To mechanically mine in BC you must develop a mine emergency plan and complete a mining plan which must be submitted for approval. Bonds have recently gone up in BC and can cost a substantial amount. Bonds are collected to ensure reclamation work is done to the satisfaction of the ministry of environment and are returned if this is done. BC is facing very similar restrictions to mining rights for small scale miners such as moratoriums on dredging as well as some very asinine rules such as the recently published update 41 that limits claim holders to 3 people working a claim at one time. We are confident this rule will be changed in the future and are working on it. This is another example as to why our brothers and sisters in mining need to become more vocal about our mining traditions, history and rights, because if we remain complacent we will lose them all one by one. Death by a thousand cuts is a very real thing in the small-scale mining industries both in Canada and the USA. Join

your local association and write the powers that be, get organized and let our elected officials know how their poor decisions have affected your lives. In addition to BC's abundant precious metals which I cannot leave out the rare occurrences of platinum nuggets in the Tulameen and Similkameen areas of the province along with some other anomalous deposits scattered throughout the province and the incredible gemstone prospecting to be had there. Gemstones is a budding industry in the province with gemstones of almost every variety being found. Everything from fire opals to diamonds, and emeralds to rubies. British Columbia is larger than the state of Texas and the entire province has mineral or precious metals potential. This is my home and as far as I am concerned, British Columbia with gold fields many times larger than the mother lode country of California and nuggets that would compare easily to the largest in the world combined with its gemstone and other industrial mineral wealth, is one of the premier locations worldwide to locate yourself if you truly hope to find a life changing economic deposit.

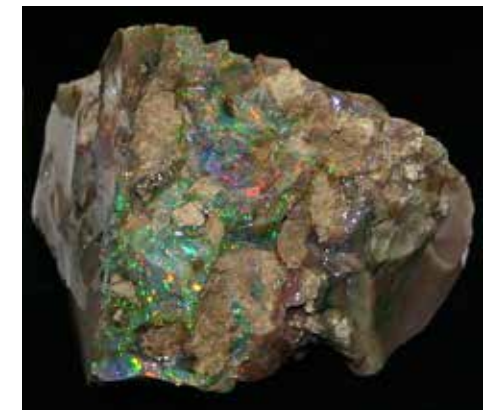
The last location in Canada I wish to cover is the best of them all when it comes to the gold hounds that I know have read this far. Next up is the infamous Yukon Territory



Molybdenum - Wikipedia



Silver - Wikipedia



Opal - Wikipedia

THE NUGGET KING

of Canada, home of the incredibly rich Klondike Goldrush! There are over 150 commercial placer mining operations currently running in the Yukon Territory, as well there is an estimated 25 million ounces of hard rock gold centered in the Carmack region mostly. The history of the Klondike Goldrush is easily found, and mining has occurred there on a steady basis since those days. Gold mining is the primary employer in the Territory. There were over 13,000 claims staked in the Territory in the 2016-2017 season. In regards to the economic minerals available in the Yukon, Gold mining is still an important economic sector but the focus has shifted to the large undeveloped deposits of lead/zinc, silver, tungsten, iron, molybdenum, nickel, copper and coal. These deposits include the second largest undeveloped iron ore deposit in the world and one of the world's largest undeveloped zinc-lead deposits so if you're after something other than gold the Yukon Territory has you covered there as well. For the gold hounds out there, most of the gold is in the northern part of the Territory centered in and around the Dawson area and surrounding regions. Getting a prospecting license is not required. The regulations as to how you can mine in the Yukon are more common sense with the government gearing their regulations to allow for proper exploration work. Placer mining/prospecting is allowed on non-claimed land that is not under the jurisdiction of First Nations. You must remember that the Indigenous Peoples of the Yukon hold a lot of influence over mining so please do your research and dig only where you're allowed and follow proper procedures, as the territory is open for business and is happy to accommodate miners. Staking claims is done in the traditional format, requiring you to get tags from the mine registers office. Commercial claims have to have proven reserves and there is a process for this, there are many quality claims for sale in the Territory, feel free to look me up and I can direct you to some honest good folk, who will point you in the direction of good claims and



Tungsten - Wikipedia



Miners climb Chilkoot Pass - Wikimedia Commons



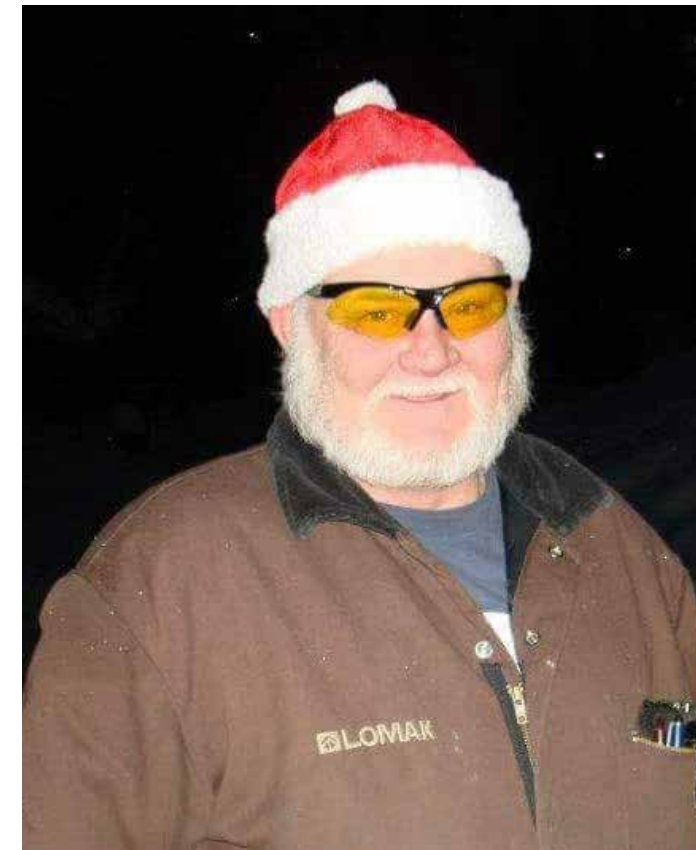
Gold Nugget - wikipedia

sellers in the Dawson area as I have several friends there in the business. All in all, for the exception of the weather (Northern Canada; need I say more?) the Yukon is my first choice for the best chance at finding and operating a small scale commercial operation and truly chase the dream. This grizzled prospector has a few more things to button up in BC over the coming years and will be headed north after that to find his true fortune. See you there!

So, concludes our marathon through Canada's 10 provinces and 3 territories, as you can well see there is not a place in Canada that a prospector would be left with nothing to locate and work, all economic minerals and metals are very abundant as well as precious metals and gemstones. In addition to the endless opportunities the country offers, there is the additional bonus to prospectors, in the fact that the country is very sparsely populated with 90% of the population located near the border with the United States. The upper portion of the country is one of the last places on earth that has truly been left virtually unexplored. Finding 1-ounce nuggets in quantity like our gold rush forefathers did is a distinct possibility for those whom are adventurous enough to pack a large amount of supplies and head into the deep bush checking areas with boots on the ground where few, if any, men have been before. If you are more than a hobby prospector and wish to pursue it as a full-time lifestyle, the opportunities in Canada can provide you with exactly that. If you have ever wished, you could see the land and what it was like before men tamed the motherlode country you only need to head north because our land is still almost untouched. Canada has a reputation for strict environmental laws and regulations and in most cases, this is true, but the fact remains, if you navigate the hoops there are literally thousands of mines across the country producing billions upon billions of dollars in minerals and metals, proving it is entirely possible still, to chase the dream in Canada!

IN MEMORY OF

Richard Wallace JANUARY 2, 1948 - JUNE 21, 2022



Dick was born in Gull Lake, Saskatchewan. He spent most of his young life working and traveling throughout North America with his father.

In the early 1970's they decided to go to the Yukon. Along the way they stopped to work at Fireside, in Northern BC. This is where he met his wife, Debbie. He then moved on to Dawson City, Yukon where he worked as a mechanic and did a little gold mining. He reconnected with Debbie in Whitehorse in 1975. They were married in August of 1976. They were graced with their daughter, Kathryn, in 1978. Due to work, they moved to north central Alberta in 1983, then moved a final time to Mackenzie in 1989.

Dick loved his family and worked hard to ensure they had everything they needed. Dick was a kind and thoughtful man. He had a soft spot for children and animals. He was very generous and helped any way he could. Dick had a great sense of humor and loved to play pranks. His career was spent driving truck and running heavy equipment, but his passion was running grader.

Dick is survived by his wife of nearly 46 years, Debbie; daughter Kathryn (Chris); granddaughter Jamilyn; grandsons, John and Thomas; their fur-baby Winnie and numerous extended family and friends.



Dawn - June 21, 2022. 0430hrs - Hwy 97 Mackenzie BC - Photo by Mitch Mortensen

St. Louis Daily Globe

SEPT 2, 1897

Golgotha of the Pacific

San Nicolas Island, Cal., Almost Covered with Human Bones

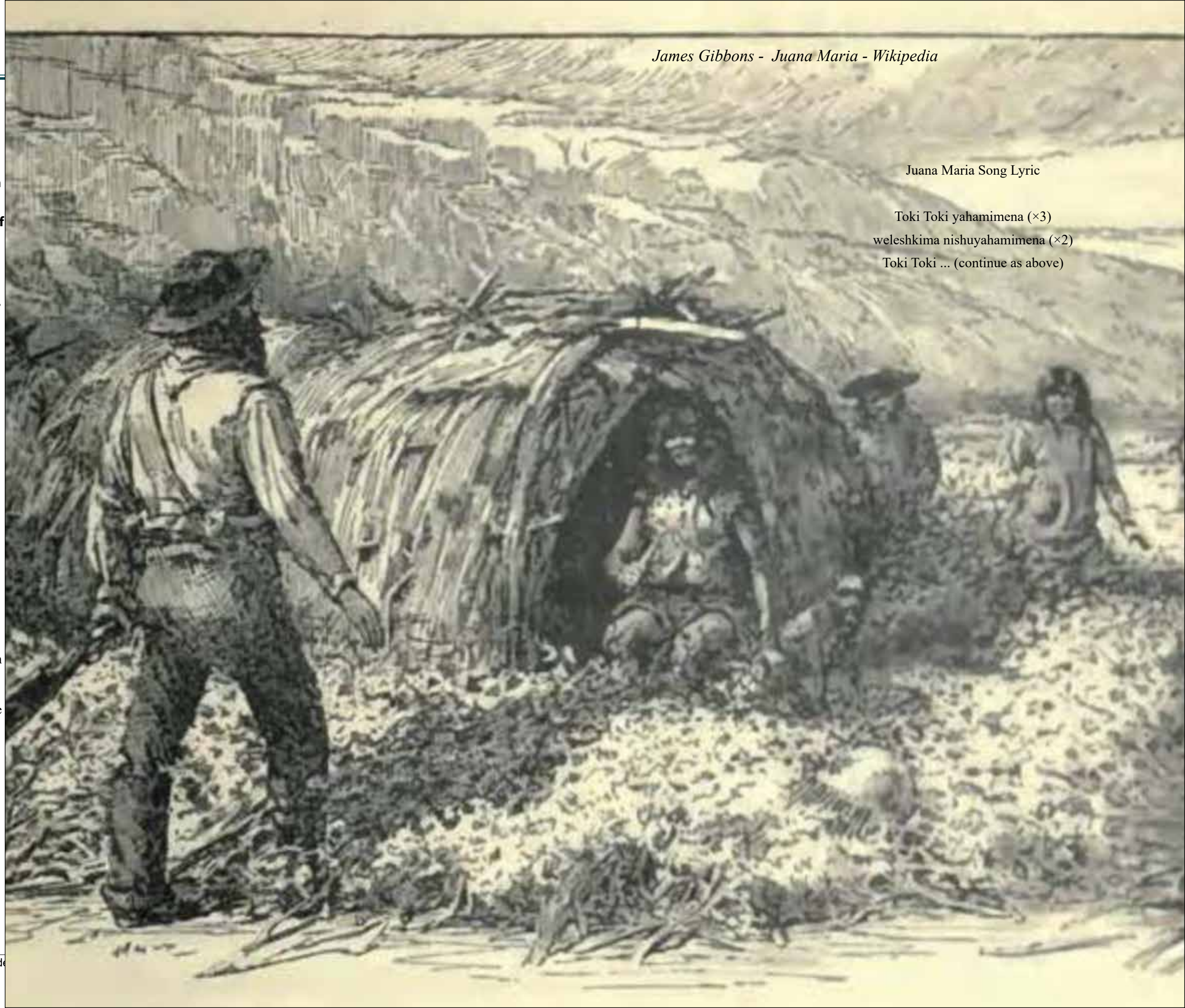
Skulls by Thousands Found There – An Extinct Race of Giants-The Strange Story of the Wild Women of San Nicolas – Ethnological Explorations.

Special Correspondence of the Globe-Democrat.

Los Angelous, Cal., April 24 - A party of young scientists, acting under the auspices of Harvard University, at Cambridge, Mass., and Leland Stanford, Jr., University, at Palo Alto, Cal., are now exploring the Channel Islands, off the coast of the California, and they have sent word to the mainland that their archaeological and ethnological discoveries have been so marvellously rich that the expedition will be prolonged several months. The Channel Islands have long been known among the old-time residents of California as the Golgotha of the Pacific, for nowhere else in the world are there probably as many human bones and skeletons lying exposed to the elements as in the Channel Islands.

There are several spots on San Nicolas Island where whole acres of rocks and sandy waste are thickly strewn with human bones. Only a year ago several men came home to Ventura from the island with a barrel of Indian crude implements and over 200 whitened skulls, which the men said they had picked from among thousands of skulls. A dozen of these fast-crumbling skulls were sent to the Smithsonian Institution at Washington and also to Harvard University at Cambridge. The ethnologists at both institutions were immediately interested and they declared the skulls were those of a race of Indian giants. Harvard University lost no time in sending an expedition to explore the Channel Islands scientifically.

Probably no region in the United States offers greater inducements to students in anthropology and ethnology than these islands. Ten years ago a resident of San Francisco offered to pay the expenses of an expedition of scientists who should spend a summer in exploring San Nicolas and San Clemente Islands, and to give the results of their finds to the State University at Berkely, but there arose such jealousy among the leaders of the proposed expedition that the offer was withdrawn. The Channel Islands constitute California's only archipelago, with the possible exception of the rocky and scanty Farallon Islands.



Juana Maria Song Lyric

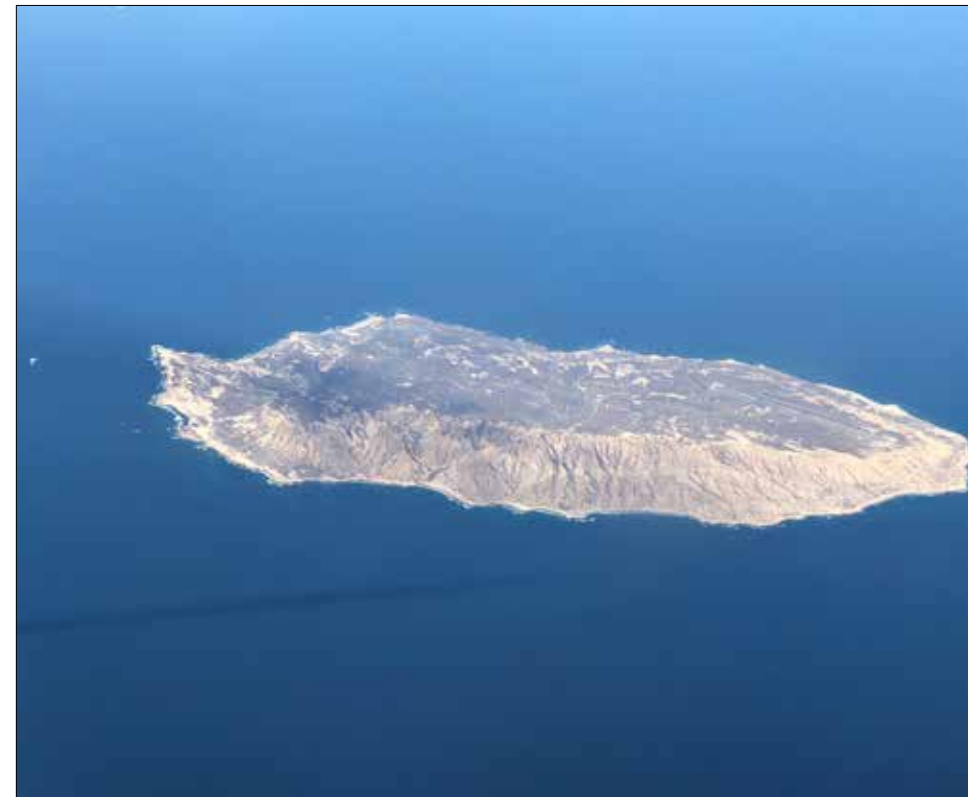
Toki Toki yahamimena (×3)

weleshkima nishuyahamimena (×2)

Toki Toki ... (continue as above)

They have been objects of romantic legends, curiosity and mystery for two generations or more. Notwithstanding that all the islands are within eighty-two miles of the California shore, they are solitary and unfrequented, and years roll by with visits to them of fewer than twenty people. Each island has its own particular traditions, and each has countless traces of an occupation by thousands of Indians. When Juan Rodriguez Cabrillo, the Portuguese navigator, sailed up the coast of California in 1542, he stopped for a day or two at each of the Channel Islands, and his records bear testimony that on the islands of Santa Barbara, Catalina, San Clemente and San Nicolas there was a vigorous and lusty race of natives, who thronged the shores of the little bays and headlands, "and gazed in wonder at the white-sailed ship of the navigators. To-day the islands stand as they did more than 350 years ago, but the natives are only a memory, represented by immense quantities of stone implements, barrels of fine wampum and literally cart loads of human bones.

San Nicolas Island, which lies eighty miles off the little city of San Buenaventura (recently called by the modern and easier name of Ventura), is the most interesting of all the Channel Islands from many points of view. As far back as the memory of any person in the Southern California runs, hundreds of white skeletons have dotted the valleys and hillsides. Strange utensils of serpentine, sandstone, and steatite are found there among the human bones, and the island and its inhabitants have a history so curious that it is difficult of comprehension.



The Island of San Nicolas - Wikipedia

In 1835 the Franciscan Padres in the Santa Barbara mission, learning that there were but sixteen of the strange Indian race then living. Determined to rescue them from the island. They went over in a sloop and succeeded, as they thought, in getting all on board. At the last moment an Indian women returned for her child, and one of the frequent storms of the Channel Islands springing up, the sloop was driven away. The sloop went on the rocks of Point Conception, and all on board were lost.

Sixteen years later Capt. Geroge Nidever and two men went from the coast in a sloop to hunt sea otters off San Nicolas. On landing they, like Crusoe, were astonished to discover human footprints in the sand. They saw no one, however, and a storm compelled them to put to sea. It was two years later the captain, revolving in his mind the sight of the footprints in the uncanny island, determined to go and discover and bring over the lonely women of whom he had vaguely heard. Men accompanied him, and at length they saw on the surf-beaten shore a women with long tawny hair, dressed in a queer garb of colored bird skins, and scraping with a bone knife the blubber from a seal. They surrounded and approached her stealthily. Although suddenly confronted, she did not appear to be in the least bit afraid, but smiled, and then, falling on her knees, prayed to the sun. She offered no objection when, by signs, she was made to understand that she was to go with them in the boat.

They searched Santa Barbara across the rough sea, and the first thing the Indian woman saw was Dr. S. L. Shaw, who is still living at the age of 80 years, riding a hors. She had never



Juan Rodriguez Cabrillo - Wikipedia

seen a spectacle like it, and thought the man and horse were one, and she knelt on the shore and offered her devotions to it.

Two weeks afterward the last inhabitant of rock-ribbed, tempest-beaten San Nicolas died from eating food to which she was not accustomed, and the curtain fell on her race forever. In speaking of that death at the meeting of the Southern California Medical Society the other day, Dr Walter Lindley said that if the women could have been spared for a few years, a story of one of the strangest races that ever lived in the Southwest and had had no contamination from the whites might have been learned.

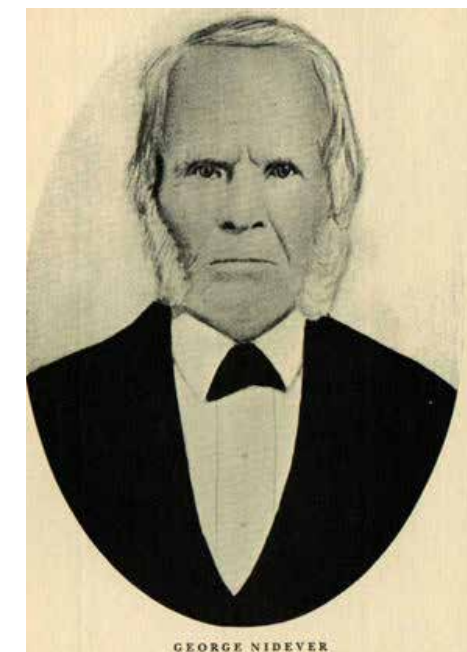
The woman known as the "Lone Woman of San Nicolas," has been the subject of a score of romances and poems and food for a lot of philosophy of the coast.

San Nicolas is ten miles long and four miles across at its widest point. Its topography shows a nearly level plateau, with an elevation of from 800 to 1000 feet. Two thirds of the surface is covered with drifting sand, and the remainder grows a species of nutritious grass and moss, on which 1000 sheep pasture. Several springs have been discovered, but the water is slightly brackish. Of late years the island is rarely visited, except by sheep shearers and shell gatherers, who make annual trips in schooners, fishing smacks or Chinese Junks.

The only safe landing ground is at the Coral Harbour, a pretty cove formed by two sandstone arms thrust out from the main barrier of the shore. The entrance is only 6 or 7 yards across, and the water within is placid as a lake and sufficiently deep to float a vessel of twenty tons burden. On the bleak, silvery strip of beach immense white pelicans are to be seen at almost any season of the year,



San Salvador Replica - Wikipedia



Capt. George Nidever-Wikitree



Juana Maria - Wikipedia

promenading with a stately dignity. On the approach of the dingy they spread their heavy pointed wings and vanish over the rocks. Further up the slope of the beach there is a dilapidated shearing shed and a weather-worn shanty belonging to Chinese shell-gatherers, who haunt these cliffs during the late summer and fall.

Nothing more desolate than the general appearance of the island can be imagined. As far as the eye can trace there are barren levels, with innumerable circular depressions, showing where primitive dwellings once stood. Not a vestige remains of the materials used in the construction of



Padre Jose Gonzalez Rubio Funded an effort to find Juana Maria-wiki



Above left- The West Box - Above right - The East Box - Below Left - Stone Projectile Points for spears and arrows - US national park service. below right a drawing depicting Juana Maria - Wikipedia



1800's: Newspaper clippings

1893 - FEB. 12

San Francisco Examiner

This female Crusoe was the last of a superior race who once inhabited this island, and whom Cabrillo described as "comparatively white and of ruddy complexion" The native men were finally exterminated by the Aleutian seal hunters and the woman left alone on Ghalashat or Sea Otter island, as San Nicolas was called.

The geologist of the party was almost beside himself with joy and seized a huge thigh bone and measured it against the canvas trousers of the artist. "Just as I thought"

he cried exultingly; " it is all of five inches longer, and you must be a good six feet in your stockings! Who says these islanders were not giants!"

1893 - OCT. 22

Morning News

The story of the Wild Woman of San Nicolas Island is a singular one. Outlines and summaries of it have been published from time to time, but a full account has never been given, nor has any part of it been presented as related by the principal actors engaged in her rescue after she had lived in solitude for seventeen years on that lonely isle.

1897 - FEB 21

Los Angeles Herald

At the time of the discovery of California, the coast, as well as all of the islands, was quite thickly populated, Congregated in numerous villages, the people are described as a superior race, with white skin, light hair and rosy cheeks.

1897 - MAY. 15

Cincinnati Enquirer

A dozen of these fast crumbling skulls were sent to the Smithsonian Institution at Washington and also to Harvard University at Cambridge. The Ethnologists at both institutions were immediately interested, and they declared the skulls were those of

A RACE OF INDIAN GIANTS.

1897 - JUL. 16

One of the most interesting relics brought back by us was part of a skeleton of a large man in whose bones a long bone spear point was sticking. In the shattered skull was a big round stone used as a war implement.

The spear passed near the heart and entirely through the shoulder blade. I am sure two different races fought and died on the island, as most of the bodies were of moderate size while some were almost giants. The latter were always in isolated graves

these rancherias. Hundreds of shell mounds are scattered about, and are found to consist of astonishing numbers of mollusks, the bones of every species of fish found in the channel, skeletons of seals, sea elephants, whales, sea otters, the island fox and various aquatic birds. Without question these animals were used for food by the tribes that once thronged the island. There are also numerous canine skeletons, several of which indicate a species of bull terrier. Judging from the immense quantities of dead land mollusks everywhere, there must have been a time when the island supported luxuriant vegetation. Of all this verdure nothing is seen to-day but a few stunted thorn bushes and now and then a cactus forlornly reaching its grotesque arms out of the sweeps of the sand. An examination of some of the mounds discloses all sorts of curious utensils, stone cooking pots, water ollas, mortars, pestles, drills, bone needles and fish hooks, shell beads, charm stones, pipes, cups and a few arrow heads, spear points and swords made of bone. The absence of many weapons proves the peaceful attributes of the islanders. Small imitations of boats and fishes carved crystallized talc and serpentine also show a rudimentary knowledge of the art of sculpture. In many places conical piles of small black pebbles contrast oddly with the white sand. In some instances these pebbles were closely packed in abalone shells. No trace is seen of the brush pens, in which the lone women of San Nicolas for years found her only shelter from the cutting wind and sand. Every foot of the strange island is eloquent of the extinction of an almost unheard-of people.

A trip along the west coast of San Nicolas Island over a vast extent of shell mounds sets one to wondering how it was possible for a limited population to consume such prodigious numbers of mollusks. In fact, the infinite variety of Mollusca on San Nicolas is said by biologists not be exceeded in any other known region of equal area. The shore line is of coarse sandstone, burrowed by the



Corral Harbor, San Nicolas Island - Islapedia

pounding surf into fantastic alcoves, bridges, columns and caves. Sometimes these savage cuts from rude effigies bearing a surprising likeness to living creatures. One of the most conspicuous is the exact counter part of the neck, breast and body of a bird with an alert, hooded head. This piece of nature's sculpture must be 40 feet long, and beheld from a distance looks as perfect as if fashioned by man. Going westward from this gnawed, surf-lashed wall the ground makes a gentle descent to a wide mesa, terminating in a steep escarpment. The atmosphere from this elevation is so deliciously clear that the eye can readily distinguish the peak tops of all the channel islands, although several of them are forty miles away. Immediately at ones feet there stretches away a dreary desert. A singular characteristic of the place where heaps of the bones of whales, their arrangement and packing so systematically correct as to have withstood a century's sweep of winds over this exposed point. Only one human skeleton has ever been found here. All around are casts of roots of trees in the shifting sand, ranging all the way in size from coarse fiber to several inches in diameter. These semi-petrifactions are intact, the wind having swept them clean of the loose earth. They yield a metallic ring when tapped with a rock or shell. A still more remarkable feature of this desert is a sparse stone forest, the broken columns or trunks of trees composed of indurated sand.

At the extreme western end of the island there is a colossal precipice 1000 feet in height, its chasm-ed and slitted face softened by a luxuriant growth of emerald moss and lichens. The strangest of all the sights on this island is to



Statue of Juana maria and child - wikipedia

be seen on the broad plateau south of the Chinese camp at Coral Harbor. Here acres of the sand are littered with thousands of disjointed skeletons. Measurements have been made by several scientists of the thigh, leg and arm bones, and literally bushels of skulls and other parts of the human frame have been brought to Los Angeles from San Nicolas Island for investigation. A physician recently counted there over 1200 skulls in one locality. Some were almost dropping to pieces from long exposure to the sun and water. The general opinion is that the physique of the Indian race that swarmed over the island then was much larger than that of any civilized race of to-day, and that some of them must have been 7 feet 3 inches tall. The skulls of this extinct tribe often measure several inches more than some of the large skulls of to-day. Many skulls found lying about on the island show that their possessors must have suffered death from a club or blunt battle-ax. No one has yet found a skull on San Nicolas that shows marks of a bullet. There are many collar bones and shoulder blades broken and crushed, so that it is evident that their owners were killed by some instrument like a war club or boulder. Scientists say the favorite weapon in warfare with the Aleutian savage tribes a century or more ago was a club or bludgeon, and this fact fits with the stray tradition that the Aleutians came down and completely destroyed the people on the Channel Islands about 1780



THE WILD WOMAN OF SAN NICOLAS

James Gibbons - Juana Maria - Wikipedia



Plaque commemorating Juana maria at Santa Barbara Mission - 1928

James Douglas Secret Mission To Find Gold

Published December 19, 2020 in TheOrca.ca

Daniel Marshall



Gold! This was the quest of not one, but two expeditions that crossed Vancouver Island from east to west during the mid-nineteenth century – both from Cowichan Bay and along the river of the same name – to Kaatza (meaning the

“Big Lake” in the Hulqu’mi’num language) and beyond in search of the elusive metal.

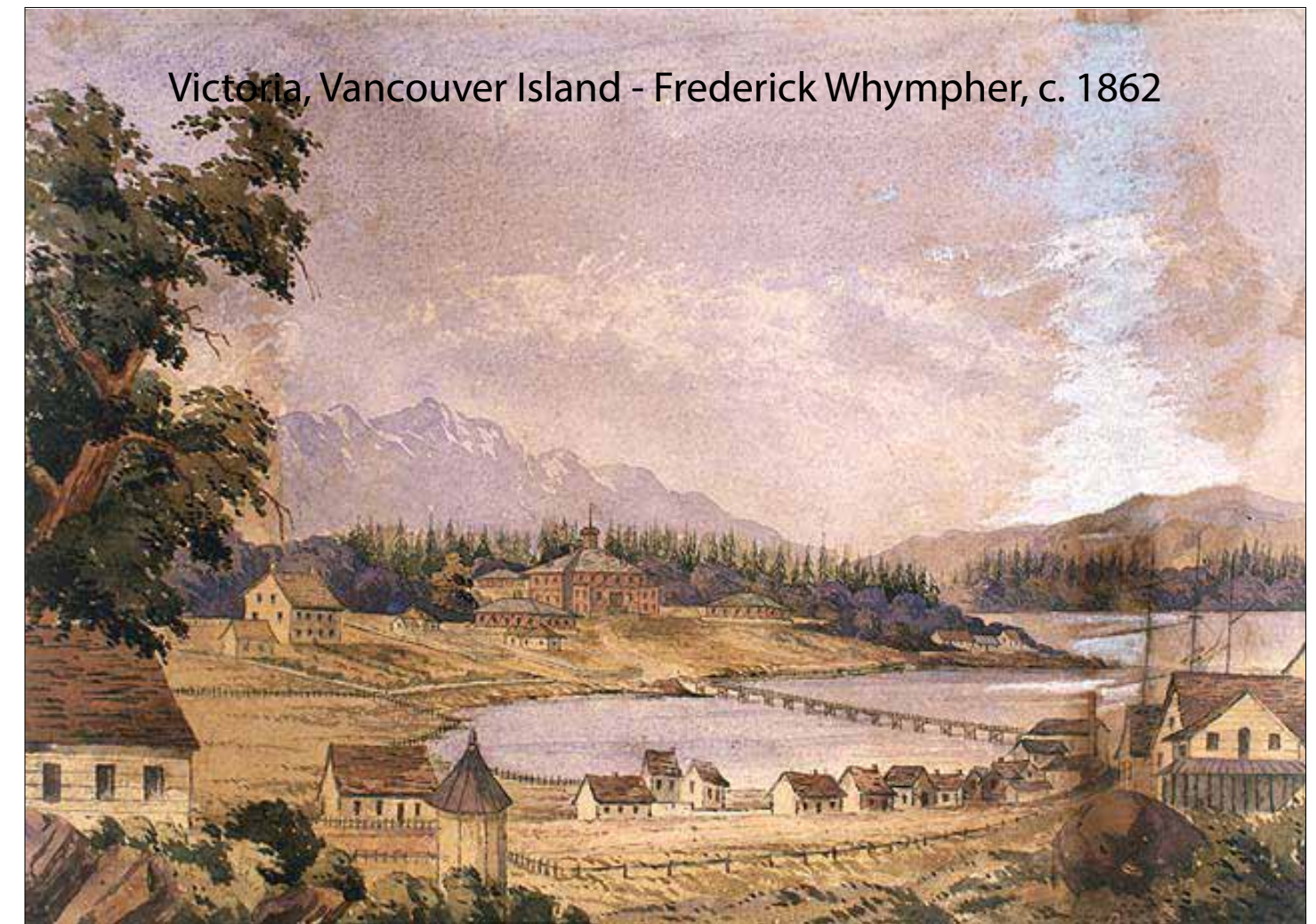
When the first “Indian diggings” were confirmed by Hudson’s Bay Company Chief Factor James Douglas in the Interior of what would become British Columbia (a year or two before the 1858 Fraser River gold rush) he

soon began to wonder whether gold might also be found in Vancouver Island.

Certainly, there had been a limited gold rush to Haida Gwaii in the 1850s, but no serious gold reconnaissance of Vancouver Island by non-Indigenous exploring parties, even though the founding of the Colony of Vancouver Island in 1849 had been the direct result of the massive California Rush of the same year.

While Douglas, also Governor of Vancouver Island, was excited by discoveries on the Mainland, apparently most were not! The Governor’s son-in-law, Dr. John Sebastian Helmcken, recalled:

The Governor attached great importance to [those mainland discoveries] . . . and thought it meant a great change and a busy time. He spoke of Victoria rising to be a great city — and of its value, but curiously enough this conversation did not make much impression.”

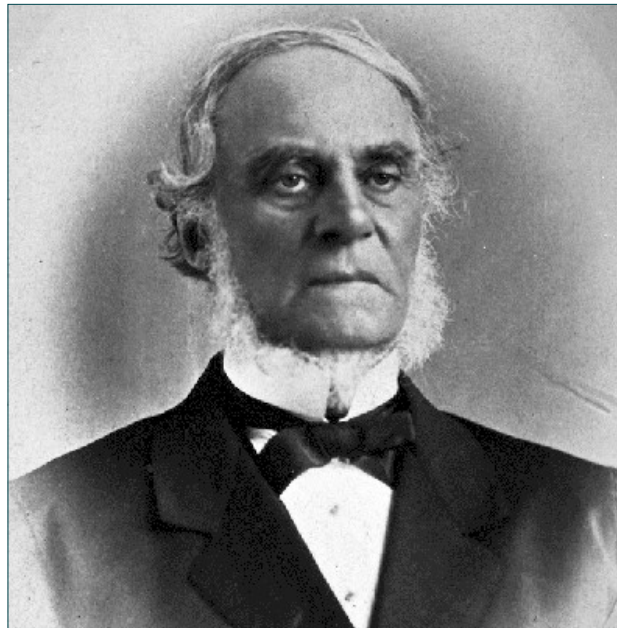


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"Old Square Toes" or Governor James Douglas

Some few weeks later, Douglas was again to show further gold collected by the Nlaka'pamux Indigenous people, this time "a soda-water bottle half full of scaly gold," yet Helmcken recorded that the Vancouver Island House of Assembly "took no heed of these discoveries."

As Speaker of the Colonial Legislature, Helmcken's

words show just how far removed the officials of the small colonial outpost were from the mainland discoveries that would ultimately reshape the coast. Nevertheless, Douglas remained undaunted and soon found reason to mount an expedition to cross the Island in search of gold.

According to one member of the expedition, Lieutenant Sherlock Gooch (son of Vice Admiral Thomas Lewis Gooch, grandson of Sir Thomas Sherlock Gooch, 5th Baronet, MP), shortly before sunset, 2 September 1857, the expedition aboard HMS Satellite steamed into Cowichan Bay, and anchored near the mouth of the Cowichan River.

A few hours later she was joined by the Hudson's Bay Company steamer Otter, having on board His Excellency James Douglas, Governor of Vancouver's Island.

Apparently, the stated object of Douglas' visit to Cowichan was to confer with the Somena Indigenous people (a tribe of the Cowichan Nation). Only much later would it become known the governor had an additional, hidden motive.

The following day Douglas, accompanied by several naval officers, HBC officials, and an escort of 50 seamen and Royal Marines, traveled up the river for the ancient village of the Somena people. According to Gooch:

The entire tribe turned out to welcome the Governor. They

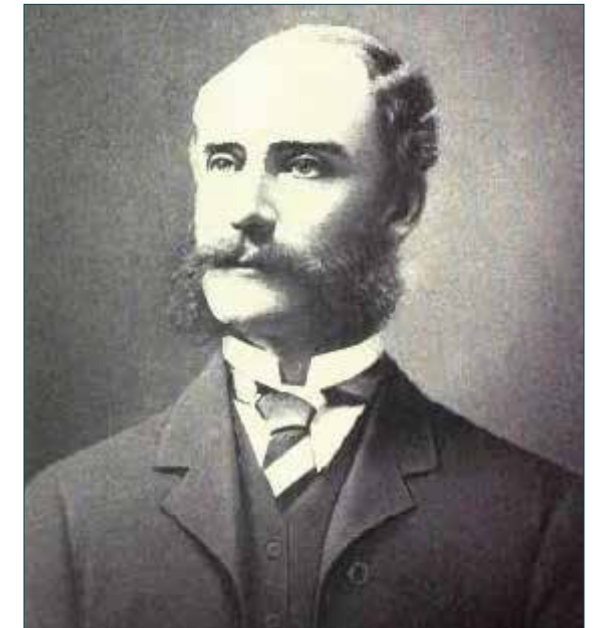
were not demonstrative, but were undoubtedly pleased to see Mr. Douglas. This remarkable man was a born administrator, and his name was held in fear and respect by every tribe on the north-west coast of America.

The chief had words with Douglas, and apparently the governor had responded in their own language, the exact communication not recorded by Lieutenant Gooch.

The chief of the village, "a handsome, well-set-up, and dignified man of about thirty-five" led the official party to camp about two miles further to an open campground with Swuq'us (meaning "dog" and related to an ancient Cowichan story) or today's Mount Prevost looming in the distance. Here was established the governor's base camp. Apparently "ponies" had also been shipped in from Victoria to use in their explorations of the valley's agricultural potential (perhaps an ominous sign for the local Indigenous peoples). Gooch's account becomes further interesting as to Douglas' hidden intention.

Late this evening (September 4th) Mr. Joseph Pemberton, Surveyor-General of the Colony, accompanied by two young Americans and an Iroquois in the pay of the Hudson's Bay Company, and several Somanos [sic] Indians to act as porters, left the camp without the knowledge of any of our party, except the Governor, with the intention of crossing the Island to the Pacific side. It was not generally known, but Douglas knew that gold had recently been discovered on the mainland. He wished to quietly ascertain whether it also existed on the Island. Hence the attempted secrecy.

Before the expedition was underway the Somena people, many apparently hired as packers, abandoned the project. This shortage of people led to Royal Marines like Lieutenant Gooch to immediately enlist. This was 1857; the smallpox epidemic of 1862 had yet to sweep the coast. Indigenous populations, such as the Cowichan, were not only numerous, but had already taken more than one determined stand with the colonial

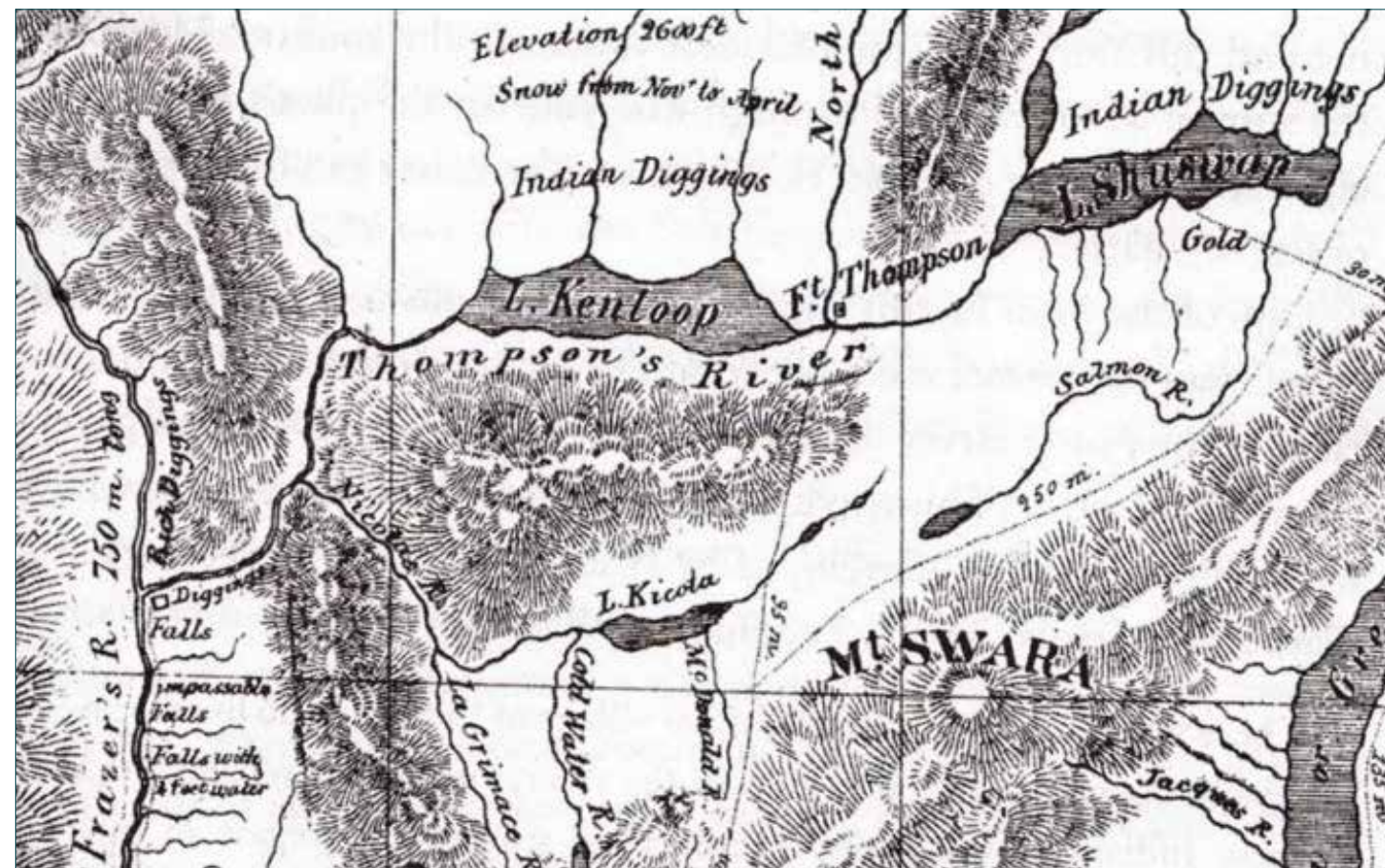


Expedition Leader, Surveyor-General Perberton

government – which had not engaged in any treaty-making in the Cowichan Valley, as in Southern Vancouver Island.

History records that the Cowichan people were naturally aggrieved they had not been paid for their traditional lands, and though the larger settlement by non-Natives was yet to occur five years later (with the arrival of HMS Hecate), it seems likely that Douglas would have been confronted on this issue, and a reason for the Somena to abandon their support.

Whatever the reason, from Somena intelligence colonial authorities learned of the existence of "a large lake in the centre of the Island" and this became the expedition's first



"Indian Diggings" in the Interior of B.C. Alfred Waddington map published in 1858



goal – to find Kaatsa.

As Pemberton’s party headed up through the Cowichan River-lands for the “unknown” lake, the story is of tough terrain, travel, weather and hardships:

“Through thick masses of wild raspberry bushes and other underwood . . . With our packs and our rifles it was a scramble getting down,” admitted Gooch, “but at last, with torn clothes and bleeding hands, the lowland was gained.” Yet through it all they continued to look for gold:

“Some ravines, with torrents from the north, were crossed, and in the beds of the streams gold-bearing rocks were found, and specimens obtained.”

Governor Douglas would have been pleased.

The expedition was undoubtedly at a great disadvantage without the Somena to not only pack for them, but more critically, to guide them. What success they did have was aided immeasurably by one mixed-race individual by the name of Tomo Antoine, the legendary Iroquoian hunter and HBC interpreter. Gooch described this extraordinary individual:

As Antoine was an important member of our party he deserves a description. About forty-five years old, he was a slight, actively built man, with a dark, copper-coloured face. lit up by keen, intelligent blackeyes... By birth an

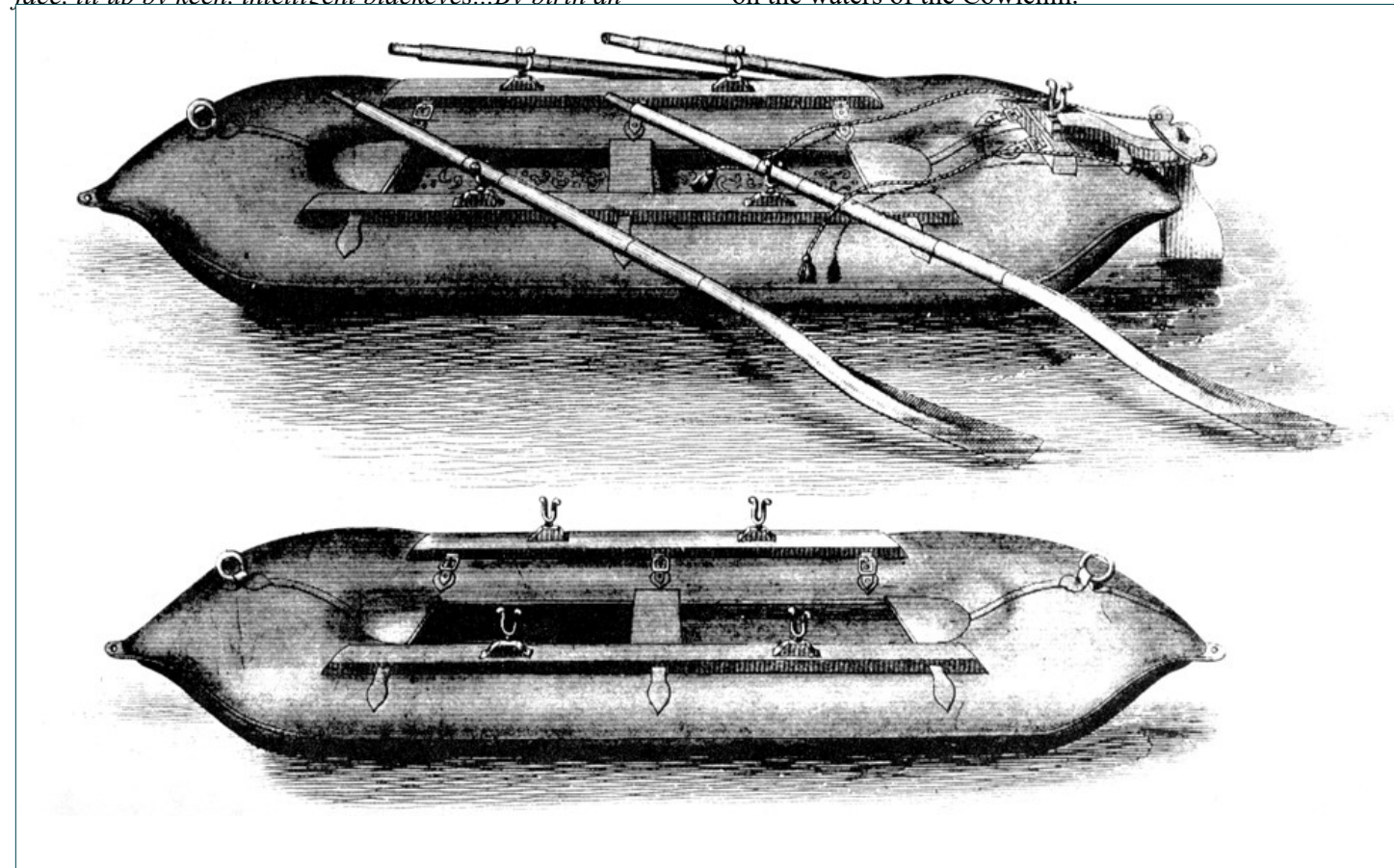
Indian of Lower Canada, he spoke the French dialect of that province well, and also English, and many Indian languages. His reputation as a huntsman and axeman stood high, and from his intimate knowledge of back wood life and of the customs of Indian tribes Antoine was a valuable addition to any pioneering expedition in North America. Further, although of a rather suspicious and peppery temperament, the Iroquois was a cheerful, sociable fellow, and spun us many amusing yarns when seated round our campfire at night.

The “Tomo” referred to here is none other than Thomas Quamtany, one of Douglas’ most-favoured interpreters, employed in this role at Fort Victoria through the treaty-making councils of the 1850s.

After further hardship and toil the expedition party finally “had their eyes gladdened by the sight of a large sheet of water glistening in the rays of the setting sun,” wrote Gooch.

“This was at once pronounced to be the great central lake described by the Somanos Indians.”

Glad to leave the bush, the exploring party set out to inflate a 30 foot “Indian rubber boat” – surely the first such inflatable boat to have ever been used in British Columbia. “It was blown out, duly named the Pioneer, [and] launched on the waters of the Cowichin.”

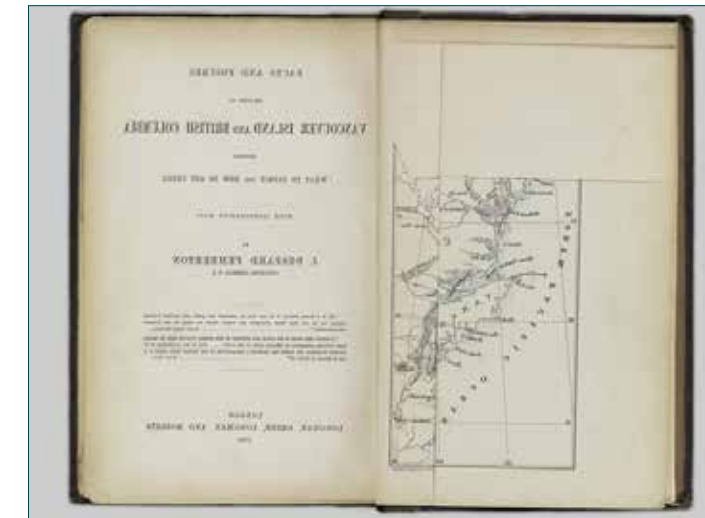


An inflatable Rubber Boat 1855, attributed to Thomas Hancock who was granted a UK patent

Pemberton’s party also “spent eleven hours” building a sizable raft which they named the “Saucy Jack” and both these craft were put into play exploring the great inland lake of Cowichan.

The expedition surveyed the surrounding countryside, eventually making it to Nitinat and the West Coast of the Island, but no further mention of gold discoveries. Reporting to Douglas 12 November 1857, Pemberton wrote:

The principal instruments and chronometer I carried



Pemberton’s 1857 Expedition Report published in 1860

myself, but as the country is heavily timbered, after passing Mount Prevost, and the fallen trees slippery to walk on, occasional falls was a thing unavoidable, which so damaged the instruments that I regret to say the observations, though taken with the utmost care, proved useless, and the map annexed a compass sketch.





Dr. Robert Brown, Expedition Leader C. 1864

results, the Vancouver Island Exploring Expedition of 1864 achieved much greater success, particularly in its search for gold – and this time with the active participation of Chief Kakalatza [Kakalatse] of the Somena people.

The expedition followed a similar path to Cowichan Lake, under the command of Dr. Robert Brown, a young botanist, who awarded Chief Kakalatza special recognition. In Robert Brown and the Vancouver Island Exploring Expedition (1989), John Hayman notes Chief Kakalatza’s importance to the expedition both for his intimate knowledge of the river landscape through which they traveled, and also for the ethnographically important stories shared with members of the expedition:

Brown’s most rewarding period as a collector of myth and legend [notes Hayman] was probably during the four months of the Vancouver Island Exploring Expedition in 1864, and he was later to acknowledge his indebtedness to . . . Kalalatza, a joint chief of the Somenos [Somena] who accompanied the exploratory party from Cowichan Harbour to Cowichan Lake. ‘Every dark pool suggested a story to him,’ Brown remarked, ‘every living thing had a superstition, and hour after hour we lay awake listening to the strange story of Kakalatza, Lord of Tsamena.’

I know descendants of Kakalatza [Kakalatse] today, proud to know the story of their famous ancestor. Yet, there is another pivotal expedition member: “Tomo, who joined the expedition at Cowichan Harbour and remained with it until the conclusion.” Tomo (Thomas Quamtany) was the only individual to have accompanied both expeditions in 1857 and 1864. As noted previously, Tomo was a mixed-race guide and interpreter considered by Governor Douglas to have been indispensable in so many early explorations.

The Brown expedition left Victoria by boat on 7 June 1864, and arrived at Cowichan Bay that same day. On 9 June they left the village of Comiakén and arrived at the “Great Cowichan Lake” on 15 June. Of the river, Brown wrote:

The Cowichan River is about 40 miles in length, and is a most tortuous stream; a straight line from the mouth of the lake would not probably be more than 29 miles; it is exceedingly rapid, there being hardly any smooth water with the exception of short distances in the canyon, and about two miles at the height of the river before joining the lake. Its banks, some distance from the sea where the sea breezes do not affect them, covered with magnificent forests of the finest description.

And as to the existence of gold, Brown provided much more detail than Pemberton’s problem-plagued expedition of 1857:

The color of gold we found everywhere, and in one or two

places from X cent to IX cents to the pan was reported to me, in other places sufficient pay dirt to last for a long period. I may call to the recollection of the committee that white men have since then been-reported as making as much as \$5.00 per diem on this same river.

In addition, this expedition was now able to collect identifiable Indigenous names at every point, Chief Kakalatza pointing out to Brown himself the long-time place-names found throughout the river corridor:

A trail is here and there found along the banks with occasional fishing lodges, [wrote Brown] and camping ground such as (above Samena), Tsaan (the ‘torn-up place’); Saatlaan (the place of ‘green leaves’); Klal-amath (two log houses); Qualis (the ‘warm place’, Latitude 48 degrees 45 min. 37 seconds north); Kuchsaess (the ‘commencement of the rapids’); Quatchas (the canyon); Squitz (the ‘end of the swift place’), a most picturesque series of rapids with Indian lodges of which we secured a sketch, and so on until we came to Swaen-kum, an island where the Indian deposits the poles by which he has hitherto propelled his canoe up the rapid stream for now we have come into Squakum, the still waters, the commencement of the lake, where the current is no longer perceptible...

On Friday, 10 June 1864, Brown took steps to commence the expedition:

Sent the canoe with Tomo, Kakalatza, Lemon [son of Comiakén Chief Locha], in charge of Mr. Buttle, up the River with the provisions, appointing an Indian fishing village called Saatlaam as the rendezvous, the exact situation of which had been described to me by Tomo & said to be reached by tolerably good Indian trail. To lighten the canoe each of us took our personal [belongings] though this was somewhat compensated by the amount of personal baggage Kakalatza took—amongst others his hat and incredible to say a hat case to hold it which he had got from some young Englishman who had ‘gone through the mill’ in Cowichan since the halcyon days of Regent Street. His villagers gathered out to see him off. He wished to take one of his young men with me but I declined. With the rest of the party I started off, taking with us an Indian boy Selachten to put us on the trail

The exploration having begun, Brown remained alert to any information about gold:

On a creek a little further up, gold has been found in paying quantity it was said by Mr Jas. Langley who prospected it in company with Harris & Durham in 1860 [following Pemberton’s confirmation in 1857], but we now know better what pay [is] in placer diggings & I am assured by Harris that it would not pay. It yielded according to our washing about 8 colours to the pan, But



Chief Kakalatza - Painting by Fredrick Whympier

Have no doubt but that more could be got.

Not unlike the earlier Pemberton Expedition, Brown’s party were often “losing the trail frequently and tearing our hands & feet through thick undergrowth of crabapple & raspberries.” And sometimes when he inquired of the Indigenous name of a particular locale, it was so ancient that “the meaning we could not learn, as it was named in days long gone by, by the old people from something they could not understand, just like places in our own country.”

Unlike the Pemberton Expedition, the 1864 exploration sought more than geographical information or intelligence of gold. Tomo, like Kakalatza, often spent the evenings in camp telling stories – undoubtedly like those told to Lieutenant Gooch in 1857, but the difference was that Brown recorded them.

Moonlight night—late to rest—stood round the camp fire listening to Tomo’s description of Indian astronomy and was struck with it as similar to the Arabian in the similitudes they draw between constellations and known objects. The handles of the plow are two men in a canoe, the Pleiades are a collection of fishes, Four stars (The Plow?) are an elk. The Moon they think travels and has a frog inside of it (Is this worse than our Man in the Moon?) The stars are little people. A strange people are these Indians. The more you know of them the more can you appreciate their shrewdness—the curious store of lore and traditions they possess; to judge them as you see them ‘loafing’ about the white settlements is like judging a man

by the coat on his back. Few ever take the trouble to learn about them and still fewer know anything bad about them tho' loudest in their general dogmatic denunciation of them.

As the party continued up the Cowichan River, gold was never very far from their minds. The expedition even employed an experienced American gold seeker who was constantly dipping his pan into the various streams and sand & gravel bars they encountered. In fact, American gold seekers often played a pivotal role in the early development of this province.

Brown wrote of this experienced gold miner:

Foley (a very experienced Miner) prospected a bar & found about 1/2 cent to the pan & thinks pay might run ahead of the prospect and that Chinamen [archaic] might by using Blankets and quicksilver make \$1 to \$1.50 per diem which would be a great thing for the country. On every creek and bar yet we have found the colour of gold and plenty of black sand but too fine. Hitherto the River has been bordered by flats (more or less wooded) & it is not likely that good prospects can be got on bars in their vicinity. What gold comes down the hills lands on the flat where an equally good prospect can be got. When the hills come down to the water that is the time for prospects.

As the expedition continued to map and record their journey, heavy rains compelled them to take shelter in two native lodges at Skutz Falls shown to them by Kakalatza. "These lodges were empty just now," recorded Brown. "Three young men & two women having gone (so old Kakalatza said) to hunt elk at the great Lake. We accordingly took possession of the best lodges—and as our trousers were very wet, we took them off & fastened our blankets round our legs Indian fashion & stretched our length upon mats belonging to the 'three hunters of Kaatsa' in which position Mr. Whympier took a rough sketch of the party."



Squitz Falls - Painted by Fredrick Whympier 1864, 1864, Beineke Library, Yale University

Though the rain continued unabated, Tomo continued to hunt and bring fresh game, and the expedition continued the next day, Tuesday, 14 June, in the direction of Lake Cowichan.

"Now we appreciate our waterproof sheets," Brown commented on the deluge they had experienced, "It seemed true as Macdonald [an expedition member] declared that 'the devil was whipping his wife' & if we may judge from his frequent allusions to that gentleman, he appears to be on terms of considerable intimacy."

The American miner Foley continued to prospect throughout, next panning "an old bar & found 1 cent to the pan, fit to pay a good miner with a rocker \$2.50 to \$3.00 per day. It is on the old bars of the river that we have found the best prospects & hence the best gold."

To give these wages some perspective, standard pay for a labourer at the time was about \$1 per day. Brown recommended for the future that "men who have the means & the inclination with appliances superior to ours, & more time at their disposal, to test further a river which we have proved to yield more gold than any other place yet tested in Vancouver Island."

Brown was convinced of their success:

Foley is a very experienced Californian & British Columbian Miner & may be relied on. I particularly cautioned him against the slightest approach to exaggeration, telling him that I was not at all anxious to swell out my report with reports of gold but only want the naked—even underestimated—statement of the truth. He assured me that he had gone under rather than over, when he stated the prospect at from 3/4 to 1 cent the pan. A very experienced miner can wash out 300 pans a day. Call it \$2.00 a day. I saw many Chinese on Fraser River last autumn between Lillooet & Yale—particularly about the far-famed Boston Bar weighing out their day's earnings,



Lodge at Squitz Falls - Painted by Fredrick Whympier 1864, Beineke Library, Yale University

and dividing from 55 cents to \$2.50 to each—and yet they were contented, notwithstanding the privations of these out of the way places, & the high rate of provisions.

"So exciting is gold hunting," enthused Brown, "that men are willing to leave the certainty of good wages to take the uncertainty of poor ones, led away by the hopes of striking large ones. Nothing but this could ever make them endure the hardships & disappointments of their work."

Finally, Brown's party approached Lake Cowichan, and in a little clearing somewhere before the lake "found on a cedar tree divested of a piece of the bark, written in pencil fresh as the hour its being written 'Harris, Langley & Durham Augt 1st/60' marking the limits of their exploration. We added our autographs to this memorial tree."

Just beyond, Chief Kakalatza was waiting with their canoe and about a mile further along were greeted by "a blazing fire" where other expedition members were found busy cooking supper, "which we soon encircled to dry & warm ourselves, until the heat made us retreat to a respectable distance from it."

Brown recorded:

The Indians say 'You White Men are fools. You build a fire to warm yourselves but you make it so big that you cannot get round it,' & I daresay they are quite correct. A White man's camp you can know for years. He cuts down trees, he heaps on logs, & altogether he makes a very 'tall' fire, but the Indian manages things better, & saves himself a great deal of trouble. He gathers a few sticks, saves his axe, makes a small fire & crowds round it, warming without burning themselves.

In short order the expedition would travel the great Lake Cowichan (Kakalatza soon returning to Somena having fulfilled his promise to guide them to the lake). They inspected the vast terrain, sampled the creeks for gold, and



Mining Operations of the Vancouver Island Exploring Expedition 1864, Beineke Library, Yale University.

ultimately ventured to Nitinat on the West Coast, but not before breaking into two separate parties.

Under the command of Lieutenant Peter Leech, Royal Engineer, the breakaway party headed down into the Sooke Lake watershed and finally struck the kind and amount of gold that Governor Douglas had so hoped for – the Leech River, a tributary of the Sooke River – and some of the coarsest gold yet found. With this discovery, the Island's own gold flurry commenced – the Leech River gold rush – but some six years after the Fraser River Rush of 1858.

The Leech River gold fever was immediate. Before the year had ended, there were a total of six general stores, 30 saloons, and about 1,200 miners in these goldfields.

How gold has – and continues – to change the world. Between 1857 and 1864 not only had a smallpox epidemic hit, an instant gold rush town created, but increased numbers of non-Native settlers had moved into the Cowichan Valley. While Robert Brown's expedition had been a success, for Indigenous people it represented vastly more than a mere mixed blessing. Throughout the 1864 journey Brown had widely conversed with the Cowichan people and recorded the substantial ill-effects to their people. Writing at Cowichan Bay, 9 June 1864, "The Indians are complaining of the conduct of the whites," wrote Brown.

They say 'You came to our country. We did not resist you – you got our women with children & then left them upon us – or put them away when they could have no children to keep up our race (a fact or nearly amounting to as much). You brought diseases amongst us which are killing us. You took our lands and did not pay us for them. You drove away our deer & salmon & all this you did & now if we wish to buy a glass of firewater to keep our hearts up you will not allow us. What do you white men wish?'



The Encampment at Lake Cowichan, Whympier, 1864, Beineke Library, Yale University

This is in part very true. The Indians have not been treated well by any means. There is continually an empty boast that they are British subjects, but yet have none of the privileges or the right of one. Their lands have never been paid for in these districts at least. They are not taxed nor yet vote. They are confined in their villages to certain places. Nor are any means taken to protect their rights of fishing & hunting.

Over 150 years since a sympathetic Brown itemized the complaints of the Cowichan peoples, and in 2020 it still remains that “their lands have never been paid for.”

While Pemberton and Brown would have their names immortalized in history, the success of these two colonial exploratory parties depended quite significantly on others less well known: Chief Kakalatza; and Thomas Quantany, a.k.a. Tomo. They certainly warrant inclusion, indeed a much more prominent place, in the history books of our province – in addition to the outstanding grievances of these Indigenous people of the last one and a half centuries.




Kennedy Flats Camp, Leech Town. Royal BC Museum

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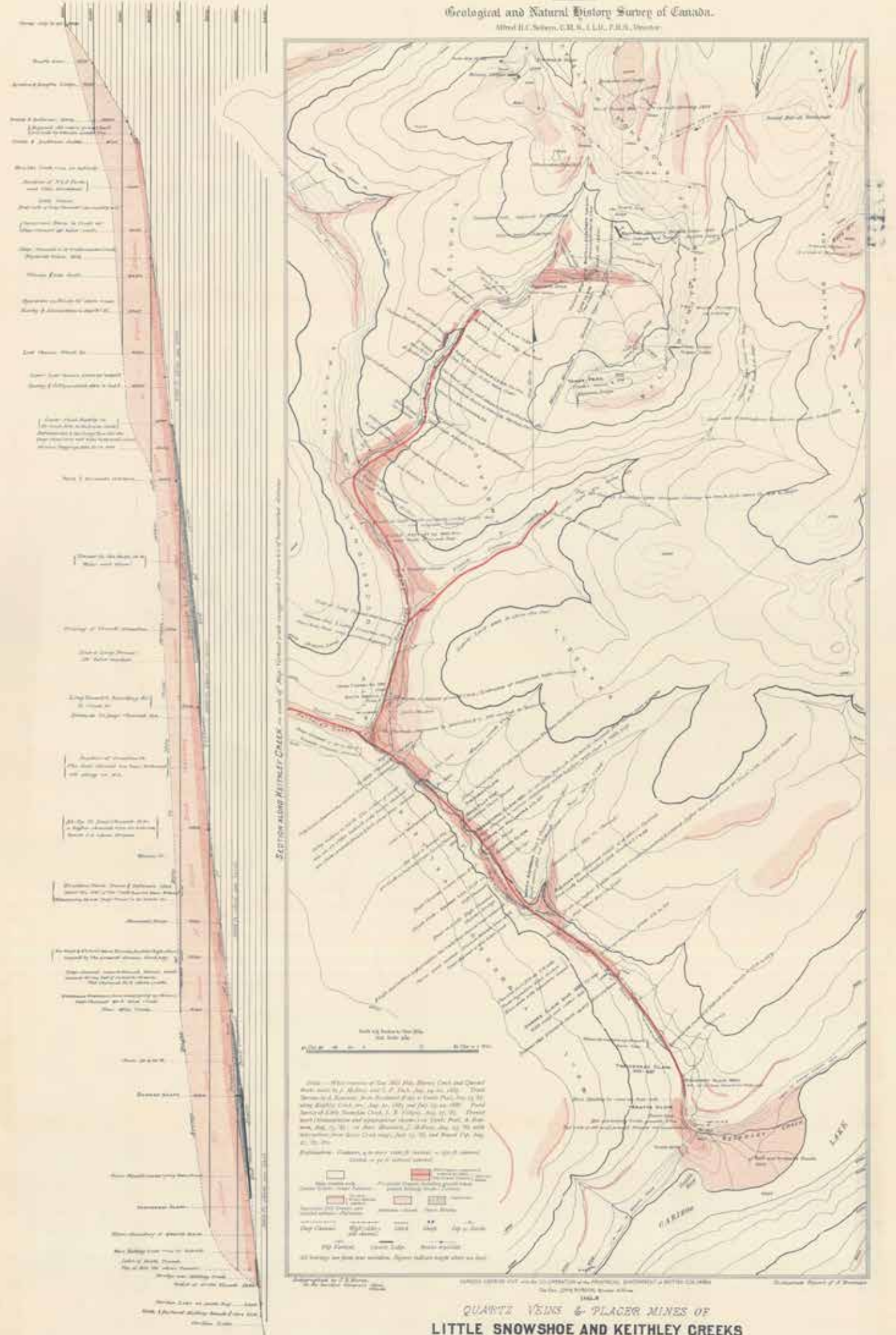
A fifth-generation British Columbian, Daniel Marshall is an author, professor, curator, documentarian, and researcher focusing on British Columbia's relatively untold but rich history. He is a recognized leader and award-winning researcher on historic Native-Newcomer relations, and their evolution and implications on Aboriginal rights today.

His award-winning documentary, *Canyon War: The Untold Story*, has aired on Knowledge Network, APTN, and PBS. His latest book, *Claiming the Land: British Columbia and the Making of a New El Dorado*, is available in bookstores across B.C.

Claiming the Land has achieved a rare and possibly unique feat in BC History by winning three major book awards: the Canadian Historical Association's 2019 CLIO PRIZE for best book on B.C.; the 2019 Basil-Stuart-Stubbs Prize for outstanding scholarly book on British Columbia, administered by UBC Library; and the 2019 New York-based Independent Publishers' Book Award (Gold Medal for Western Canada).



On the Cowichan River' by Whympner, 1864, Beineke Library, Yale University





Yanks Peak- Photo by Mitch Mortensen, June 2021

Exploring The History Of The Douglas Vein (Part1)

Mitch Mortensen

Yanks Peak, also known as Snowshoe Mountain, and the surrounding area has been in a constant of mining for the past 160 years. Many mining operations and even towns have been reclaimed by mother nature in that period.

Bulletine 34 (Holland Report) was published in 1954. This report identifyee's 24 lode and placer occurrences between Roundtop Mountain and Yanks Peak. One of them is the first hard-rock (mineral) claim recorded in the colony.

In 1862, Thomas Haywood, Edward Jeffrey and C.L. Miller struck a rich quartz lead at the headwaters of Luce Creek. The specimens observed and reported by the Weekly British Colonist were said to be "rich in gold" and stained with iron oxides while the vein was said to be 18 inches thick. They also reported the value of this discovery was Probably \$250.00 per ton!

They wrote the Colonial Secretary, Sir Edward Bulwer Lytton announcing their discovery and requested discovery privileges. Sir James Douglas and his Gold Fields Act of 1859 made their request responsible for the enactment of the first regulation concerning simple partnerships for mines.

This discovery became known as the Douglas Vein and it led to a rush of Quartz claim staking in 1863. Thomas Haywood staked several more Quartz claims in the area.



Sir James Douglas - Wikipedia

One of them was reported in the Cariboo Sentinel August 28th 1875 with assays of 7 ounces silver and 2 oz gold to the ton on a ledge. This vein is not identified with any known today.

The Holland report suggests it may be near the Douglas vein and there is a third and lower tunnel described in the Report of the minister of mines for 1929 at elevation 5230 feet and driven 36 feet. However, The Bowman map from 1885 1886 locates Haywood's ledge at the 6000-foot elevation mark on the west side of Yanks Peak. This is the last reference of Thomas Haywood in the public record until 1886 where George Veith and Robert Borland relocated the Douglas Vein. They did some work the following year and then it was abandoned until R. Reinhold relocated it in 1928.

Thomas Haywood had partnered with William Luce who used an arrastre to process material from the first tunnel but was unable to make it profitable. This was probably due to the gold being too fine and requiring more elaborate chemical processes to leech the gold from the pyrite. These processes exist today but not in the 1860's. The first arrastre is buried under material from driving the second tunnel. A second Arrastre was built and but it was never used.

The word Arrastre means to drag along the ground. This is an ancient form of milling ore going back to Phoenician



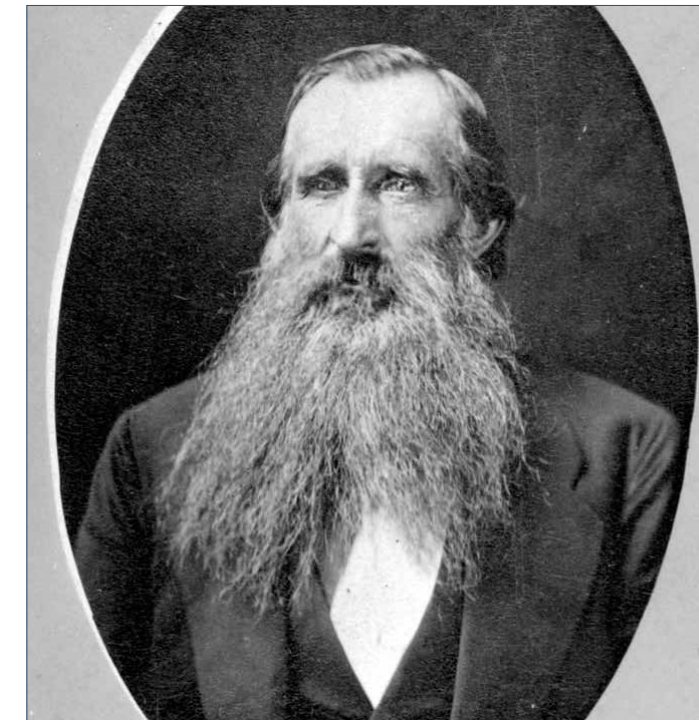
Sir Edward Bulwer Lytton - Wikipedia

times. Its described as placing two flat bottomed drag stones in a pit of flat paved stones. They are fashioned on both sides to a long arm that turns on a center post. Using a horse, mule or human strength the stones were dragged slowly around in a circle crushing the ore. Some Arrastre's were powered by water as proposed in the British Colonist newspaper Oct 1862 when Haywood's discovery was announced.

Mercury would be added to the ground ore while continuing to grind. The fines would then be rinsed out and more ore added. At cleanup the gold amalgam was recovered from the bottom of the Arrastra and then heated in a distillation retort to recover the gold and separate the mercury for reuse.

It was now known as the Arrastre mine. The Holland report continues

The upper Arrastre adit is at 5,401 feet elevation, is 62 feet long and driven in a northerly direction on the Douglas vein. The rock exposed init is light, biscuit-brown weathering sericite schist, all considerably oxidized and iron-stained because the adit is only a few feet below the surface. The vein, 24 to 30 inches wide, is exposed for 12 feet south of the portal and for 10 feet within it. Beyond, the adit follows a small northerly striking fault, but there is no vein along it. Instead, quartz stringers a few inches wide, striking mostly north 70 degrees east and dipping



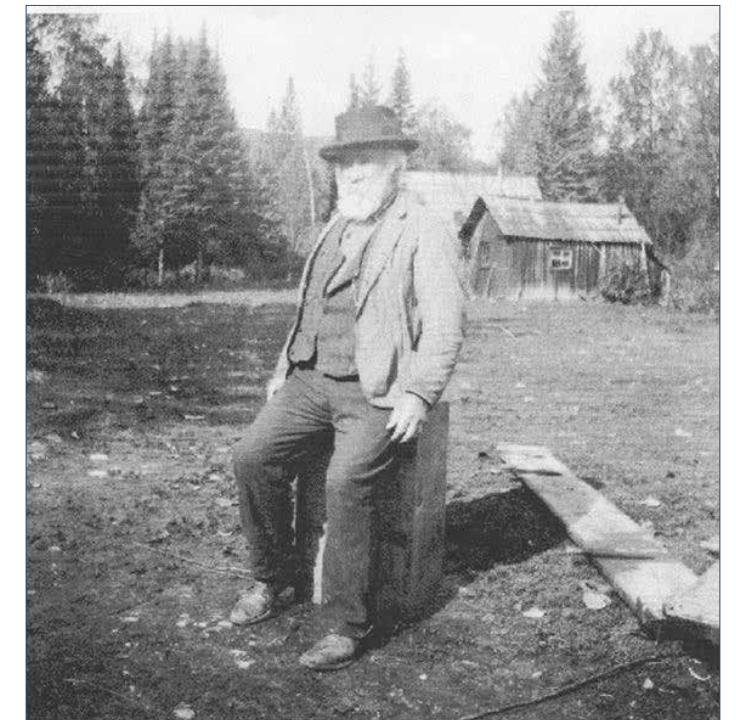
William Luce - Likely Museum - BC Royal Archives

75 degrees northwest, extend laterally from the fault and cross the drift obliquely. The stringers are mineralized with pyrite, and visible gold is present in some. The pyrite is thoroughly oxidized and in many veins is leached, leaving small cubical pits.

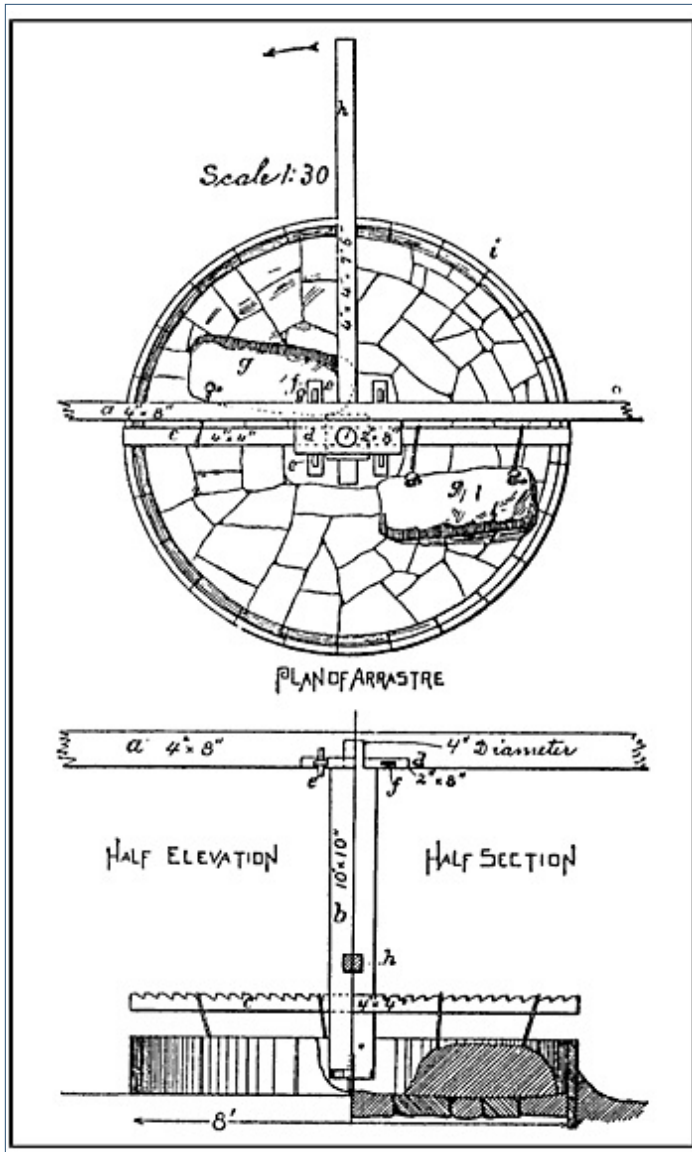
The lower Arrastre adit, elevation 5,362 feet is 120 feet south of the upper Arrastre adit. The portal is caved and the workings are inaccessible. However, a survey of them was in September, 1940 by B. T. O'Grady, and the following information is derived from his notes. The adit comprises about 160 feet of workings consisting of a northerly drive of about 90 feet and a branch to the northeast about 60 feet in length. At 50 feet from the portal there is a raise to the surface, beyond which the adit follows a northerly striking vein for 30 to 40 feet. Vein quartz in the face is about 5 feet wide. The north-easterly striking branch follows a vein which pinches out about 35 feet from the intersection.

It is possible that that the northerly striking vein in the face of the lower Arrastre adit is the same as that in the outer part of the upper Arrastre adit

Old arrastre tailings are partly covered by the dump on the lower Arrastre adit. It is apparent that very little vein quartz was milled, other than the amount broken in driving the two adits. There is no stoping in the upper adit, and O'Grady indicates that not more than 15 square feet of



Robert Borland - Likely Museum - BC Royal Archives



vein could have been stoped in the lower adit, None of the assays suggest tha the average grade of the vein quartz is sufficiently rich for profitable mill by arrastre.

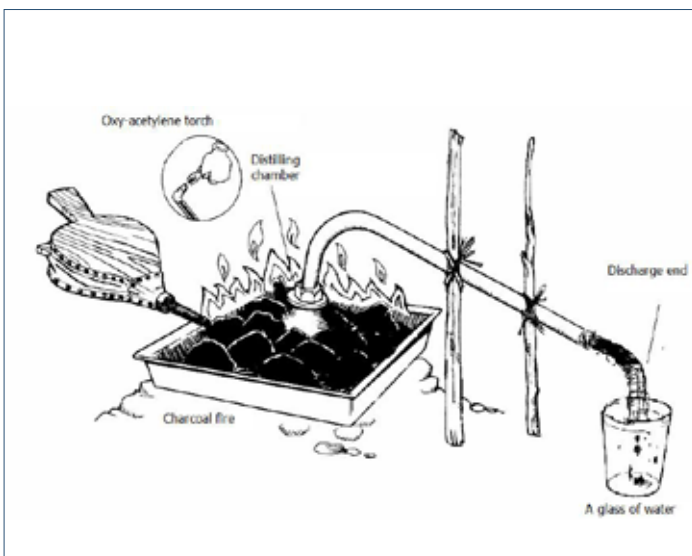
Yanks Peak and Roundtop Mountain have three main classes of veins. These are based on their strike direction. There are the Northerly Striking, the North-easterly and the easterly.

The northerly striking veins occupy faults or shears up to 40 feet thick and 1600 feet long. The north-easterly striking veins occupy tension fractures. These veins are up to a foot wide and only 100 feet long but they also occur in swarms. The easterly striking veins occupy fractures from 1 to 3 feet and slightly longer than the North-easterly striking ones

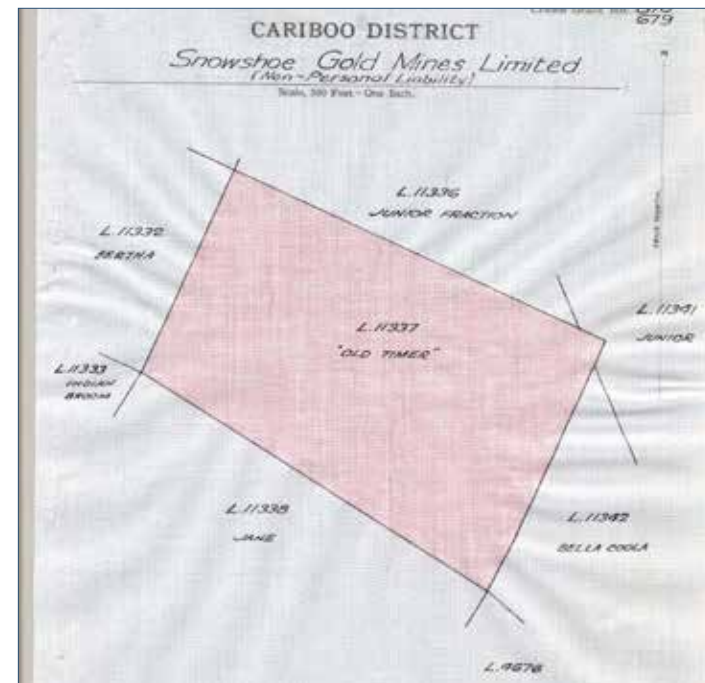
In some instances, veins do not occupy single fractures but form along two directions of fracturing, of which one or the other may dominate. A perfect illustration of this branching pattern is the Camp and Intermediate levels. The main vein has formed along a northerly striking fault and small strands branch off along north-easterly fractures.

Vein mineralization shows Ankerite is common but not the universal gangue mineral. It is a source though for ankerite in the country rocks. Pyrite is the most abundant of the vein sulphides and occurs in irregular masses and disseminate grains. Assays indicate the quantity of gold is closely related to the amount of pyrite in a vein. The reddish-brown color of Ankerite is distinct from the yellow brown color from pyrite.

Visible gold in some veins are mostly small rough pieces and flakes lodged in the cubical cavities from which pyrite



Top- Illustration of an Arrastre as described by Wikipedia, Bottom - Diagram of a Mercury Amalgam Retort. - Appropedia. This process made it possible to recycle and reuse the mercury



The Old Timer-Public Domain

grains have been leached. The gold only becomes visible when the pyrite is leached. As a result, little to no gold is visible in veins exposed in the underground workings.

The veins are closely associated with the dominant northerly striking faults. Either they occupy the main fault or the fractures of two directions which may accompany it. It hasn't been possible to determine the total displacement along the various faults, but some represent a considerable amount of movement. These represent the last main structural event following several periods of folding. The mineralized and unmineralized faults were formed during this time.

The North-easterly striking veins occupy tension fractures along which there has been no lateral movement. The fractures are almost at right angles to the elongation of the rock. This is believed to have originated as extensions. The Right-hand movement along northerly striking faults created tensional forces that reopened them.

The easterly striking veins formed with the other two directions. They are believed to occupy fractures associated with the Northern striking faults.

The main concentrations of placer gold on Keithley Creek, the Snowshoe Creek's and Luce Creek are believed to have their own bedrock source nearby. These sources are as yet undiscovered. The one consistent generalization is that all golds, both lode and placer, contain mercury and copper.

An interesting observation in the Holland Report is the distribution of the northerly Quartz Veins. There are four veins that occupy faults and they appear to be in line. The Imperial, Snowshoe, Midas, and Sockett occupy faults that

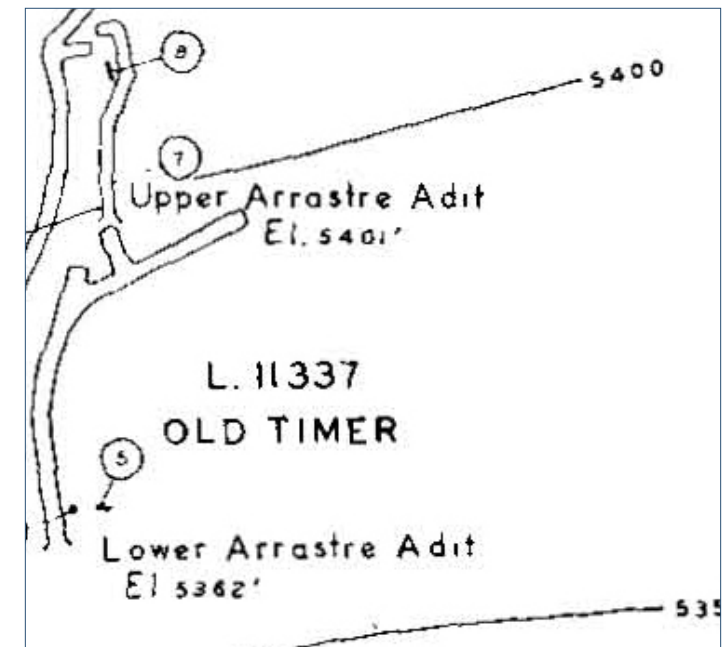
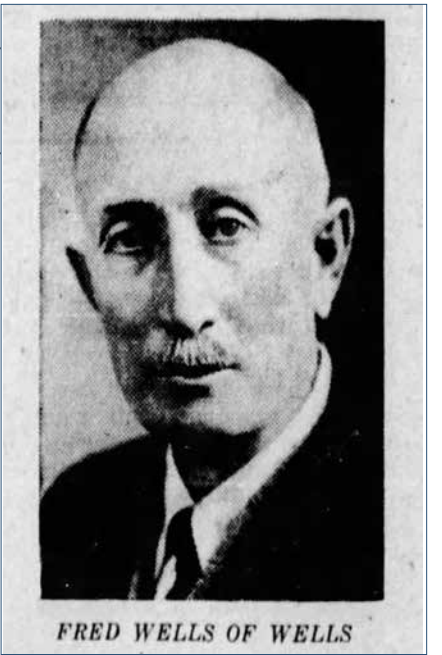


Illustration of the Upper and Lower Arrastre Adit. - Holland Report

suggests they lie along a continuous fault over great distance. This continuous fault has never been explored or proven.

Reinhold and Associates optioned the Douglas Vein now known as the Jane Group to Fred Wells. Fred Wells Created Snowshoe Mines in 1937. He had came to BC in 1882.



The Province Oct 5, 1940

He had made the Surf Inlet mine and managed it for a while. He held out selling a piece of valuable ground for a while over his personal distaste for what is described as "double dealing". Fred was known to be at times short on money and grub but would "share his last dollar and last pound of bacon with a fellow prospector"

William C. Drake had made found gold bearing quartz in the Cariboo Mountains and through his broker friend set up a meeting with Fred Wells. Drake missed the meeting and within a few weeks Fred had already met up with an old friend Al Sanders with a discovery of his own.

Al Sanders was the discoverer of the Sanders Vein on Cow

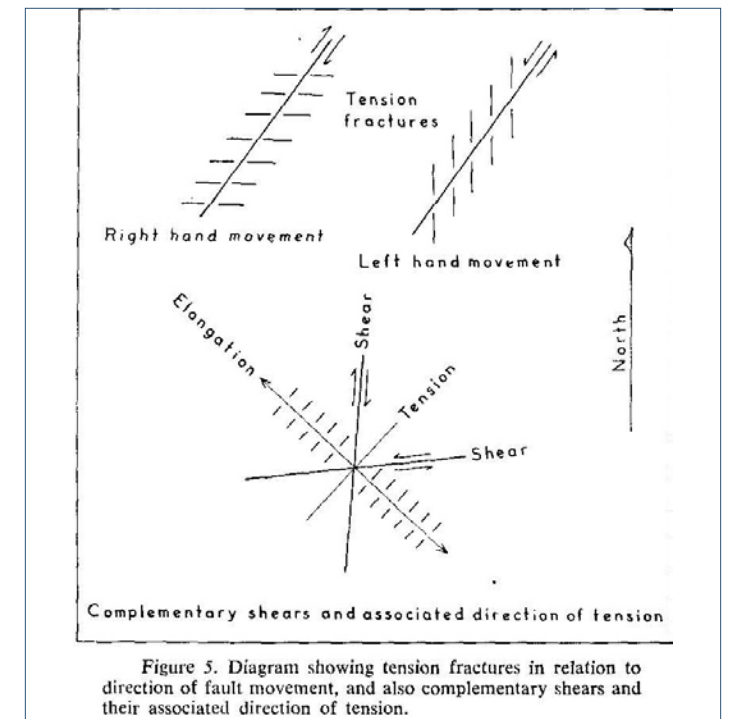
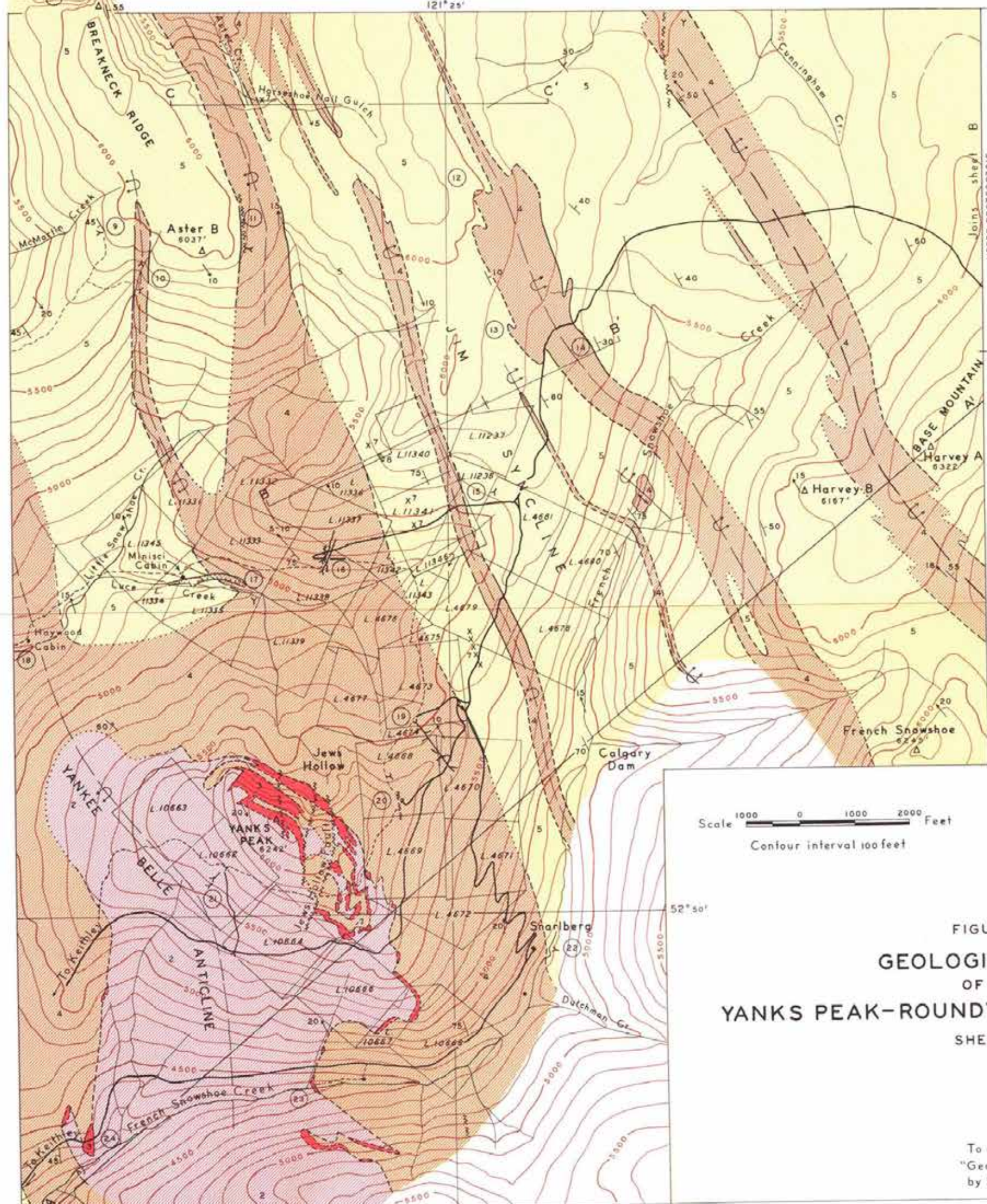


Figure 5. Diagram showing tension fractures in relation to direction of fault movement, and also complementary shears and their associated direction of tension.



LEGEND

BASIC INTRUSIONS: dykes of diorite, diabase, and lamprophyre

ACIDIC INTRUSIONS: dykes of rhyolite porphyry

CARIBOO GROUP

- 6 UPPER SNOWSHOE MEMBER: limestone chlorite schist
- 5 SNOWSHOE FORMATION: quartzite, conglomerate
- 4 MIDAS FORMATION: black silty quartzite, argillaceous schist, limestone
- 3 YANKS PEAK QUARTZITE: white quartzite
- 2 YANKEE BELLE FORMATION: quartzite, phyllite, chlorite schist
- 1 CUNNINGHAM LIMESTONE: limestone

Geological boundary defined, approximate, assumed

Bedding inclined, overturned, vertical

Fold axis plunging, horizontal

Anticlinal axis, overturned

Fault defined, approximate

Adit

Ditch

Trail

Road

Hydraulic pit

Prospect

Cabin

LODE and PLACER OCCURRENCES

- 8 Holmes Ledge
- 9 Taylor Tungsten
- 10 Hebson vein
- 11 Imperial vein
- 12 Cornish Ledges
- 13 The Stockwork
- 14 Plateau d'Or vein
- 15 Jim adit
- 16 Snowshoe Gold Mines Ltd.
- 17 Luce hydraulic
- 18 Haywood hydraulic
- 19 Midas adit
- 20 Saddle shaft
- 21 Corban veins
- 22 Homestake group
- 23 Sockett showing
- 24 Cariboo Keithley Gold Placers Ltd.

Scale 1000 0 1000 2000 Feet
Contour interval 100 feet

**FIGURE 2
GEOLOGICAL MAP
OF THE
YANKS PEAK-ROUPTOP MOUNTAIN AREA
SHEET A**

To accompany B.C. Department of Mines Bulletin 34
"Geology of the Yanks Peak-Roundtop Mountain Area"
by S.S. Holland, 1953

Mountain. Fred and Al made a deal. For four years Fred worked the ground by crushing the quartz by hand and panning the free milling gold. He purchased more claims around him including the Rainbow claims and formed the company "Cariboo Gold Quartz Mining Company" in 1926. Fred Wells was 65 years old.

The Province March 5, 1933

At the mine he is known as the Old Man and the crew do half their work for wages and the other half for the Old Man. They know of Wells Struggle since 1927 when he began work on Cow Mountain, and they smile about his exaggerated aversion to professionally-trained mining engineers and geologists. Except in very rare instances Wells does not permit engineers or geologists to go underground.

Criticism by engineers was directed against Wells and his enterprise when he dropped down a hill from the upper workings and commenced a 3000-foot crosscut tunnel to come under the Sanders or Rainbow showings at a depth of 750 feet. Engineers say it was luck; friends say it was foresight; but, in any case, the tunnel encountered no fewer than nine cross-fissure veins en route, eight of which contain commercially valuable ore. None of these veins had been exposed on the surface.

Engineers had contended that such a long tunnel was not justified and that a shaft should be sunk on the ore.

There first two gold bricks poured from the Cariboo Gold Quartz weighed 117 pounds together. It was April 16, 1933 and a huge success. Fred re-invested that success into forming the Cariboo Hudson and then Snowshoe Mines in 1937.

Fred purchased the Spanish Creek Sawmill during the summer of 1938 from a "defunct Canada and Staes Hydraulic Company". It was dismantled and shipped to Snowshoe mines.

Also In 1938 it was reported that Fred Wells and the Provincial Government had jointly undertaken constructing a road over the meadows the seven miles from Cariboo Hudson to Snowshoe mines.

By this time there were about 10 buildings that included a diesel powerplant, air compressor, bunk houses, cook house and a blacksmith shop. The camp was stocked with half a million pounds of supplies and powder to see them through the winter. All of this brought in by tractor from Barkerville to supply a mine crew of 12 men operating two drills through the winter.

To enable the mass to be mined as a whole they have to prove sufficient gold values throughout the large quartz bodies. This could only be done by tunneling and cross-cutting throughout the quartz bodies.

The Province April 26, 1939

“The quartz veins are located in quartzites and schists and are in appearance similar to those forming the Cariboo gold belt at Barkerville and the Cariboo gold quartz areas. Many of the major characteristics of that belt prevail on the Snowshoe shear zone and we now have in Dr. Lang’s report on geology of the Keithley area this formation very favorably spoken of with substantial suggestions of it being practically the extension of the same belt of formations”

The Gold Ore (pyrite type) was awarded First Place in the Mineral Exhibits at Vancouver Fair, 1939.

By February 1940, they had completed 1200 feet of drift work, including tunnelling and crosscutting on two levels. The showings were encouraging enough for Fred Wells to declare nearly good enough to run a pilot mill.

In March they struck a 20 foot mineralized zone. It was cut with values carrying \$10 to \$12 dollars per ton. Gold was \$33.85 per ounce at that time. They totaled at 1600 feet drifting to date.

March 3, 1940

“This later work has been devoted to extending our intermediate level to over 300 feet. In this level we have crossed a very interesting orebody and at a vertical depth of over 125 feet below the surface.”

“The ore, vein occurrence, seems to represent more nearly the shear zone type, showing a decided banded structure and would appear to be cutting the quartzite bedding in depth.”



Fred Wells in his winterized truck on tracks - Vancouver Sun May 27, 1939

“In crossing, our tunnel continued in bands of ore and schistose quartzite for a distance of fully twenty feet. Bands of beautiful white quartz and heavy sulphides predominate and at once express the best known class of ore shown at other points along the Cariboo Mineral Belt.”

“I have sampled carefully the ore each day myself as our drill cut through the ore-bearing sheared belt. No spectacular high grade gold has thus far been found but the whole body represents a good milling grade of ore, probably \$10 to \$12 value”

“A half powder box of somewhat selected ore gave a value of \$54.95 in gold showing some good grade in old does exist.”

“We know nothing about this ore vein except where cut through with our drift, but as our development work continues the ore possibilities will be demonstrated.”

“To express myself I feel that an important strike has been made and that in a new and undeveloped camp we have the right to congratulate ourselves and more than ever before anticipate other good orebodies to be opened up as development is carried on into the hill”

In July that year Fred declared “A few hundred feet of tunnel will reach our main objective and explore sufficiently to establish the character and to some degree the size of our ore bodies.”

A shortage of supplies and spring breakup up forced him to close the mine until snow was cleared from the road over the meadow. He referred to the ore body cut as “values are good and body is big”

There was nothing in the public records until August 16,



Fred Wells Snowshoeing the Snowshoe range - The Province March 5, 1934

1941 when the Quesnel Cariboo Observer published an update. The Snowshoe Gold Mine would be taken over by Pioneer Gold Mines of B.C. Ltd.

The agreement exclusive option on 60% of the authorized 3,000,000 shares of Snowshoe Gold. This agreement provides for a total expenditure of \$200,000. Shares will be taken down by Pioneer as funds are provided for development. The two companies were now in a 60-40 basis from the start of operations.

Pioneer took immediate possession and the agreement was approved by the B.C Superintendent of Brokers. The announcement was also meant for all shareholders to have the opportunity to view all documentation at the next annual shareholder meeting. This meeting was scheduled in early September.

The shareholders unanimously adopted the new agreement. The summary of operations was work had been held up due to rain.

On December 8th 1941 Roosevelt addressed the United States Congress

“Yesterday, December the 7th, 1941 - A date which will live in Infamy-the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan”

Holland’s Report describes that Pioneer ceased operations in January 1942, and since then no further work had been done.

Three adits – the Camp adit, Intermediate adit, and Lower adit- totalling about 1,850 feet were driven by Snowshoe Gold Mines Limited in 1938 and 1939 and by Pioneer



One man drill in operation - Wikimedia Commons

Gold Mines of B.C. Limited in 1941. The Same northerly striking vein that is exposed in surface trenches on the west side of the bulldozed strip is followed on both the Camp and Intermediate levels. The northerly striking fault, accompanied by some vein quartz that crosses the Lower adit about 460 feet from the portal, is probably the same vein.

The Intermediate and Lower adits cross a strong fault zone about 30 feet wide. This fault strikes a few degrees west of north and dips about 65 degrees west. It is seen only in the underground workings; neither its extension beyond them nor its surface expression has been observed.

The Camp adit, at 5,262 feet elevation, is driven in a northerly direction for about 240 feet. The rocks are mostly medium-grey soft argillaceous schists; some pale sericite schist appears near the face. The dominant schistosity dips steeply northeast and is crossed by a more widely spaced cleavage of a second generation dipping about 25 degrees northeast. About 80 feet from the portal, vein quartz reaching a maximum width of 16 inches and striking about 20 degrees east comes in from the west wall and is followed by adit for about 75 feet. At that point the vein joins a northerly striking fault, striking north 5 degrees west and dip 70 degrees east, of very small displacement. Vein quartz 18-22 inches wide follows along the fault for about 60 feet, at which point the vein appears to swing into the east wall. Striations on the smooth wall of quartz in the fault plunge 15 degrees south. The post vein movement along the northerly fault displaces veins about 2 ½ feet to the right. The quartz is mineralized with pyrite and a small amount of galena.



Roosevelt Addresses Congress - Wikipedia

The Province June 27, 1940. Wells Mining Company

Wells Mining Corporation

Limited

FRED M. WELLS

Promoting and Operating Gold Mines

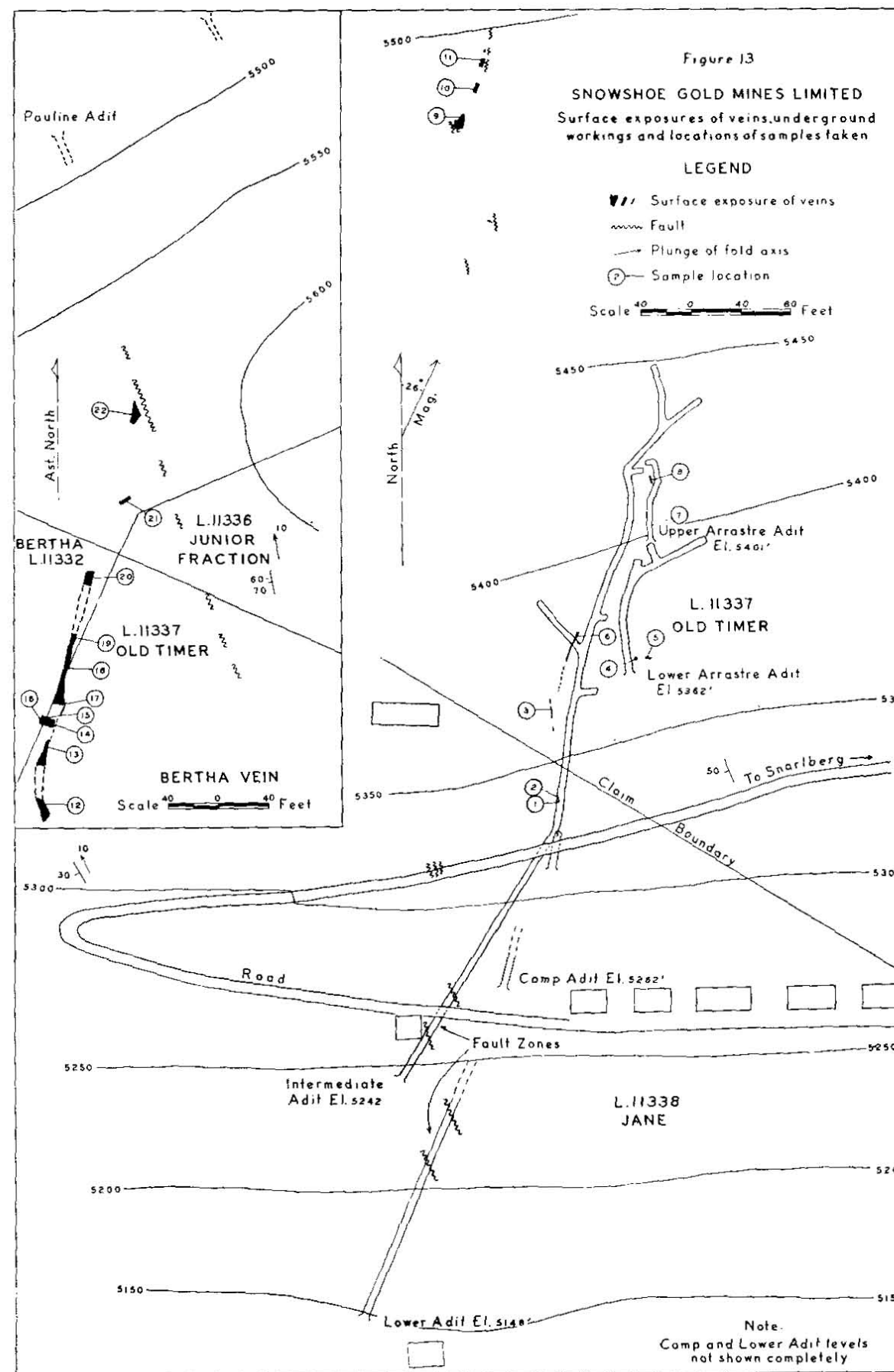
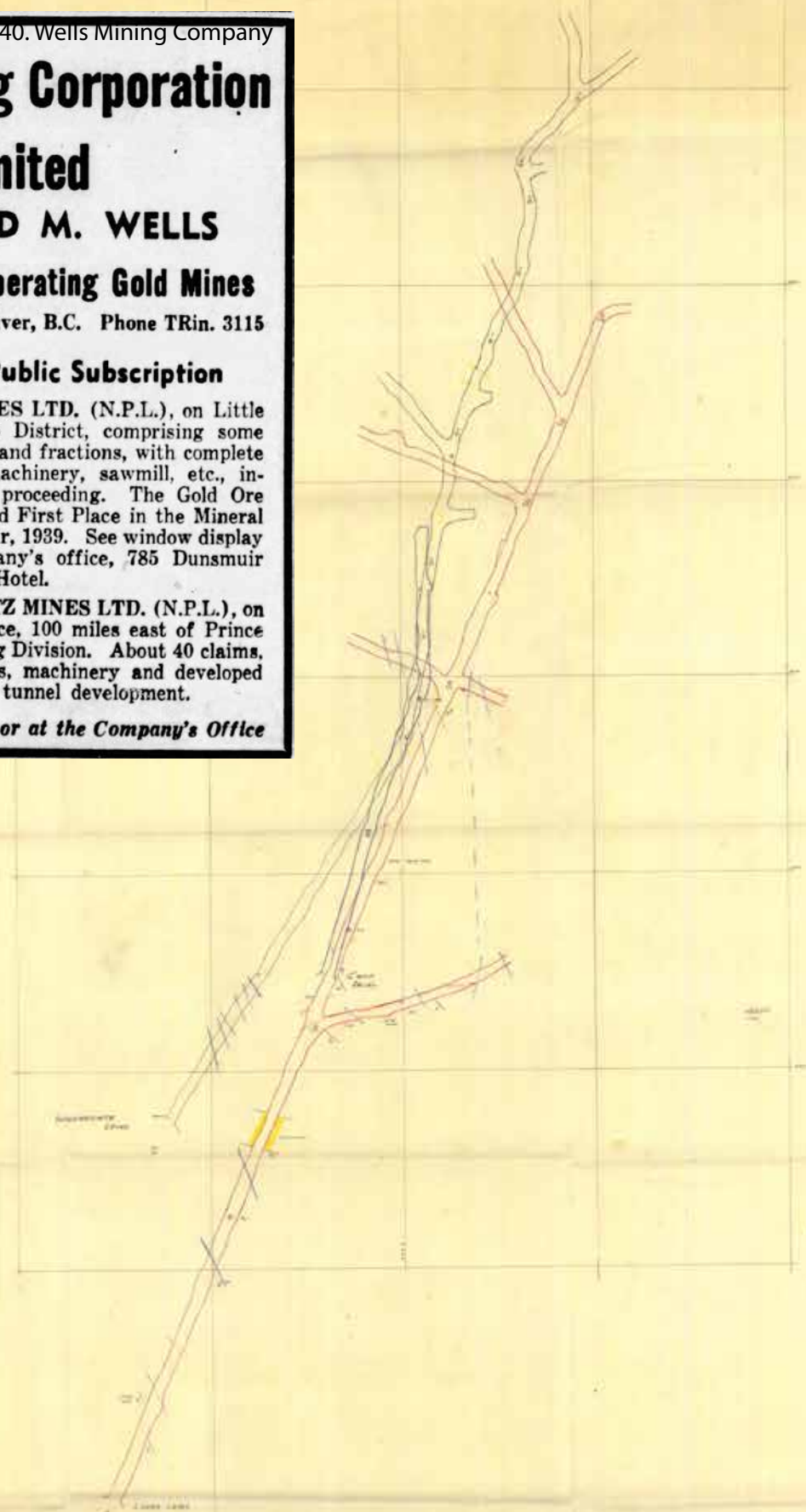
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SNOWSHOE GOLD MINES LTD. (N.P.L.), on Little Snowshoe Creek, Cariboo District, comprising some 15 Crown Granted claims and fractions, with complete modern camp, mining machinery, sawmill, etc., installed and tunnel work proceeding. The Gold Ore (pyrite type) was awarded First Place in the Mineral Exhibits at Vancouver Fair, 1939. See window display of samples at the company's office, 785 Dunsmuir Street, opposite Angelus Hotel.

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Enquire of Your Broker or at the Company's Office



TABULATION OF ASSAYS FROM SNOWSHOE SURFACE WORKINGS
(Sample locations are marked on Figure 13.)

Sample No. on Fig. 13	Width	Description	Gold	Silver
	Ft. In.		Oz. per Ton	Oz. per Ton
1	---	West vein—washings from panning quartz fragments with limonite in cavities and specks of galena	0.93	0.1
2	0 10	West vein—fractured quartz with limonite in vugs and rare specks of galena	1.07	0.1
3	1 7	West vein—ribbed quartz with about 2 per cent pyrite	0.44	Nil
4	2 6	Lower Arrastre adit—quartz with scattered ankerite and some pyrite	Nil	Nil
5	2 8	Lower Arrastre adit—fractured quartz with ankerite along walls	0.01	Nil
6	3 2	Bulldozed strip—quartz with rare limonite-filled vugs	0.01	Nil
	---	Upper Arrastre adit—selected quartz from dump with 5 per cent pyrite and galena	1.86	1.1
7	2 6	Upper Arrastre adit, Douglas vein in floor of adit—fractured quartz with about 2 per cent pyrite	0.29	Nil
8	1 1	Douglas vein zone—fractured quartz with minor pyrite near walls	0.02	Trace
9	4 4	First vein northwest of principal workings—fractured quartz with some ankerite and pyrite	Nil	Nil
10	3 4	First vein northwest of principal workings—fractured quartz with some ankerite and no pyrite	0.01	Nil
11	3 4	First vein northwest of principal workings—massive quartz with some ankerite and no pyrite	0.01	Trace
12	7 0	Bertha vein—quartz with unreplaced wallrock, iron-stained	0.09	Nil
13	3 9	Bertha vein—massive quartz with fragments of wallrock and some fine-grained pyrite	Nil	Nil
14	4 6	Bertha vein—quartz with fragments of wallrock and rare grains of pyrite	0.02	Nil
15	3 2	Bertha vein—quartz with fragments of wallrock	Nil	Nil
16	3 6	Bertha vein—quartz ribboned with black argillite	Nil	Nil
17	8 0	Bertha vein—massive quartz with some fragments of wallrock	0.01	Nil
18	2 8	Bertha vein—massive quartz with some fragments of wallrock	0.02	Nil
19	3 2	Bertha vein—massive quartz with no mineralization evident	0.01	Nil
20	7 0	Bertha vein—quartz with fragments of wallrock	0.01	Nil
21	9 0	Bertha vein—fractured quartz slightly iron-stained	Nil	Nil
22	6 0	Bertha vein—fractured quartz slightly iron-stained	Nil	Nil
	---	Mineralized quartz boulder from Luce (Minisci) hydraulic pit—20 per cent pyrite and much galena	0.28	2.9
	---	Mineralized quartz boulder from Luce (Minisci) hydraulic pit—15 per cent pyrite, 3 per cent galena	0.12	2.4

TABULATION OF ASSAYS FROM CAMP ADIT

Width	Distance from Portal	Description	Gold	Silver
Ft. In.	Ft.		Oz. per Ton	Oz. per Ton
0 10	79	Selected sample from dump containing 40 per cent pyrite	7.31	0.7
0 11	104	Quartz with about 10 per cent pyrite	0.39	Nil
	104	Fractured iron-stained quartz, sparse pyrite	0.06	Nil
	109	Well-mineralized quartz, 25 per cent pyrite	2.25	Nil
0 10	124	Quartz mineralized with 15 per cent pyrite and some galena	0.17	0.1
1 4	144	Fractured iron-stained quartz, about 2 per cent pyrite	0.02	Nil
1 2	163	Fractured iron-stained quartz, sparse pyrite	0.03	Nil
1 10	196	Fractured quartz, rare pyrite grains	0.01	Nil
	196	Fractured quartz with minor pyrite and several grains of sphalerite	0.02	Nil
	---	Quartz mineralized with pyrite, galena, and sphalerite totalling less than 5 per cent	0.04	Trace
	204	Selected quartz with 30 per cent pyrite	1.39	Trace
1 8	204	Fractured quartz with less than 1 per cent pyrite	0.12	Nil

TABULATION OF ASSAYS FROM INTERMEDIATE ADIT

Width	Distance from Portal	Description	Gold	Silver
Ft. In.	Ft.		Oz. per Ton	Oz. per Ton
1 0	239	Fractured quartz with some pyrite	0.15	Nil
0 10	254	Ribboned quartz with some pyrite	0.04	Nil
1 6	264	Crushed quartz with ribbons of wallrock and pyrite	0.15	Nil
1 3	277	Fractured quartz with ribbons of wallrock and some pyrite	0.30	0.1
0 10	319	Quartz with rare specks of pyrite	0.14	Nil
	339	Selected sample with coarse- and fine-grained pyrite	2.26	Trace
1 10	349	Quartz with ribbons of wallrock and some pyrite near walls	0.20	Nil
	381	Selected quartz with two-thirds pyrite	4.14	0.1
	381	High-grade stringer with 50 per cent pyrite	4.67	2.5

TABULATION OF ASSAYS FROM LOWER ADIT

Width	Location	Description	Gold	Silver
Ft. In.			Oz. per Ton	Oz. per Ton
0 8	260 ft. from portal on left side	Quartz with scattered ankerite and rare pyrite	Nil	Nil
0 11	Drift 260 ft. from portal, 5 ft. from crosscut	Quartz with minor ankerite and some pyrite	Nil	Nil
0 8	22 ft. from crosscut	Fractured iron-stained quartz with some pyrite	Trace	Nil
0 9	44 ft. from crosscut	Quartz with 5 per cent ankerite and no pyrite	0.01	Nil
0 10	62 ft. from crosscut	Massive quartz with ankerite along walls	Nil	Nil
1 2	78 ft. from crosscut	Fractured quartz, minor ankerite, and rare pyrite	Nil	Nil
1 0	450 ft. from portal	Fractured quartz with inclusions of wallrock and some pyrite	0.24	Nil
0 9	470 ft. from portal	Fractured quartz with some pyrite	0.12	0.1
1 0	490 ft. from portal	Quartz with rare pyrite grains	0.01	Nil
1 6	505 ft. from portal	Sheared quartz and wallrock with some pyrite	0.12	Nil
1 6	525 ft. from portal	Sheared wallrock with quartz stringers	0.06	0.1
0 9	550 ft. from portal	Quartz with ribbons of wallrock, minor pyrite	0.04	Nil
	Drift 260 ft. from portal, 5 ft. from crosscut	Selected sample with 50 per cent pyrite	Nil	Nil

Assays show higher gold values accompany the more abundant pyrite mineralization.

The veins occupy a single northerly striking fault of small displacement and associated tension fractures striking about north 40 degrees east. The contemporaneity of quartz mineralization is shown by the merging of the small north-easterly striking veins with the larger northerly striking one

About 225 feet from the portal a 6- to 8 inch quartz vein comes in on the east wall of the adit, expands to a maximum width of 24 inches, and occupies a well-defined northerly trending fault for about 150 feet. The vein is sparingly mineralized with pyrite and corresponds with the northerly striking segment in the Camp adit about 20 feet above.

At the northern end of the quartz a narrow fracture branches to the northeast, and although the fault continues

northward, no quartz appears along it. The northerly striking fault is crossed by an easterly striking fault dipping 20 degrees south which displaces it about 3 feet to the right.

Beyond the north end of the northerly striking vein, scores of narrow quartz veins, all striking about north 60 degrees east, cross the adit. Most of these veins contain little or no pyrite. High gold assays are obtainable from a narrow vein, well mineralized with pyrite, on the east wall opposite the first crosscut to the left, about 380 feet from the portal. The average of eleven samples taken by Pioneer Gold Mines of B.C. Limited along 30 feet of drift in this vicinity was about 0.3 oz. gold per ton.

The Lower adit is at 5,148 feet elevation and is driven 650 feet at north 23 degrees east. From it 360 feet of drifts and crosscuts have been driven. The rocks exposed in it are dark argillaceous schist, black slate, and pale biscuit-

coloured sericite schist, and black slate and quartzite at the innermost end. A bed of ankerite rock probably is the same one that appears in the upper levels. The rocks show two sets of cleavage, with the gently dipping second-generation set fairly prominent.

A fault zone 40 feet wide crosses the adit 130 feet from the portal. The zone strikes about north 25 degrees west, dips 65 degrees to the southwest, and appears to be more or less parallel to the beds.

At 260 feet from the portal a vein striking north 75 degrees east crosses the adit and is followed for 90 feet to the northeast before the fracture disappears. The vein has a maximum width of 10 inches and is poorly mineralized.

At 450 feet from the portal a northerly striking fault, with some quartz along it and with striations plunging 15 degrees south, comes in on the east wall and crosses to the west side of the adit. It reappears in a crosscut driven west 550 feet from the portal. This mineralized fault is probably the same one that has been followed in the upper levels

On this level it appears less well mineralized with quartz. Beyond this vein numerous quartz-filled fractures only a few inches wide and striking about north 60 degrees east cross the adit. This fracture direction is fairly constant throughout the underground workings. It is believed to represent the direction of tensional release associated with shearing along the northerly striking faults



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