GOLD
IN
VERMONT

A collection of articles dating from the 1800s to the present.

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Enclosed are articles and information pertaining to gold and gold prospecting in Vermont. We hope that you find this information helpful and interesting. If you have questions or need more information please contact:

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FIRST ANNUAL REPORT
ON THE
GEOLOGY
OF THE
STATE OF VERMONT

by C.B. Adams, State Geologist
1845

GOLD.

Gold is usually found, in grains and lumps, in the sands of rivers and in drift; also in a gangue of quartz in Talcose slate, as in the Southern States. Iron pyrites is frequently mistaken for gold; we have already mentioned its characters which distinguish it from the precious metal: it has a black streak and is hard and brittle. Gold is easily separated from sand by washing. On account of its great specific gravity it settles to the bottom, while the earthy particles are poured off.

SOMERSET.—Some years since, President Hitchcock obtained a few particles of gold from the soil in this town. It has been

suggested that the gold had been placed there for purposes of speculation. On the other hand, it is said that the soil was covered with grass, which had evidently been undisturbed; and that the geological formation is similar to that of the gold region of North Carolina.

A specimen of gold weighing several ounces was lost in Newfane, many years since, by a gang of counterfeiters, when suddenly routed, as is now supposed by those who are best acquainted with the facts; and having been subsequently found, it has been quoted as an example of the native gold of Vermont.

excerpt from

Jackson, C.T.

"On a new mine of gold, silver, lead, copper recently opened at Bridgewater, Vermont"

Boston Society of Natural History Proceedings, v. 5, p. 62, 1854

July 5th, 1854.

Dr. C. T. Jackson read an account of a new mine of Gold, Silver, Lead, and Copper, recently opened at Bridgewater, Vermont. The minerals at present known in this mine are as follows, viz.

Native gold in scales, and small irregular grains, in quartz, in black blende, and in other minerals of the vein; Argentiferous Galena; Black Zinc blende; Yellow Copper pyrites; Gahnite or Zinciferous Spinelle; Crystals of quartz in geodes; Brown oxide of Iron.

This mine is about twenty miles from the principal railroads leading to Boston and New York, and the produce of it will probably be brought to market by way of Woodstock and Hartland, as the country is less mountainous in that direction than towards Rutland. It is gratifying to find that Vermont may justly rank among the mineral States. Already extensive and valuable copper mines have been opened in Vershire and Corinth, and there is reason to believe that many other valuable mines of that metal will be opened along the line of the copper bearing rocks which extend from Strafford to Orange in a line a little west of north.

excerpt from

Jackson, C.T.

"On the gold region of Vermont"

Boston Society of Natural History Proceedings, v. 11, p. 243-244, 1867

Dr. C. T. Jackson mentioned that he had recently returned from the gold regions of Vermont. The great Appalachian gold belt passed through Plymouth and Bridgewater; the talco-micaceous slates contain gold, both in the slates themselves and in the quartz veins. The value varied from four dollars to twelve dollars per ton. He had obtained specimens showing visible particles of gold which he would at some time present to the Museum.

In many places in the state gold has been found, but nowhere in paying quantities. Most commonly it occurs in the sand of streams, but in some places, as at Plymouth and Bridgewater, gold bearing rock has been found and mined. So far as I can ascertain, in all of the localities the cost of getting the metal has been more than it was worth. There is no probability that it will ever be otherwise in this state. It is therefore useless to spend time and money in trying to find a fortune in gold mining in Vermont. Considerable money has been lost because it was invested in such mining, but I have yet to hear of much that was made in this way in this state. Occasionally a little "pay dirt" has been found, but in a short time the promising mine has been left unworked.

In 1865 there was, if we may judge by reports, a stir of excitement over the golden sands of White River near Gaysville and Bethel, and for a time it really seemed as if something might come of it all. So much interest was excited that, first and last, a considerable sum of money was invested in labor and machinery. After a short season of apparent prosperity, however, the enterprise was abandoned. Several hundred dollars worth of gold was obtained from this locality, if reports are true, and in all quite a little amount must have been taken out in Plymouth, but it is not possible to get any very definite statements as to the amount.

What is true of all mining is especially true of gold mining. It is exceedingly uncertain business. If anywhere in nature lawlessness rules, it is in the arrangement of mineral veins. They may pass from rich to poor, or wide to narrow, very suddenly and apparently without any reason whatever. About all that is sure in a vein of ore is that part which is actually in sight. Hence whoever goes into mining should distinctly understand that he is engaging in a very risky business, though a perfectly legitimate business. Much money has been made in mining, but much has also been lost.

excerpt from
Perkins, G.H., 1900

It is well for those who think that they have found gold bearing rock to know that locating such ore does not by any means insure a fortune or any part of it. It is always necessary to take account of the cost of getting the metal out of the rock or ore. It is quite possible to find a vein of gold bearing quartz, for instance, which is of little or no value to its owner because the expense of getting the stone out of the ground and then getting the gold out of the stone would be more than the gold would be worth. The process of separating gold from quartz is complex and involves the use of expensive machinery and nothing of importance can be done with even a rich vein until such machinery is provided.

Another important fact is that a quartz vein is not always, nor usually, gold bearing. The world is full of quartz veins and masses which are quartz and only quartz. These remarks will undoubtedly seem quite unnecessary to many who may read these pages, but more than once, indeed not seldom have I found persons in this state trying to start a gold mine with evidently no conception of what was before them if they carried out their plans to any completion, the sole foundation for their hopes being that they had found a mass of quartz that had a little gold in it, or, even less promising, quartz that looked like that from some western locality in which gold had been found.

Much time, labor and money have been wasted from failure to attend to facts like those noticed above.

In this connection I wish to correct an error which has stood uncorrected for a long time. In the Vermont Agricultural Report for 1874, there is an article on Gold Mining in Vermont, in which it is stated that with the gold taken from an island in White River there had been found the rare metal iridium. The statement was undoubtedly made in good faith and what were supposed to be specimens of iridium were exhibited.

It seemed, however, so extremely improbable that iridium has ever been found in Vermont that I have been at some pains to investigate the above statements and it appears to be certain that no such metal was ever found in the locality named, or anywhere else in the state, but that those who supposed that they had found it mistook grains of specular iron or some similar metal common in the White River sand, for the rare iridium.

REPORT
OF THE
STATE GEOLOGIST
ON THE
MINERAL INDUSTRIES AND GEOLOGY
OF CERTAIN AREAS OF VERMONT
1903-1904
Fourth of this Series
George H. Perkins, Ph.D.,
State Geologist
1904

METALS. The only metals that have been mined in Vermont for many years are gold and copper. The former metal is found in small quantities in the quartz rock or sand in many localities and has first and last been the cause of much trouble and far greater financial loss than gain. With the possible exception of the Plymouth and Bridgewater regions, concerning which I have not sufficiently definite facts to warrant a sweeping statement, gold mining in Vermont has never paid. I do not intend to say, that no one has found gold in any amount, for, as is stated above, small quantities have been taken out of quartz or washed out of the sand of one and another stream, but in every case with which I am acquainted it has cost more to get the gold than it was worth, often far more.

It seems very strange that anyone can be so lacking in foresight as to expect to make money by mining, whether the mine contains much or little of the mineral sought and yet there are those who seem to think that any mine, especially if,it is on their own land, is necessarily profitable. As a matter of fact the greater number of mines are not a success. As in the last report I wish to call attention to the very common occurrence of little particles of yellow mica in the rocks of the state. In some specimens, these yellow sparkling bits of mica are easily mistaken for gold and many are deceived by them.

I do not wish to be understood as asserting that gold mining cannot, under any conditions, pay in Vermont. I do wish to say that it is extremely improbable that it ever will and, therefore, that the utmost caution should be exercised by anyone who undertakes to start a gold mine, or rather the caution should come before the undertaking is started. At present, so far as I have had reports, gold is mined only in Bridgewater though first and last a good many thousands of dollars have been spent and lost in mining in different places. In Bulletin 225 U. S. G. S. Contributions to Economic Geology, 1903, Mr. G. O. Smith has a very interesting summary of the subject of gold mining in this State from which I have quoted the following paragraphs. "In the town of Bridgewater gold was discovered fifty years ago,

and within ten years of this discovery at least two quartz mills were built to treat the ore. The early work was characterized by extravagant expenditure and lack of reliable statements. It can safely be stated, however, that more money was expended in mill building than was secured from the ore treated. This kind of work has continued spasmodically, and even to-day the outlay in development work in progress appears out of proportion to the ore in sight.

The veins in Bridgewater have a north south trend, and apparently all belong to one general system which extends across the western part of the town. The southernmost productive locality is on Ottaquechee river immediately west of Bridgewater Corners. On the Ottaquechee property a small bunch of very rich ore was uncovered nine years ago, which is reported to have yielded between eight and nine hundred dollars in gold. Since the discovery of this pocket the property has produced very little and is not worked at the present time.

Next north on this veined zone is the Taggart vein, on which work has been done at various times, beginning with 1859. Ten tons of ore crushed and amalgamated are reported at one time to have yielded 374 pennyweights of gold. The Taggart vein is located on the old Thompson farm, one mile west of Bridgewater Center. It has been opened at several points, chiefly in the gulch of a small stream. These openings were visited at the upper exposure in the stream bed itself where the quartz vein has a width varying from eight to eighteen inches. The strike of the vein is 5° to 10° east of north and it dips to the east at an angle of 70°, being apparently parallel with the schistosity of the country rock. The quartz of this vein is white and barren in general appearance except for the small stringers of galena which it contains. The quartz is well cemented to the wall rock and there is no evidence of fracturing of the vein. Below the stream level at this point the vein thickens to nearly three feet and here the ore was taken out which was reported to yield $32 in gold to the ton. From a small pile of quartz and galena remaining at the edge of this opening a sample was taken which was assayed by Dr. Allen in the Survey laboratory with the following results :

Assay of a sample of quartz from the Taggart vein.

Gold	None.
Silver	1.27 ounces
Copper	6.19 per cent
Lead	6.26 per cent

This indicates a value of over $6, but the sample represents the richer part of a small ore body. The absence of gold is suggestive in view of the high gold value claimed for this vein.

excerpt from
Perkins, G.H., 1904

Quartz has been mined from other parts of the Taggart vein, but it is said that whatever value it may have contained was lost in the process of milling. Four mills were constructed at various times in this vicinity for the purpose of separating the gold from the quartz.

Farther north in the same town is the Shatauguay group of claims. Little could be learned concerning this property, except that development activity was being confined to mill construction and road making.

A well equipped quartz mill was being built, but the openings that will furnish the ore were not shown by the manager of the property.

In Plymouth, the next town south of Bridgewater, mining interest extends back over forty-five years. At Plymouth Five Corners a mill pond was once drained and worked for placer gold. Sluice boxes and rockers were used and the result is variously reported at from $9,000 to $13,000. Some recent prospecting for quartz veins has been done and reports of success given out. At the localily itself, however, there is little faith in these reported discoveries. Near Tyson's Furnace in the southern part of Plymouth, the Rook Mining Company conducted operations twenty years ago on an ambitious scale, but, apparently, with no profit from the mine." (Bulletin U. S. G. S. 225, pp. 85-88.)

I have quoted the above at length since it is an account of the only locality in which there has been even an approach to success in gold mining, and here taking the entire experience into account, the cost has without doubt far exceeded the returns.

There can be no doubt that not a little money may be saved for better uses than paying for holes in the ground if those who have it to spend will consult competent persons as to the real value of the rock in which they plan to work. It is plain to anyone who knows the facts that some of the good people of Vermont have been greatly cheated by so called assayers.

Several instances of this have come under my own observation, out the worst case on record is that of a piece of grindstone sent from the south western part of the State which was reported to contain $25 gold to the ton. Not a little money has also been paid to honest assayers to no purpose because the samples contained only yellow mica, and this could easily have been known at no cost had the samples been first sent to the State Geologist who is always glad to examine and report upon any samples sent by citizens of the State and without charge. A full assay cannot be made without charge as the State does not make provision for this, but an examination which usually is sufficient to determine whether a complete assay is worth while is provided for and will always be made if requested.

REPORT OF THE
STATE GEOLOGIST
ON THE
MINERAL INDUSTRIES AND GEOLOGY OF VERMONT
1919-1920
12th of this Series
George H. Perkins, State Geologist
1921

GOLD is found in Vermont in many localities, but like the metals mentioned, it has always cost much more to mine or collect it than the resulting gold has been worth. There is not the least probability that gold mining can ever be worth while here or that money invested in it will ever bring satisfactory returns. Not as long as iron, but for many years, gold has been sought in Vermont and found too, but, as I have said, it has cost far more to find it than it was worth when found.

I suppose more mining of this sort has been done in Plymouth and Bridgewater than anywhere else, though a considerable amount of money and labor has been wasted in numerous other towns. Gold mining in Bridgewater was begun in 1851 and continued there and in Plymouth for many years until finally, the work was abandoned and the mines closed.

In the most prosperous times of these works it is doubtful if they paid more than expenses. Probably the statement in the "Geology of Vermont," published in 1861, is quite fair. "To attempt to arrive at accuracy in the amount obtained in all the 'diggings' in town (Plymouth) were a difficult task; but from reliable sources through which information could be obtained, it is probable that between seven and eight thousand dollars were obtained during the season of 1859. As to the question whether it was profitable to a majority of those who worked we give it as our opinion that not one in ten who have engaged in gold washing in that town has realized as much from it as he would have done by working on a farm at ordinary wages * * * * * * and from the best estimates that we are able to make from the data in our possession, we are of the opinion that if the whole amount of gold washed in Plymouth during the year 1859 were put together and from it deducted the expense of erecting dams, sluices, water wheels, pumps and other incidental expenses connected with the work, the remainder, if divided would not amount to fifty cents a day to the hand," page 847.

For most of those who read this Report, much that has been written above is, I am fully aware, wholly unnecessary, but almost daily experience has proved that there are many others who may well think of the statements here made. There seems to be something about mining that fascinates many sensible persons as well as many who are not and, apparently, it will be a long time before unwise investment of money in some sort of mine has ceased.

It should be known and remembered that, while in many cases large sums have been realized from mines, it is nevertheless true that a very large majority of mines in all parts of the United States have failed to return anything, or at most have returned little, for the outlay which has been made upon them. This is especially true of mines of the metals, but it is to a great extent also true of all mines. Everywhere, only one mine out of a great number has ever paid. Anyone who doubts this can look up the mining statistics for himself.

REPORT OF THE
STATE GEOLOGIST
ON THE
MINERAL INDUSTRIES AND GEOLOGY OF VERMONT
1927-1928
16th of this Series
George H. Perkins, State Geologist
1928

PERRY, E.L., *"GEOLOGY OF BRIDGEWATER AND PLYMOUTH TOWNSHIPS,"* 1929

GOLD DEPOSITS

Gold is known to be widely distributed in Vermont, but it is rarely to be found in sufficient concentration to prove of commercial value. The town of Plymouth is exceptional in that it is the only town in the state in which gold deposits have yielded a profitable return on the time and energy expended in working them, but then only in a few instances. The deposits are of two types, quartz veins and placers, but only the latter have been worked at a profit.

Gold was first discovered in this district in 1851, in the town of Bridgewater, by Mathew Kennedy.[1] The exact location of the discovery vein is unknown, but was about one mile west of Bridgewater Center (Briggs) in Dailey Hollow and probably at about the top of the Bethel Schist (see map). The property later came to be known as the "Taggart vein" and was worked intermittently for a few years about 1859, but apparently much more money was expended on metallurgical machinery than was ever regained in the value of metal extracted. The gold was evidently very unevenly distributed in the vein and, although some pockets may have been as rich as is claimed, much of the ore was evidently low in metallic content as is shown by the following assay quoted by Dr. G. O. Smith[2]: gold, none; silver, 1.27 oz.; copper, 6.19 oz.; and lead, 6.26 oz. The vein was claimed to have yielded 18.7 oz. of gold per ton on ten tons treated. Other veins were prospected on the Ottauquechee River near Bridgewater Corners and also in Dailey Hollow one and a half miles due south of Chatauguay. The latter property was connected by road over the hill to an extensive mill at Chatauguay, but as far as could be learned by the writer, very little ore was treated and the whole project was a fraudulent scheme. In Plymouth, a mine was opened on a quartz vein intruding the Pinney Hollow Schist beside the Reading Pond Brook, about one and a half miles northeast of Tyson. This is now known locally as Foxes' Mine, from the name of its last operator, but was originally operated by the Rooks Mining Co. It seems never to have yielded a profit on the investment, and although native gold is unquestionably present in the mine, it is probably present in such small quantities in the aggregate as to make mining impractical. The mine is at present

[1] Hager, A. D., *et al.*, Rpt. Vermont State Geologist, Vol. II, 1861, p. 844.
[2] Smith, G. O., U. S. G. S. Bull. 225, 1903, p. 87.

excerpt from
Perry, E.L., 1929

in such a state of disrepair that the exploration of it is impossible, but from surface indications and exposures in two raises which reach the surface, the mine consists of drifts and raises along a very irregular quartz vein intruded in the plane of the schistosity of the country rock, which is here oriented N 3° W, dip 60° E. The mine is situated on a steep, southward sloping hillside, with an adit and ruins of a mill slightly above the level of the brook at the base of the hill and the upper workings, apparently a head house over a shaft, about 170 feet above the brook.

From the above it may be inferred that mining of the gold-quartz veins of the district is unprofitable, since the metallic contents are very low in total average and very irregular in distribution.

Gold in placer deposits has been known in Plymouth since about 1855, in which year prospecting is said to have yielded about $500. In the next few years gold was found in the gravels of Reading Pond Brook and its tributary Buffalo Brook, Kingdom Brook, and the streams in the vicinity of Plymouth Five Corners. At the latter locality in the years 1858 and 1859, William Hankerson is reported to have washed several hundred dollars' worth of gold from the sediment in the bottom of a mill pond and during this same time about $7,000 worth was estimated to have been washed in the entire town. These figures are unreliable at best, but perhaps give an idea as to the general magnitude of operations at that time. Since 1860 very little has been done in placer mining in Plymouth, although even at the present day some "panning" is carried on by local residents. The writer has observed the results of "panning" on Reading Pond Brook near Foxes' Mine and pieces of gold an eighth inch in diameter may be obtained from natural riffles formed by upright plates of schist in the bed of the stream. Considerable fine dust is also present with the small nuggets, but the labor involved in extracting the gold from between the plates of schist is worth more than the gold obtained. The process is hardly more than a holiday diversion at best.

The gold in the stream beds and the hillside gravels has been very probably derived from the denudation of gold-bearing quartz veins nearby. The concentration of the gold in this manner has, as seen above, produced a few deposits of commercial value, even though the original vein rocks do not constitute workable ore.

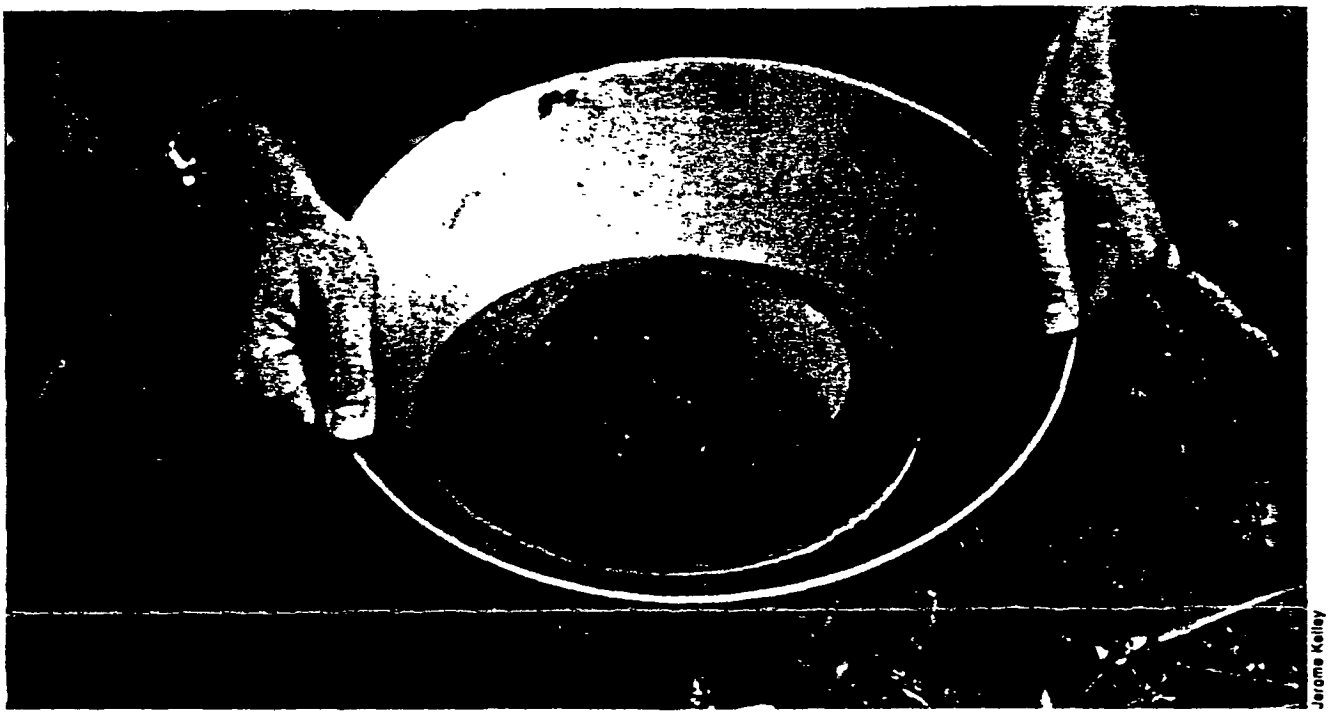
REPORT OF THE
STATE GEOLOGIST
ON THE
MINERAL INDUSTRIES AND GEOLOGY OF VERMONT
1929-1930
17th of this Series
George H. Perkins, State Geologist
1930

GOLD

Most of the gold mined is found as native, that is simple, uncombined gold, though in some localities it occurs in paying quantities in pyrite and other minerals. It is often mixed with silver. Most commonly gold occurs in veins or quartz. A large amount is sometimes found, as nuggets or as gold dust, in the gravel of streams, which have originally come from quartz veins and have been washed out and carried on by flowing water. Although rarely found in large masses, gold is very widely distributed over the world. Usually the nuggets are small, they really are little pebbles mixed in gravel with other pebbles and like them rounded by the wear of the stream. Once in a great while, nuggets of considerable size have been found. The largest known was found in Australia. This weighed 190 pounds, but none other of this size has ever been reported. Though more commonly found in quartz, gold has the property of retaining its color under all circumstances, but it is by no means every metal which is yellow that is gold. Nor even every nonmetallic minerals. Some of these, in which there is never any trace of gold, in some circumstances and to a casual observer, more or less closely resemble gold. In former Reports several allusions have been made to a very common rock in Vermont—a sort of granite—which contains little scales of mica with the ordinary quartz and feldspar. Some of this decomposes readily into a sort of gravel and finally into sand. The mica, at first black, or very dark, because of iron it contains, changes by the oxidation of the iron, to a bronze and often a golden yellow color. As has been said before, more people have been deceived by this than by any other rock, except some forms of pyrite. Nevertheless, it is very easy to distinguish this worthless material from gold. Gold is very soft, softer than lead, and heavier than lead, it never is possible to split gold in thin, elastic scales as in mica. Indeed this mineral differs in every respect from gold except in appearance. Another quality of gold is that it is not affected in any way by the application of an acid.

excerpt from
Perkins, G.H., 1930

In writing the above I do not forget that a great deal of gold ore is not by any means nearly or quite pure and it is only of this more or less pure ore that what has been written is true. When, as is not infrequently the case, the gold ore is mostly pyrite or some other mineral, then it may be very hard, less heavy and less malleable. I have often met people who thought that in a vein of white quartz which occurred on their land there must be gold. As most people know, much of the gold mined is found in quartz, or quartz rock, but the presence of quartz is no sure indication of the presence of the precious metal. I suppose that most of the quartz found so commonly in all parts of the world, is wholly barren. Besides in quartz, gold is found in other igneous rocks and in some limestone. When in what proves on examination to be gold ore of some value, the large mixture of other substances entirely conceals the gold and only careful chemical analysis can discover any of the desired metal, identification is difficult. It may be well to notice that such ores have never been found in Vermont. So many of our people, especially those owning land, spend time and money searching for gold on their premises that there seems to be need of "line upon line" in every geological publication issued. For this reason some advice published in former Reports is repeated. During more than a century more or less money and labor have been wasted in trying to get rich quick by exploiting as a gold mine some worthless ledge. In this way the State has up to the present time, been pretty thoroughly investigated. It is true that gold has been and very occasionally still is, found in a ledge or stream in Vermont, but it has so far as all records inform us, been unprofitable, usually from the first, in all cases before the end. Again let me say that in my opinion, it is entirely useless to throw away money, time and labor seeking gold in Vermont.



Jerome Kelley

PANNING FOR GOLD

The fun is in the search.

By Jerome Kelley

Gold! That magical word that starts blood racing and hopes soaring has been reverberating throughout the beautiful Green Mountains of Vermont with increasing intensity these past two years.

There's gold in Vermont — quite possibly lots of it. Currently the market price fluctuates at around $125 per ounce. Some monetary experts are forecasting that in time, it could conceivably reach the astronomical sum of $250 or $300 per ounce.

This past summer literally hundreds of amateur miners dotted the streams and rivers of Vermont, sloshing their gold pans, looking for that big strike. They ranged in age from toddlers to grandparents. As the price of gold climbs, their numbers are bound to increase. Some observers predict that the way the sport (if that's the proper word) has been growing, it could develop into a full-fledged gold rush by this coming summer.

Gold has a history in New England, going back in time to the days of early settlement. Our Pilgrim fathers came to these rocky shores to find freedom of worship and not gold. Be that as it may, these stern-visaged pragmatists weren't exactly oblivious to what the yellow metal could do for them. Consequently, from time to time, they searched for it in an unorganized fashion.

There are several accounts of where early colonists thought they had struck it rich. Sending their finds to England for assaying, they got back bad news: their "gold" turned out to be iron pyrites, better known as fool's gold.

Over the years the theory came to be accepted that gold was a warm-weather metal, common only to tropical and sub-tropical climates. So early New Englanders gave up prospecting and occupied their time by farming, raising large families, bearding the British and fomenting a revolution.

When gold was finally discovered, it didn't have the effect that one would expect. In 1826, a nugget weighing eight-and-a-half ounces was picked up on the banks of the West River in Newfane, Vermont. It hardly caused a stir, much less excitement in the small community. The reason was simple. A family of notorious counterfeiters — the Wheelers — lived in the vicinity and the local citizenry figured they were the ones who had lost the nugget.

This premise still survives in the Newfane area to this day, but there is room for reasonable doubt. Gold *is* presently being panned in both the West and Rock rivers in Newfane!

In 1833, Professor Edward Hitchcock of Amherst College was engaged in a geological survey for the State of Massachusetts. While conducting this survey he wandered into Somerset, Vermont, near the Bay State's northern border, and discovered small amounts of gold in some of the neighboring streams. His findings were duly reported in obscure journals and monographs, but went totally unnoticed by potential gold-seekers.

During the 1849 gold rush, thousands of young New Englanders left the rocky hills of home and headed for the California diggings. By the middle 1850's some of them came drifting back from the West.

One of them was an unnamed lad from Plymouth, Vermont. Tradition has it that he returned from the gold fields with a fair-sized poke. In 1855, while fishing in Buffalo Brook, he found a small nugget. Using the knowledge he'd gained in California he was soon working

Vermont gold is purer than gold found in most other parts of the United States.

his gold pan overtime on the Buffalo Brook shores.

Secrets in a small New England town in that faraway day were no different than they are now, and it wasn't long before the word was out and the rush was on.

No one has any accurate idea of how much gold was taken out of the Plymouth area in those days, but geologists at the University of Vermont term it as "considerable." What few records do exist will surely whet the appetites of present-day goldseekers. One miner panned something more than $2,800 of gold out of Plymouth's Gold Brook in one day during the summer of 1858.

Later that same year more than $42,000 worth of the yellow metal was sluiced out of a nearby mill pond. As late as 1884, it is reported that approximately $78,000 worth of ore was taken out of a newly-opened mine in Plymouth during a six-month period.

Gold fever in the Green Mountain State reached its crisis stage in 1885. That year a number of mines were dug in the Raymond Hill and Freestop Hill areas, north of Plymouth in Bridgewater. None of them produced any appreciable amounts of gold and the fever almost, but not quite, died out.

Over the years there have always been a few old-timers who did "a mite of panning" to supplement their incomes. Most of these venerable miners are closed-mouthed Yankees, so we have no record of whether any of them has ever struck it rich or, indeed, has ever made a modest strike.

Inferences, however, can be drawn. Some of these old-timers have been sloshing their gold pans around for 40 or 50 years. It's pretty logical to assume that they've been turning up something more than black fly bites, wet feet and aching backs.

Most of the gold found in the Green Mountain State is referred to by geologists as "placer gold." The metal has been leached out of surrounding rock formations by weather and stream erosion. Because of its high specific gravity and ability to withstand weathering and alteration, it concentrates in stream sediment.

For some unexplicable reason, Vermont gold is purer than gold found in most other parts of the United States. Recent assays indicate the gold runs something on the order of 23-1/2 carats. In layman's language, this means it is roughly 96 percent pure!

Good-sized nuggets aren't common but neither are they rare. A great-uncle of ours found one the size of a robin's egg many years ago in Shady Rill Brook, just north of Montpelier. Recently we've seen three others that were nearly as large.

Most current gold-seekers in the Green Mountains use pans. Hardware and sporting goods stores carry several types ranging from children's models made of plastic to the classic western pan. Prices range from $2 to $7.

A good panning technique requires patience and practice. The best way to learn is to get an old-timer to show you how it's done. Failing this, read the directions that come with most pans — carefully.

To increase your production — if you are planning to become a gold seeker — you can construct a simple sluice box. All you need is a long, narrow box open at both ends and top. Lathing is nailed at six- or eight-inch intervals across the bottom and this, in turn, is covered by a strip of old carpet.

The sluice box is placed on an incline in the stream in such a way that the water flows through it. Stream sediment is then shovelled onto the top end and, by adjusting the water flow, the light materials will be washed downstream. The heavier materials such as gold, magnetite and garnet will settle on the carpet.

When the carpet is saturated with heavy materials it is rinsed out in a bucket or old wash tub. This is then transferred to a pan for final panning. The gold remaining is tweezed or spooned into a jar or bottle. Don't use a leather poke — it can leak!

For non-do-it-yourselfers, ready-made sluice boxes manufactured of high-impact plastic are available in many sporting goods stores for around $25. More affluent gold-seekers can purchase a gasoline-powered, dredge-sluice box combination that retails for $275.

Now for the big question. Are present day gold-seekers striking it rich in Vermont? No one really knows and the gold-seekers surely aren't telling. There are two reasons: income taxes and competition. A close friend of ours may be pretty typical. He's been panning for 10 or 12 years and has been recently showing some signs of newly-acquired affluence. He has just purchased an expensive new camper, has got a fancy, custom-built deer rifle on order and his wife has changed her beauty shop schedule from once a month to twice a week.

Insofar as he doesn't play the stockmarket and he hasn't been the beneficiary for any wills lately, it's obvious he's made a strike and a darned good one at that.

Instead of pussy-footing around we fired the question straight at him. "Ed, we're doing an article on gold panning. It's obvious you've made a good strike. Now level with us. How much did you hit and where'd you hit it?"

He gave me that old hand-in-the-cookie-jar expression. "Look," he replied, "the answer to the first part of your question is 'none of your business.' To the second, let's see, oh, yeah, 'gold is where you find it!' " □

WHERE TO LOOK FOR GOLD IN VERMONT

During the summer of 1975, gold in varying quantities was found in all of these locations in Vermont:

Rock River in Newfane and Dover

West River in Townsend and Jamaica

Williams River in Ludlow

Ottauquechee River in Bridgewater

White River in Stockbridge and Rochester

Third Branch of White River in Braintree

Mad River in Warren, Waitsfield, and Moretown

Shady Rill Brook in Wrightsville

Minister Brook in Worcester

Little River in Stowe and Waterbury

Gold Brook in Stowe

Lamoille River in Johnson

Gihon River in Eden

Missisquoi River in Lowell and Troy

Note: if you do find what you think is gold, take it to the State Geologist's Office and have it assayed.

It's in His Blood

Steven Reiner

Photographs by Erik Borg

WHEN HE WAS A YOUNG MAN, in the days when a high-stepping horse and a good buggy with hard-rubber tires would take him from the farm to the dance halls in Gassetts, Ferris A. Warren discovered gold.

It was easy then, before the great Vermont flood of 1927 sent tons of earth cascading into the river. The bedrock just lay there ready for a skilled hand to mine its bounty, and on Sundays, or when the chores were done, Ferris and his grandfather would walk up to Smokeshire along the Williams River to the places where the black sand and gold were hidden.

"There's gold enough right here up to Smokeshire to make a man a fortune!" Ferris shouts, in the harsh voice of a man who finds it difficult to hear. "Three generations of Warrens been up and down the river here. Eight miles of it. We'd make $30—$35 a day digging, before the flood. We'd get anywhere from twenty-five to a hundred pieces a pan, and we just did it for a hobby. Carrying on a farm you couldn't run around as you damn wanted to. But since the river's filled up, you're lucky if you find anything. If you had a bulldozer and money enough to go at it big then you could get at it. But that's the only way. It used to be a pleasure to do it. But it's just a lot of work now. There's no goddamned pleasure about it."

No, no pleasure for the last remaining Warren who knows the mother lode can be found. The trouble, Ferris says, is that no one who heard of the big strikes before the flood is around any more. And each year, as the river fills in, there's less chance of making it big. The Warrens knew gold and they knew the river, Ferris says, and no one could pan for gold better than his father. Before the Spanish-American War some saloonkeepers backed him on a prospecting trip to Alaska, where he made $4,500 in just two years.

If the mail from home hadn't been lost, and he hadn't become worried about his family, he'd have stayed longer and probably made a fortune.

Ferris never had it in his blood to make a fortune, and it doesn't bother him that now, in his eighty-fifth year, he never will. He hunts gold for simpler reasons, practical ones that are tied to his roots. And that's why on Sundays, or when the chores are done, he heads for the Williams River.

"Jesus!" he shrieks, "when gold is $200 an ounce and you've got it in your blood and you know how to do it, you've got to go after it."

The small, sleepy village of Gassetts was a bustling crossroads when Ferris moved there as a boy. His father was in the express business in Holyoke when he came to Vermont to help Ferris's grandfather run the farm. The town was full of hard drinkers and fortune seekers then, the money flowed freely, and the trains from the busy talc mines moved all night. A young man didn't have to look much farther for a taste of the world.

"My father always had a good buggy with hard-rubber tires and a fast, high-stepping horse," Ferris says. "I could leave the farm any time I wanted and go dancing with the girls. Yup, when I was younger I drank hard cider and chased fast young women. I guess that's what keeps me going. My father always told me, 'Ferris, live it up while you're young, 'cause you'll be old someday.' I've been quite the live one, all right."

He finally retired, settled down, and married when he was sixty-five. Mar-

riage was good, he says. After all, things hadn't been the same since the family farm was sold, and those years working the double-edger at Frank Chittenden's sawmill were enough for any man, especially one who weighed just 145 pounds. Working every day like that, when his hours belonged to someone else, didn't leave him much time for pleasure. His wife wouldn't let him chase the women any more, but she was a good dancer, and together they'd win the contests at Woodcock's Eureka Barn every Saturday night. She died two years ago, God rest her soul, and there's enough of the rascal in him now to tack those *Playboy* centerfolds to the wall. And he keeps his neat, tar-paper house free of the artifacts of the lone and elderly —there's no clutter of newspapers, shoe boxes, and string. His home is not a place where a widower mourns.

"I still got eight or ten girl friends," Ferris smiles impishly. "From Claremont to Springfield to Bellows Falls. I go stay with them awhile, kiss 'em goodbye, and then come back here to batch it. Hasn't been much time for that lately, though. Got wood to cut. Not many men eighty-five can cut six cord of wood like that."

Not many men eighty-five would be sleeping on the floor either, just to toughen themselves up for prospecting. Nor would they walk ten miles, when they couldn't hitch a ride, with crowbars and mallets, big rubber boots, iron wedges, and a large round metal pan, for the chance—just the chance—to hit paydirt.

"A man came down from Ontario once," Ferris says. "We worked the whole river together and found plenty. He brought two mining men with him about the time the war broke out, and they were interested in bringing in some big equipment to get at the bedrock. I panned it right in front of them. I had forty-five pieces of gold right in the pan. They wouldn't believe it. They thought I'd put it there to trick them. I said 'You goddamned fools, if you think I put it there to trick you, come down to the river anywhere.' They wouldn't take me up. So you see how much they knew."

NO ONE ELSE has taken Ferris up on his ideas about the river, although his notions just might be right. The mountains around Smokeshire are composed of talc, remember, and the mines are still the area's largest industry. More important, the river sits on a vein of talcose schist, a metamorphic formation in which iron ores and oxides are found—the black sand that tells prospectors gold is nearby. Nonetheless, few people come along Route 103 to the Smokeshire branch of the Williams River to search for gold, and even during the halcyon days of prospecting in the mid-1800s most headed north to the brooks near Plymouth to seek their fortunes. The Williams is a crooked little river at Smokeshire, now half buried in rock and debris—an unlikely place for treasure to be hidden.

"In the cracks of the ledges in the bottom of the brook! In the cracks of the ledges in the bottom of the brook!" Ferris chants. "That's where the gold is. It's all in the bedrock, but it's buried deep down. If you don't go low, you won't get anything but fine gold, what they call flour gold. You dig out your cracks as deep as you can. Clay, black sand, light-colored sand, and gold. Sixty-five years ago when my father and I used to go down there, you could drop in anywhere along the bedrock ledge and you were sure of getting nuggets because you could get right down to the brook. Then you just had to work it good in the pan. When you can find it the whole length of the river, there must be plenty of it there."

Proof? Ferris can show you a small vial that he keeps hidden away in a neatly tied satchel. "My grandfather first showed me gold like this when I was nineteen," he says proudly, holding the vial to the light. "Must be three-quarters of an ounce in here. A jeweler lady's coming up from Boston and I'm going to sell it to her. You see this," he says, shaking the jar, "this is the real McCoy. Jesus, we used to get this in a single day before the flood." Given half a chance, Ferris will infect anyone with gold fever, and because he sheepishly admits to pulling a trick or two in his time, like carrying a gold-painted rock to throw in his pan to entice passers-by to join him, there's no way of telling how he got that gold, or how long it took him to find it.

SO ONE DAY although his wood cutting isn't done, he accepts a ride up to Smokeshire and offers to show real proof. He faces the river with trepidation this year, however, for the June 1973 flood has changed its shape once again, and more familiar signposts have been washed away. It will be hard to find anything, he mutters, it will be hard to find somewhere to get down low. Looking a bit confused, he searches for miles along the river, until suddenly he sights a pocket of shallow water where the smooth bedrock is exposed. Without a word, he pulls on big rubber boots that cover the billowing denim overalls hanging from his tidy frame. Knapsack on his back, tools in his hands, he scrambles down the steep dirt bank and heads for a place to begin. He walks nimbly in the water, with the assurance and rhythm of someone who doesn't have to think about what he is doing.

He hammers a crowbar about eight inches into the bedrock. After more than a quarter hour of hammering and prying, using wedges, stakes, and muscle, he removes a large piece of bedrock. Small pieces drop off and he deposits them in his pan, which lies in shallow water nearby. Resting on his knees, he scoops out more rock chips from the cavity he has made. He scrapes clay and silt from some rocks into the pan, along with small fragments of others. After peering intently into the water, he takes a final trowelful and dumps its contents into the pan.

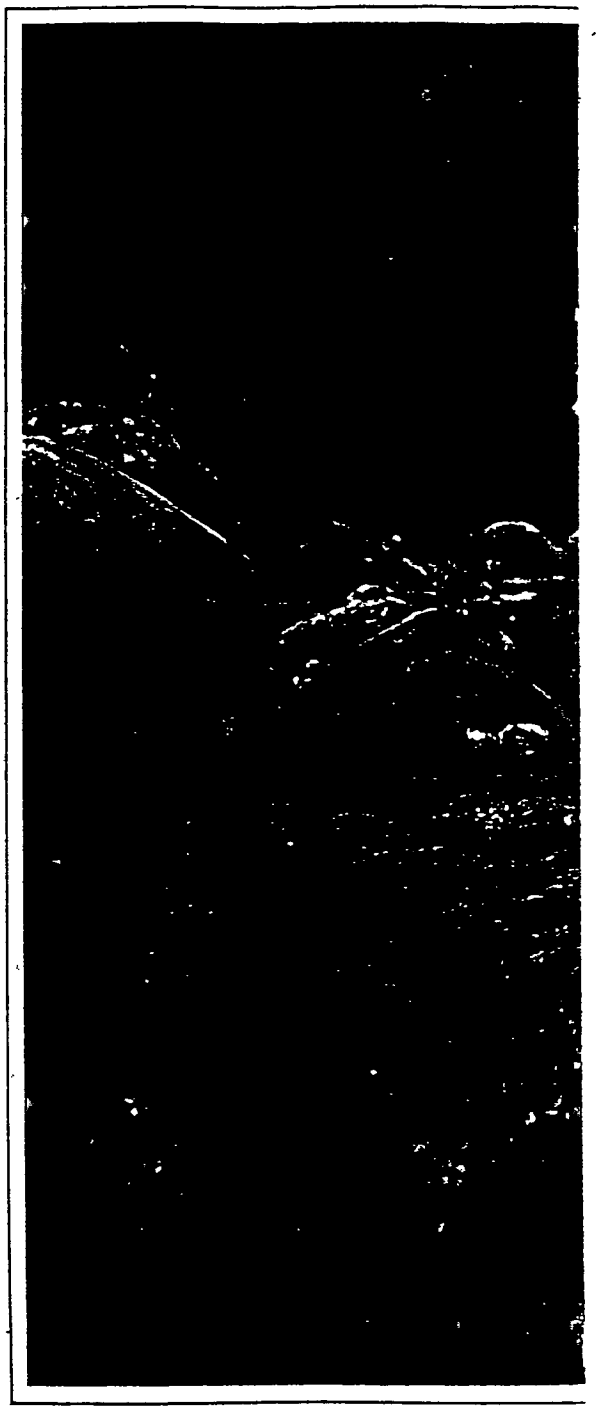
"That's paydirt!" he yells, with a short nod of the head. "But we need more."

He walks upstream, perhaps fifteen feet, and begins. "This isn't so easy," he says triumphantly. "You've got to know your onions." Again, he breaks through solid rock, excavating beneath it. For another fifteen minutes the only sounds are the rush of the river and the harsh clang of metal. Silently, Ferris kneels in the water, focusing on each piece of rock he pries loose.

The small ones coated with the sediment of the river bed are kept; the larger ones are scraped to remove deposits of black sand and silt, and then discarded. The pan, about six inches deep and fifteen inches across, is filled halfway.

"You've got to know how to do this now," Ferris says softly, pointing to a groove midway in the pan. "You've got to keep that lowest, way down near the water. That's where the gold goes. If you tip the pan up too far, everything will wash out of the groove. First you work the light sand out, then the small chips. Then you have black sand and gold left. Then you work your black sand out. That's the hard part."

Ferris holds the pan delicately, at the edges of his fingers. As he crouches over the water and briskly swishes the pan around and around, the murky sand washes away and the small chips fol-



Kneeling in the water, Ferris carefully examines each small piece of rock he unearths from the cavity. With a well-worn and rusted trowel he scoops up the paydirt—black sand, clay, and silt—and deposits the find in his pan.

When his pan has been washed clean of light sand and rock fragments, Ferris crouches over the river and begins the most difficult part of his job—separating the black sand and the gold. With slow, deliberate motions, he rocks the pan from front to back and side to side, in a delicate procedure that isolates the gold. Then, with eyes fixed on the pan, he searches for the glimmer of color.

low. He stops, tosses some pieces aside, and begins gently moving the pan from side to side and from front to back. During the first motion his body is rigid and his arms do all the work. Then he rocks the pan from front to back, swaying at the knees as his whole body moves to a silent beat. Side to side—the black sand settles to the bottom. Front to back—the black sand slowly washes away. The movements are repeated dozens of times until only a handful of black sand remains in the pan. Ferris stops and brings it close to his eyes.

"We've got colors!" he screams. "We've got colors! I didn't think we would, but they're here."

He begins panning once again. Now the movements are more deliberate. Front to back, front to back. Slowly the black sand disappears, except for a few grains. In the groove of the pan, resting on the sand, are seven tiny, shining pieces of gold. Ferris quickly takes a paper napkin from his pocket, carefully rests the gold on it, and raises his head.

"Who says there's no gold here!" he yells. ◇

Smith, B. R., 1976, "The Plymouth gold rush," Vermont Life, v. 6, no. 2, p. 8-13.

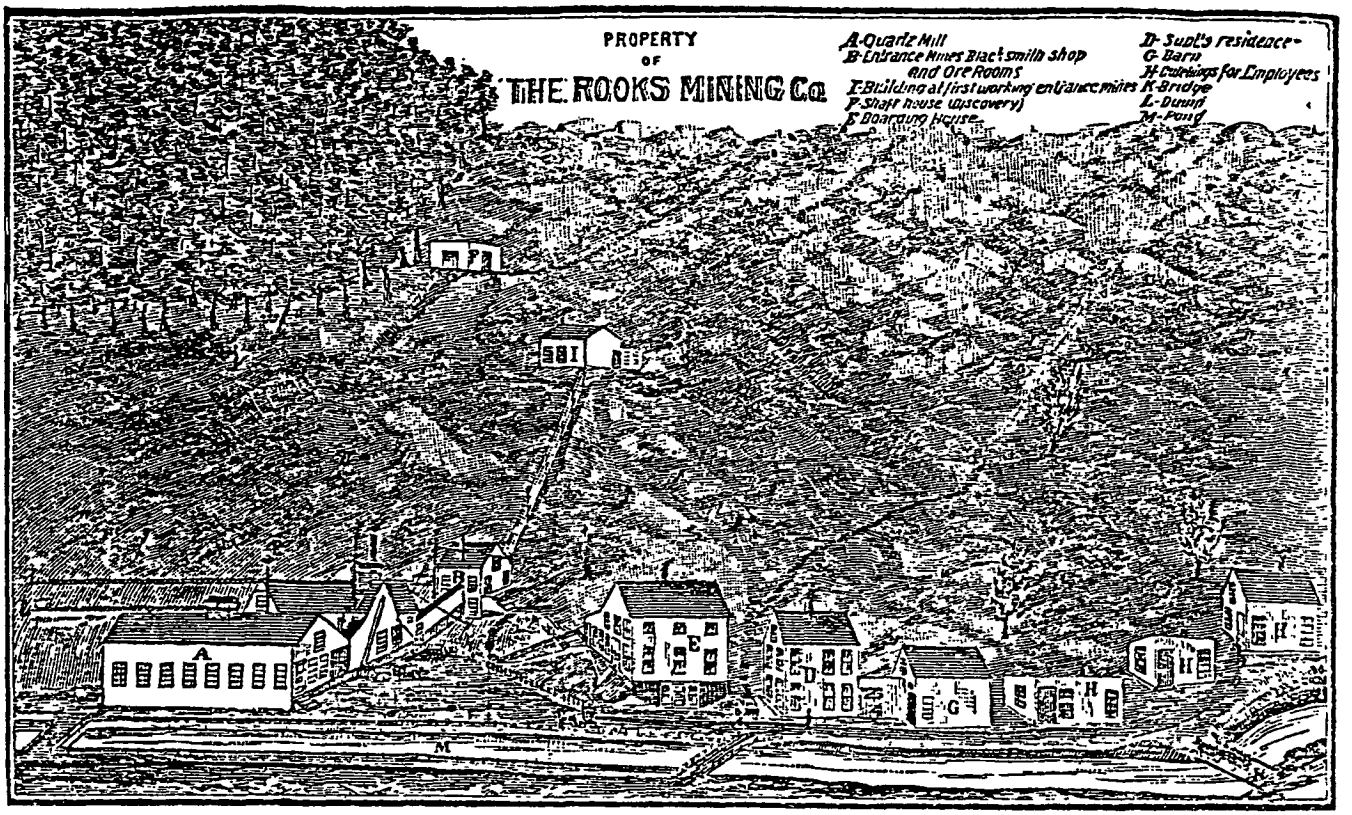
THE PLYMOUTH GOLD RUSH

by BETH R. SMITH

GOLD!" A word that has always sent the pulse of man racing; that cold relentless stuff of which vain dreams are made; the last thing you would expect to find in the still cool solitude of the Plymouth hills. And yet it is there. It has caused the same wild excitement there, the same reckless hopes and heartbreak, that it has been causing man since long before Vergil lamented "the accursed greed for gold."

Its presence was first discovered, so one story goes, just a hundred years ago by a young man back from the gold fields of California. When the cry of "Gold" went up from Sutter's Fort in '49, three young men from Plymouth had left their hillside farms for the West. One was known to have been killed by Indians; the fate of the second was never known, and though his wife waited and hoped for many years, no word ever came. The third returned with what was in those days considered quite a fortune. He was fishing one day in Buffalo Brook, one of the crystal-clear streams which flows into Echo Lake just beyond Tyson. Gold was far from his mind, but his trained eye caught its flash in the rushing water. It was but a small nugget, but there were more. He worked alone and tried to keep his find a secret. But soon the whisper rose above the ring of whetstones, above the whine of the water-driven saw mill, above the political discussions in the village store. GOLD! Not three thousand miles away but right in Plymouth.

←Beneath these peaceful hills may still lie the gold to send men's blood racing and to line their pockets.



This optimistic view of the Rooks property appeared in the company's gilt-edged annual report of 1884. The picture was reproduced from a rare copy in the Wilbur Library of the University of Vermont.

Hitchcock's *Geology* says it was Matthew Kennedy who made the discovery, and that it was just over the town line in Bridgewater where the brook which drains the Five Corners area enters that township. This writer also gives William Hankerson credit with "the discovery of gold in Plymouth in 1855." They probably refer to the area around the Five Corners however, for they also mention that Ira Payson, Charles Kane and Simeon Johnson formed a company and erected a "mill and crusher in 1853." They do state emphatically, however, that the purity of the gold found in Plymouth exceeded that generally found in California.

At any rate, by 1855 the brook which ran through Amos Pollard's Farm began to be known as Gold Brook, and a canny old "Forty-Niner," Virgil Woodcock, was among those washing there. After the others had become discouraged and quit, he entered into an agreement with Pollard and put in a log dam. With a sluice a half mile long he achieved a twenty foot drop, and increased greatly the amount of gravel he could wash. After Pollard's death a few years later, it was found that he had been paying one sixteenth of the gold he took for the rights. In less than a year this had amounted to $100, so a conservative estimate would place the total at least $2000. Woodcock died soon after this and it was several years before anyone with experience worked the claim.

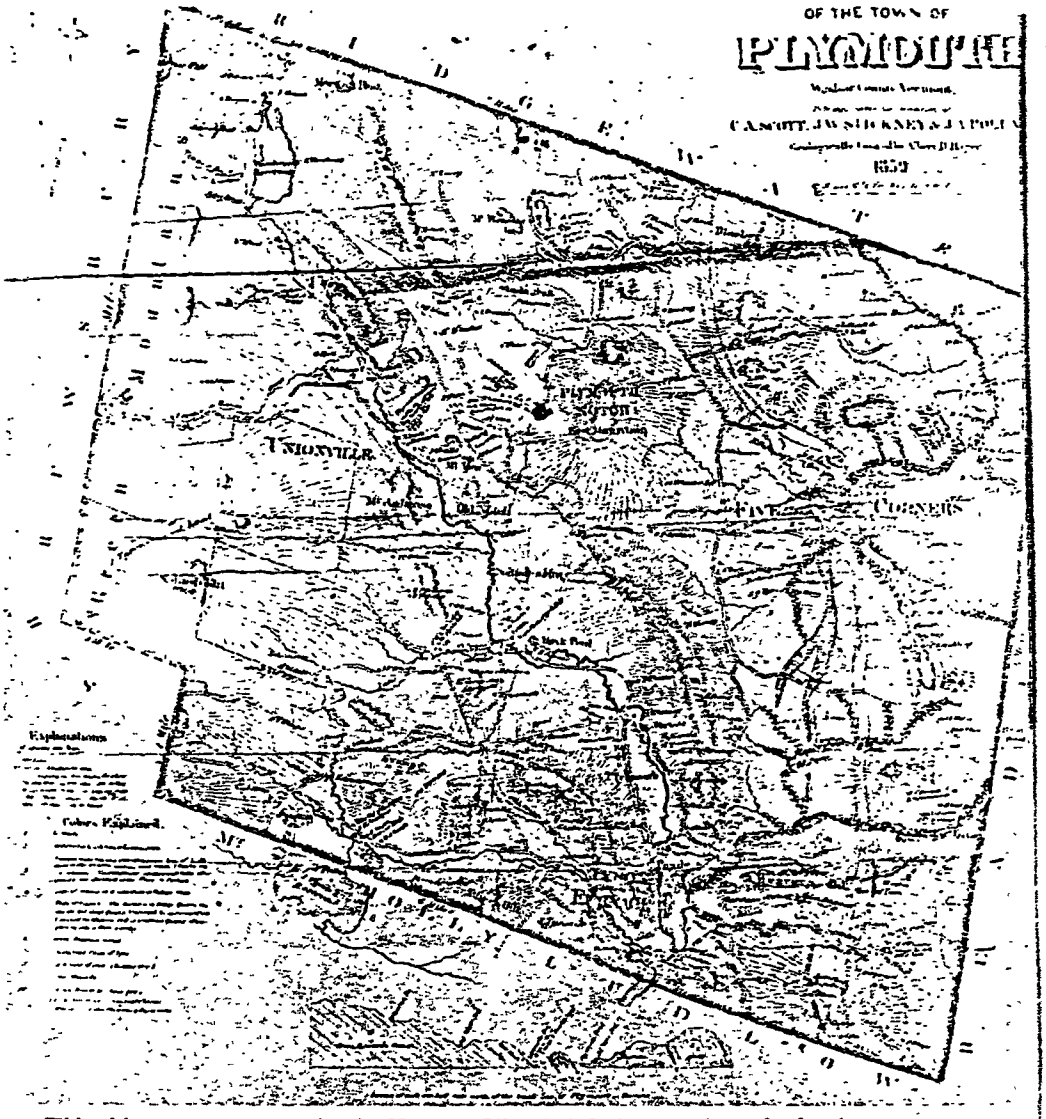
In the meantime over the ridge in the Five Corners area things were happening fast. Matthew Kennedy still held the mortgage on the land he had sold to the Plymouth Mining Co. which had suspended operation. In the Fall of 1858 William Hankerson returned and took a claim. He took out $400 by digging over two square rods. The next year he put a water wheel in to run machinery with which to drain the old mine and caused this water to pass through a sluice into which was thrown the gold-bearing earth. These sluices were made of boards and varied in width up to 20 inches and were 6 to 10 inches deep. Fine dirt was washed away leaving only pebbles and the gold in the bottom. "Riffles" were frequently used in the bottom. These were removable parallel slats with cleats or strips of sheet iron nailed about one fourth inch apart. Because of specific gravity, the gold would supplant lighter material and at the end of the day the Riffle could be removed and the gold laden sand placed in a "Rocker." This was just what it sounds like, a cradle, and was sloshed back and forth to further purify the ore. Hand panning, the process which required the most skill of all was eventually necessary, for the "Black Sand" or fine iron particles are nearly as heavy as the

Henry Fox, heir to the Rooks Mine property, is shown here in the shaft entrance. This unusual photograph was taken in 1895 by Walter Claflin of New York City

gold. Experience and a knowledge of the behavior of gold under various conditions, which the native farmers did not have probably accounts for the fact that it was almost always the "outsiders" who found the gold. A man who has failed usually minimizes the importance of a venture, and that may account for the dearth of material on an "industry" which kept the town in agitation for over thirty years. By this time the matter had come to the attention of "the press." Ludlow now had a weekly newspaper, *The Voice Among the Mountains*, and on May 31, 1860 it took notice of "Plymouth Gold Digging." After explaining that conflicting reports and some pretty tall tales had been reaching his desk, the editor tells how he hired a horse and buggy and went to see for himself what was going on. "It is getting to be quite a busy time among the Miners. New discoveries of gold have been made on the brook running from the west point of Reading into Plymouth near the residence of Uriah Allard and Jonathan Merrill. Two men, Messers. Hayward and Sweetland of Springfield, Mass. are now at work on this stream doing tolerably well. They have bought the whole brook. Hankerson is now clearing out the old millpond at the Five Corners where we shall hear from him again. There are now seven companies at work on Buffalo Brook where they are said to be making fair wages. At any rate it is nonsense to suppose they work there for nothing."

Again in *The Voice* of August 9, but ten weeks later, Beals and Graves, two more ex-Forty-Niners, from Mass. are declared to be "doing handsomely." We can do no better than to quote from an eye witness how things were going on Gold Brook in 1860.

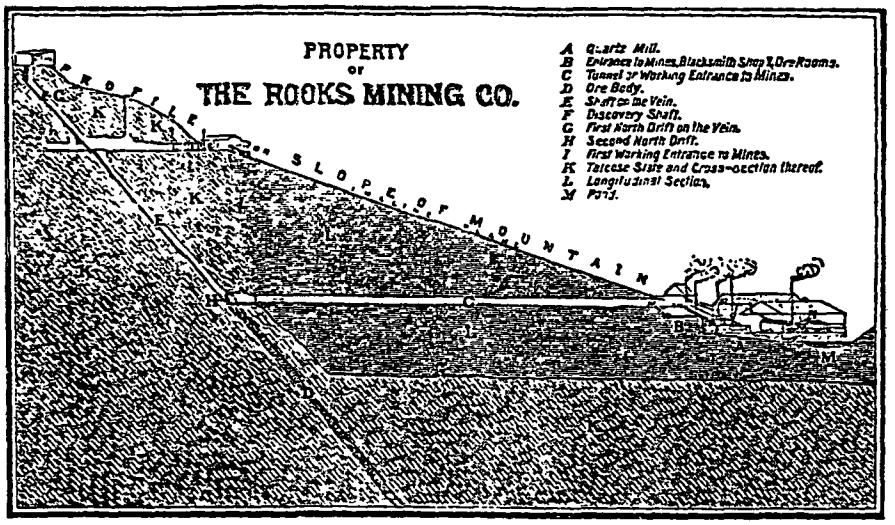
"The miners take a lease on a certain no. of lineal rods, from 10 to 40, along the stream with the right to dig in the "dry" on either side as far as they choose, for a seven year period from Pollard for $100 or more. Mr. Newton bought the lowest claim, 70 rods, and resold to 3 or 4 others. There are now sixteen dams. A Mr. Allen of Zachry Snell & Co., who was standing in the water shoveling out a tail race, said he hadn't had a dry foot for ten days." False reports in the *Springfield Republican* are given by the reporter as the reason why this Allen had become wary of newspapermen and was "slow in warming up, but finally became communicative and showed much scientific knowledge. He admitted that he was averaging but $1.25 a day, but had high hopes when he reached the Bed Rock. He is finding silver in small quantities and some sulphurate of zinc, but no quick silver. A native of Bridgewater, Mass., Allen is a returned Californian, and told us he had worked there in the warm water till his feet were raw. Some of the claims were not being worked, and as we progressed upstream we came to that of F. W. Coolidge, a promising claim, but he was out haying." (There are wedding rings still in existence made from the gold from that claim.) "There are two Hotels, Central, and Buffalo House, which furnish board and 'Refreshment' of the best quality, and there is a butcher cart twice a week." The initials M. B. were signed to this editorial.



This old map, a rare copy in the Vermont Historical Society, predates the heyday of the Plymouth gold mining. The dark lines, though, show where placer gold was panned. The Rooks mine later was located on the stream north of Weavers Hill.

William Hankerson, who *The Voice* promised would be heard from again, had now finished sluicing the mill pond at Five Corners. He had taken a terrific risk in paying $1000 for the privilege, but it had made him over 600% for he took out more than $7000 in gold. This area may not have produced as reliably but there were some spectacular finds. The natives kept on panning a few flakes from the brooks, but experienced miners found pockets. Lombard is said to have taken his dinnerpail full of ore from a shaft in the rock, and found it worth $190. A minister by the name of Raymond is reported to have found rich ore by digging in a hillside above the old road from Five Corners to the Kingdom. Marcell Earl came back from the West and spent one summer on the farm of his brother, Edward Earl and took by panning in an eddy by a ledge in the tiny brook on the farm, several "pill bottles" of pure flakes. There were so many local people panning and sluicing the many brooks in that area that they were washing out the roads and the town officials had to put a stop to it.

William Ames now owned the old Woodcock claim on the Pollard Farm



This cross-section view, taken from the Rooks report of 1884, seems to indicate a bottomless vein of ore.

Henry Fox lived the last 30 years of his life in this superintendent's house, the sole owner of the mine property once valued at a million and a half dollars. This photograph, part of it enlarged, was taken in 1908.

by the lake. He had no mining experience, but a St. Louis lawyer by the name of Harris became interested, and they decided to form a company. It was a motley assortment, not one of whom had any mining background, who finally comprised the Rooks Mining Company. Among them were Charles Rooks (or Rook) a government agent from the Indian Territory; Anthony Blum, a shoe store proprietor from New York State; and Col. Babcock, a promoter from New York City, who probably furnished them with ideas. The one indomitable member of this odd assortment was the assayer, Henry Fox. Like the rest, he was without experience but he differed in that his faith in the site he helped select endured. They came to the rather obvious conclusion that the gold which had been washing into all these streams was coming from richer deposits in the surrounding hills. Perhaps a vein of pure gold quartz! Excitement ran high. The younger generation in particular found the search for it more alluring than farming and were eager to join in.

A device made of metal rods, something on the order of a divining rod, was brought from New York by a man who surrounded the whole affair with an air of mystery. A gold bearing rock was finally located. High on a hillside north of the Pollard farm they began to dig a shaft and what was probably the largest of Plymouth's gold producing enterprises. A boarding house was quickly built. The ring of hammers and axes mingled with the voices of many men as trees fell and several small houses took shape. The assayers were so favorably impressed with the quality of the ore that the building of a mill was begun. After the main shaft had gone down some fifty feet, it began to fill with water and a horizontal shaft had to be dug. This extended nearly three hundred feet into the mountainside and much speculation went on among the townspeople as to whether the two would meet. Quite a group gathered to see the finish and tense moments preceded the gush of mud and water which proved that the engineers had figured correctly.

A little forty horse power engine turned the rollers which crushed the roasted ore, and quicksilver and sulphuric acid were used to extract the gold. Where today there is only a rusty little turntable and some warped iron rails on which the tiny cars brought out the ore, seventy years ago there was a hustling mining town in operation. The superintendent and all employees lived at the mine. The first month's "cleanup" was exhibited on Oct. 27, 1883 and the

Good sized trees now grow where the crushing mill once stood. Only the ore car tracks remain. All pictures on this page are by the author.

Ludlow paper, now known as the *Tribune*, printed the following on Nov. 30:

"We had the pleasure of handling the first ingot of gold produced at Plymouth Tuesday. It measured 6 x 1 x ¾ inches and weighed fifty-one ounces and one pennyweight. It was 97/100 fine and valued at $1021. This was the result of the first clean-up and the second was under way the present week, and much better results are anticipated from it. The Plymouth Hills have at last fallen into the hands of men who can make them disgorge their long-concealed treasure in paying quantities, and we are glad to note this success; certainly they have by their energy and faithfulness deserved it."

The first month's clean-up was reported by local sources as $700. It is hard to tell at this late date whether this was a figure arrived at after expenses had been deducted, or if it was Vermont conservatism in contrast to the approved publicity practices of the day.

"A bar of gold dug from the soil of New England is a novelty," comments the *Boston Evening Journal* of April 4, 1884, "but a bar worth $2891 was exhibited in the *Journal* office today by Mr. H. L. White, treasurer of the Rooks Mining Co. of Plymouth, Vt. In less than six months they have taken out $13,000 worth of gold at a cost of $5,000, the first dividend on 50,000 shares is 17 cents per share." The *San Francisco Journal* lifts an eyebrow as it comments that they had never heard of mining in the Green Mountain State, and adds that, "the famed Kentuck mine in Nevada will pay but ten cents, or a total of $3,000 in the same month."

An impressive alligator-grained leather bound report of the Rooks Mining Co. was printed and circulated. It contained pictures and a month by month report of a most convincing sort. Nuggets worth as much as $31 are noted. The net value of the mine was estimated at $1,535,274; daily earning at $2,104.16 or $13.12 per share. This was over 131% on capital investment. Stock changed hands, Boston interests bought heavily, and H. L. White of that city became President of the company. Plans were made at a meeting of the board of directors to quadruple the capacity of the mill. In preparation for this program of expansion, the machinery was taken down and carefully packed. Henry Fox, the assayer who had helped to determine the location of the mine, was now Superintendent. He had been buying stock and now owned a few thousand dollars worth. Three years went by and he waited more or less patiently for the directors to go on with the plans. Without machinery or help he could only pan the brooks and wait. Finally he was forced to sue the company for his back salary. The court's decision was in his favor and the mine and all property were put up at Sheriff's sale at Ludlow. The representative of a company dealing in abandoned mining property placed a bid of $12,000, Fox raised it $500 and it was struck off to him. The height of Plymouth's goldrush was past and late in 1887 Henry Fox began his thirty years as a hermit mine owner.

The story of Fox's life is a colorful one. Born in Switzerland of Austrian descent, he became a British subject, joined the Foreign Legion and saw fighting in India. Later he was a Steward with a steamship company operating a line to South America, and finally went into the assaying business in New York. He never liked to talk about himself and the local people felt that some parts of his life had been tragic. He was neat and courteous but always reserved. During the thirty years he lived alone in the one remaining house, selling off the property and always searching. He never lost faith in his mine but finally became ill and had to be taken forcibly to a doctor in Ludlow. Insane and suffering from Brights disease, he was taken to the Retreat at Brattleboro where he died a few weeks later, May 2, 1919, at the age of seventy.

"The Gold Mine" was one of the attractions the town had to show to the "City Boarders," the nineties version of the tourist of today, and many a party of beruffled young women well protected by large leghorn hats, has dipped gold-flecked gravel from the brook at the side of Mr. Fox's house. He was always a quiet but interesting host and frequently gave his guests pieces of gold-flecked quartz.

A modern prospector inspects the horizontal shaft entrance to the Rooks Mine, for many years now blocked by fallen rocks.

Was there as much gold taken from the mine as reports would indicate or were the ingots faked? Who can say? It was certainly over-promoted. Is there enough gold in that talcose slate vein in the eastern part of Plymouth to make mining profitable at some future time? That too may have to await the development of some device like the Geiger Counter for its answer. There is no question but that there is still gold in the hills, or even more likely, in the lake beds, and on a Sunday afternoon you often see people panning for fun. But the excitement has died down and melting snows have brought down gravel and partly buried the old millsite. Moss-grown timbers still project from the piles of dirt at the mouth of the shaft, and rusty tracks lead to the spot where gold was once milled. Trees a foot in thickness have grown where the house stood in which a man lived alone for thirty years on a $12,500 piece of faith only to die a pauper. END

Gold Brook, giving little hint of its tumultuous past, enters Echo Lake quietly in this scenic cove on Route 100.

The Midas Touch Yields Glitter Of Hope

Amateur Prospectors Find Gold, Enjoyment, In Panning Vermont Rivers

By MAURA GRIFFIN
Associated Press

STOWE — Just like the '49ers in the California Gold Rush, some Vermonters are finding gold in their pans.

"You know it's gold by the sight or by the weight," said a 65-year-old Stowe resident who's been panning for decades. "You swish."

His equipment is simple: a few pans, a hammer and mallet, and an old, rusty pair of magnifying glasses. He does not want to be identified because he fears someone will try to rob him because he collects gold

"For some reason people equate gold with money," he said, scooping up chunks of dirt and rock with his raw, red fingers and dumping it into his pan. "It's just not so."

One morning last week, the Stowe prospector "worked the rocks" for about 20 tiny flakes of gold.

In a rough, careless manner, he pulls the rocks out of his pan and swirls it until all that remains is a heavy black sand and — possibly — gold. He dabs at the speck of gold and puts it into his glass vial, filled with hundreds of other wee flakes.

He is one of dozens who peer into Vermont's rivers and streams, hoping for the flash of gold. Most find only small bits the size of fleas.

"I used to trade some, but the jewelers don't really want raw gold," he said. "Now I do it mostly for exercise."

It's not riches Scott Moffatt of Wolcott is looking for, either

"It's the challenge. You sift through the mud and dirt and find gold," he said. "Sometimes you get lucky and find a piece that's bigger than a pinhead."

Moffatt, 23, hopes to collect enough to make a ring for his fiancee. He might have to wait awhile. "I just wait for that day when I find a piece that I can drop and hear it hit the pan," he said.

Gold is 19 times heavier than water, so it sinks to the bottom of a stream, or a pan. The "swishing" action is not as easy as it looks, the Stowe prospector said. "You've got to know how to do it."

He would not reveal his secrets.

In 1855, Capt. Abial Slayton first found gold in what was then Hull's Brook, now Gold Brook, in Stowe. Slayton had traveled to California in 1849, along with three or four others from Stowe, and struck it rich.

After returning, Slayton thought he saw gold in the stream while he was fishing, historians say. He set up an elaborate sluicebox operation and hired several men, but he never had the success he found in California.

Slayton's gold coated the last spike to be driven in the Mount Mansfield Electric Railroad in 1897.

"I know there is gold up the brook and in the little ravines in the mountains," Slayton told a reporter at the time. "All the slope of the mountain is a great depth of earth, and I doubt not that there may be many paying veins."

Moffatt agrees. "I think this hillside is full of gold. Maybe not near the streams, but off a ways," he said. Moffatt hits the stream on sunny days in the warm months, but he says the best time is the early spring after the ice goes off.

"That's when the new dirt is brought down the mountain with new gold in it," he said.

The gold found in Stowe, which is washed down the stream from the Worcester Mountain Range, has some silver and copper in it, but is close to pure, geologists say.

Judy Hannah, a geologist from the University of Vermont, said the Green Mountains have held gold in green quartz veins for about 300 million years.

"A lot of it has eroded into the streams and rivers and is called placer gold," she said. "That's where the panners get it."

"People mine in a number of places in Vermont, from the Massachusetts border to Quebec," said Jeff Howe, curator for the University of Vermont's Perkins Museum. "Another big area is Plymouth."

Some prospectors say they've panned a few ounces a year out of the Gold Brook. But the old prospector, who pans nearly every day for a few grams a year, doesn't believe it.

"You might mention that people exaggerate in this business," he said.

AP Photo by Toby Talbot

A gold prospector searches for gold in the gravel in his pan recently while prospecting in Stowe's Gold Brook.

Elusive, Minute, But It's There

Vermont Gold: New Gilding Of ts mage

By COLIN NICKERSON

BRIDGEWATER — Lawrence Curtis, 74, of Bridgewater has sought gold in the streams of Vermont for nigh onto half a century.

"It's pretty elusive stuff, that gold — always trying to hide from you," he said. "And it does a pretty fair job of it."

Curtis, a semi-retired farmer and logger, claims not to recall how much gold he's panned in all those years.

"I've never been one for figures," he said, adding: "For me, going for the gold has always been what you'd call a hobby. I wasn't looking for any profit. It gets me out in the fresh air, and it gives the mosquitos something to do."

If the price of gold continues its skyward scramble, there's likely to be goldpan handlers aplenty up to their knees in Vermont's roaring brooks and chilly creeks when the ice starts breaking this spring.

"Gold prices of over $600 an ounce can be a rather powerful incentive," remarked Vermont state geologist Charles Ratte in a recent interview.

There is gold to be found in the Green Mountains.

The precious element has been panned, sluiced and "snifted" from the Ottauquechee River, Buffalo Brook, Minister Brook in Worcester, the White River, Little River, the aptly-named Gold Brook in Stowe, and several other streams and rivers in Vermont.

Although tiny amounts of gold-bearing quartz have been discovered in the state, most of Vermont's gold is "placer" gold deposited eons ago by Ice Age glaciers and usually found only in the gravel of stream beds.

"The quantities found, to date, have been small," Ratte cautioned.

However, as Curtis noted: "When the gold bug gets ahold of you it doesn't normally let go...."

Curtis predicted that the record prices being paid for the yellow metal will spark a sort of gold rush in Vermont.

"Oh, yes, people will be scratching all over; they tend to prick their ears right up when they think there is money to be had," he said. "I expect there's going to be a lot of disappointed people."

Ratte said he has recently received "a lot of inquiries from people interested in coming to Vermont to pan for gold."

Curtis described gold hunting as "mostly hard work: you got to go to the gold, it doesn't come to you. It's healthy excercise, though, as long as you don't fall into the brook."

Leighton Wass, a 37-year-old Barre science teacher, started panning gold as a hobby several years ago.

"Most of the gold I've found I've given away — I'm not so sure I'd do that now," he laughed.

Wass said he knows of a creek "near" Minister Creek in Worcester "where I can find flakes every time I go there."

On one occasion, Wass said, he came up with 14 tiny pieces of gold in a single panful of gravel.

"But I mean tiny — about the size of a flake of pepper," Wass said. "I don't really think there is enough (gold) in the state to make it monetarily worthwhile."

He added: "With the prices so high, you can pay for your pan, and maybe even pay for your gas if you work at it."

Lee Garsh, owner of the Junction Country Store in Bridgewater Corners is one of the very few who can claim to actually have made a profit money from Vermont gold.

He sells gold pans, rock picks and other rock-hunting equipment.

Garsh also sells small bottles containing minute quantities of gold "guaranteed to be from a local brook."

For the most part, Garsh said, his customers are "recreational panners."

But Garsh insisted there "at least few oldtimers from the area" who've panned many ounces of gold, and even found small nuggets, from the creeks of Plymouth and Bridgewater.

Lawrence Curtis, however, was skeptical.

"If you find people making money panning Vermont gold, let me know about it," he said.

Curtis preferred to remain close-mouthed about his own favorite spots for hunting gold.

"Oh, I keep my pan with me and stop at different places," he laughed.

In general, though, Curtis recommended looking for gold in the same spots in the stream where you'd angle for a fat trout — in the still water behind a boulder or at the bottom of a pool. The heavy gold, carried downstream by the torrents of the spring, tends to settle in quiet eddies.

Curtis said he was taught to pan gold "around 1930" by an oldtimer named Fremont Thompson.

"He'd been around back in the days of the gold rush," Curtis said.

Although gold can be found in every New England state (except, perhaps, for Rhode Island), Vermont has always had a reputation as the Eldorado of the northeast.

It began it the late 1800s, when gold fever raged high in the nation after the discovery of the metal in California.

Just a speck of "color," placer mining slang for the glitter of gold, spied in Buffalo Creek in Plymouth was enough to set off talk of a bonanza just waiting to be discovered in Vermont.

And in 1883 a commercial operation — the Rooks Mining Co. of Plymouth — was burrowing after gold in earnest....

Gold Fever!

Photo by Ed Barna

Edward Ruggeri demonstrates panning to a young visitor at the Richards mine in Ludlow.

The Magic Metal Surfaces Again, With New Believers And Extraction Methods

By ED BARNA
Correspondent

"There's gold in them thar hills!" the Forty-niners said during the great California Gold Rush of 1849. Vermonters were among those who made the westward trek, and among those who slogged homeward again, busted.

"For one who gains riches by mining
Perceiving that hundreds grow poor,
I made up my mind to try farming,
The only pursuit that is sure,"

went the words of one popular song. But Vermonters didn't all throw away their gold pans when they came back, and the day came when someone fishing in Plymouth saw a familiar yellow sparkle in the brook. Vermont had a brief gold rush of its own, in the 1850s when it was learned that a Gold Belt of sorts extended from south to north through the Green Mountains.

It was mostly placer gold, though, the kind found broken loose from veins. A few mother lodes were worked, but gradually they were abandoned. Gold became more a part of Vermont's history than its present, and the dream of the gleam was left to a few diehard panners and prospectors.

But the yellow flame never entirely burned out, either in California or Vermont. Now California is in the midst of a gold revival, as the "New Forty-niners" use modern techniques to make old mines and streambeds workable again.

History seems to be repeating itself in Vermont as well. There are people who have brought new expertise and technology to the Green Mountains, in the conviction that profits, if not fortunes, are waiting. People have continued to find placer gold in numerous streams.

There are at least two reopened gold mines, including one that the owner plans to reopen as a tourist attraction where amateurs will be guaranteed success at panning for gold. A new U.S. Geological Survey is taking stock of Vermont's mineral inventory, and mining companies are following close behind.

Little by little, the word is getting out: there's gold in us here hills.

Mining Equipment

"Gold pans," says the sign at Leisure Lines, a recreational equipment business on Route 4 just east of Rutland.

Hundreds of people stop each year to look, and several dozen walk away with equipment to go looking for gold, owner Gene Stiles said. Sales have been steady for the 15 years he has carried pans, sluices, dredges, gold dust processing kits and nuggets, he said, even during the winter.

Stiles said his decision to supply the hobby trade came after he became interested in Vermont's history of gold mining. He went out to some of the old mining sites — the lost towns of Chateaugay and Plymouth Five Corners — and tried his luck.

His own experience, combined with that of other Vermont rockhounds, has led Stiles to believe "There's gold scattered all around the state." What's more, "it's 23.85 carat," he said, on a scale where 24 carat means 100 percent pure.

That means a one-ounce nugget that would fetch between $400 and $500 as gold bullion (bars, ingots, coins) would be worth thousands of dollars if sold instead to a

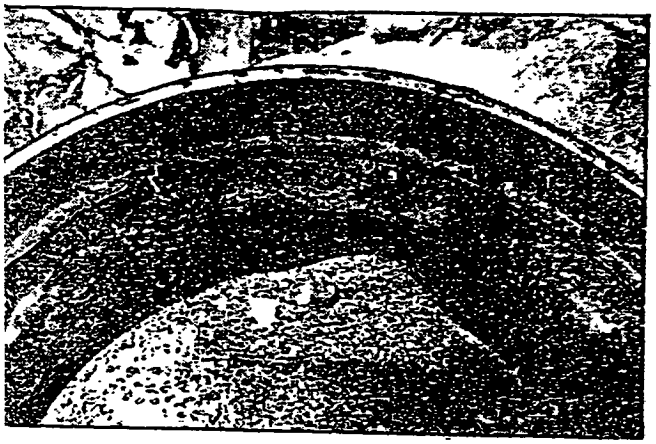


Photo by Ed Barna

here are small flecks of gold in this pan, along with larger chunks of gravel from the Richards mine.

mineral collector or jeweler. Stiles said.

There's gold in Plymouth, over the hill to the east of town, and "people who work at it still find quite a lot of gold there." Stiles said. There's gold in Tyson, in the Williams River; near Stowe, at Gold Brook; and "anywhere along the Cold River, it's possible to find it," he said.

Weak Mind, Strong Back

Stiles is quick to caution his customers that panning for gold is the kind of work that requires "a mind that's weak and a back that's strong," in the words of the old Tennesse Ernie Ford song. "There's hobbyists who will be happy to find a dozen pieces in a day," he said, those being flakes more the size of carrot and tomato seeds than the old Double Eagle coins, now being reminted by the government.

The odds can be improved by using better equipment. Stiles still carries the old standard metal gold pans — flat bottom, slanted sides — the one moviegoers remember prospectors using to slosh water and gravel around until "color" is visible at the bottom.

But those have been outclassed by plastic pans with built-in ridges along the sides, with sometimes a pocket built into the bottom. The heavier gold goes to the bottom of the gravel, and when the pan is tipped and the contents are sloshed, it is kept from falling out of the pan by the "riffles," as the ridges are called

Any of the pans costs less than $10. With a pan and a list of mineral sites around the state, which Stiles also sells, a hobbyist can be equipped for weeks of work — though some will return for a pair of heavy duty knee pads.

Confirmed goldbugs use sluices. These are long, box-like affairs with built-in riffles, and sometimes a piece of removable carpeting at the bottom for flakes of gold to lodge in. Selling sometimes for less than $50, they turn prospector into processer, using river water (in most cases) to wash away far greater quantities of gravel.

The best gravel is to be found in the cracks in a stream's bedrock. Since this is a difficult place from which to remove anything by hand (the old-timers somtimes resorted to black powder), it helps to have a vacuum-like affair known as a power dredge. Vermont water quality regulations limit dredges to no more than four inches across, but even these smaller units can cost several hundred dollars.

Dredging also requires the landowner's permission and a water quality permit limiting when, where, and how the equipment is used, according to miner Michael Richards.

Out West, metal detectors are sometimes used to locate nuggets, Stiles said. In Vermont, the nuggets generally are too small for that, he said. But he sells many for a different kind of prospecting: locating lost rings and things.

In fact, Stiles said, that kind of prospecting might uncover more nuggets than working the streams. "It's nothing to make a living at or get rich at," he said. "Nobody has ever found any big mother lode around."

Boy Scout Finds $300 Nugget

But others have a different opinion. Richards, Edward Ruggeri, and James Morris, who plan next year to open a 17-acre former streambed in Ludlow to the public, guarantee that their visitors will find gold. The experience of two Boy Scout troops from Connecticut this fall proved they can back that guarantee, and one boy even took home a nugget worth $300.

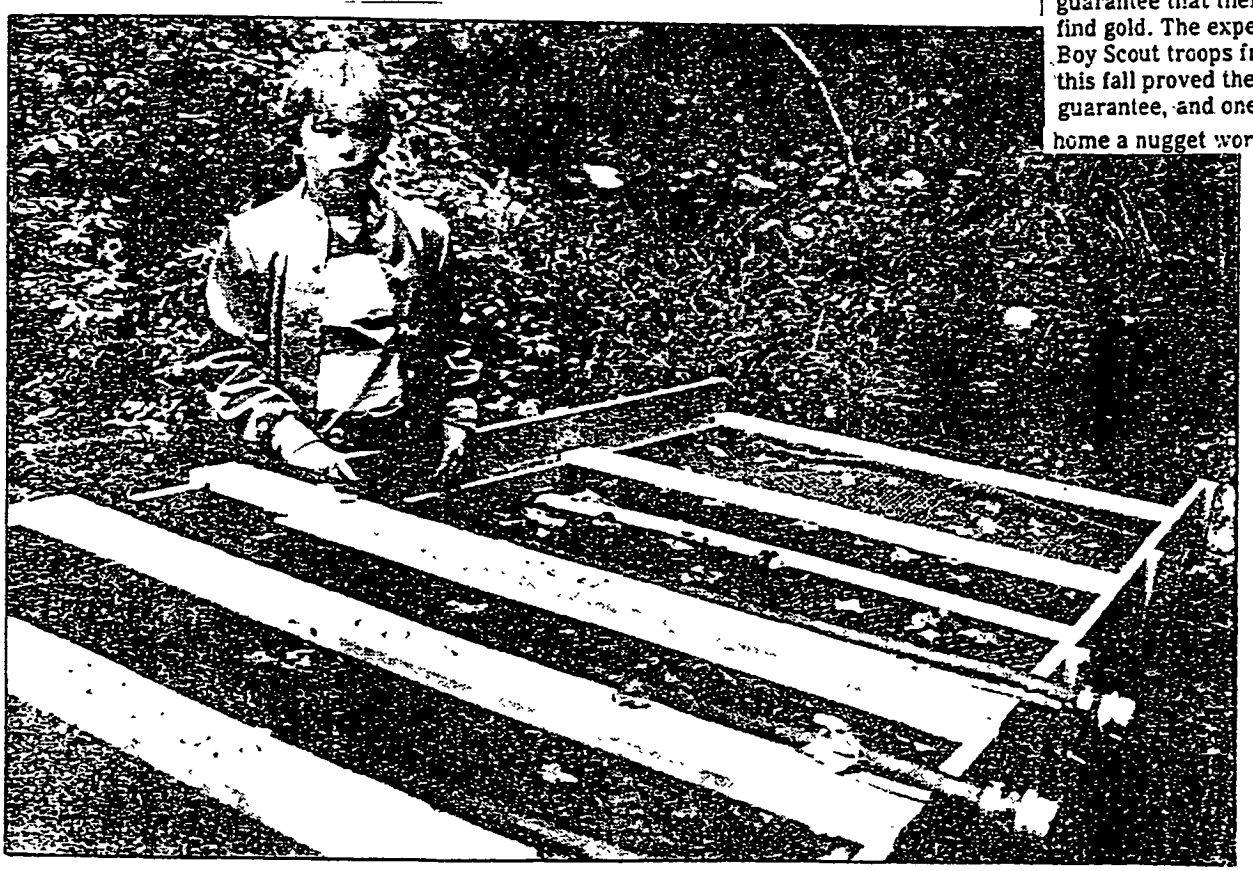


Photo by Ed Barna

Allen Richards, 13, and the sluice which helps filter out the gold flakes at Richards mine in Ludlow.

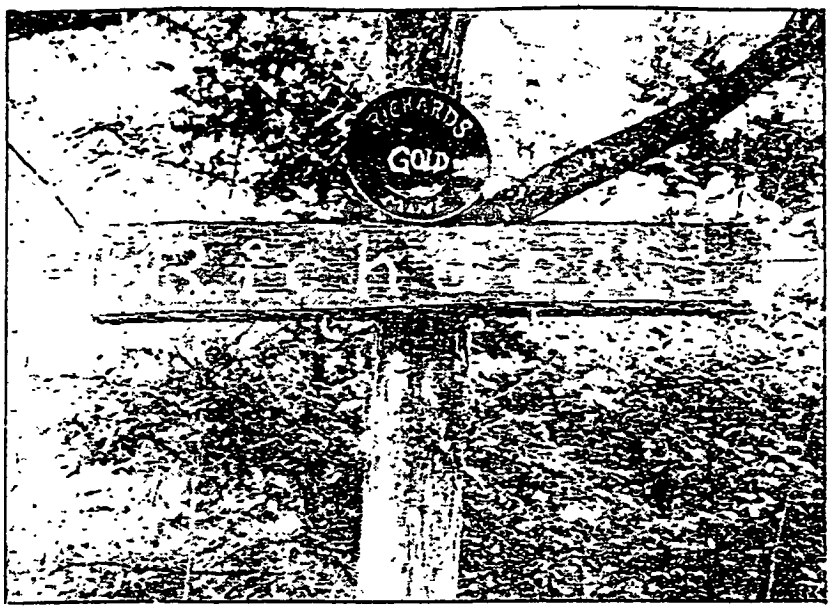


Photo by Ed Barna

This sign points the way to the 17-acre former stream bed in Ludlow which will be open to the public next year. A visiting Boy Scout this fall took home a nugget worth $300.

After the top gravel in the Richards Mine has been processed in that way, the partners expect to find even larger deposits on or in the bedrock. "We have gotten some rough gold that indicates there is the possibility of a lode deposit," Richards said.

According to Stiles, Reuben Whittemore is working the former Rooks Mining Company lode deposit or its tailings near Buffalo Brook in Tyson. Richards said that in the late 1800's, the mine was the third best producer in the country.

Talc And Semiprecious Stones

But gold isn't the only worthwhile mineral, Richards said. Farmers are walking over talc deposits that could help save their farms. People pick up and admire and toss back into streams pretty rocks that could be cut and polished as semiprecious gemstones. Chromite, silver, and rhodium are present, and "it may be in good, paying quantities in some areas. It just takes investigating," he said.

In the middle of the state, says Richards, "I don't know why some of these guys owning sand and gravel operations aren't sluicing some of the material, just to check. Most all of the pits have gold in them to some degree."

A veteran gold miner who has worked from California to Georgia and Montana to Arizona, Richards said he has learned a great deal over the years from generous fellow prospectors. In turn, he said, he would like to awaken Vermont to the wonders and resources that wait in its back yards and fields.

"There's a lot out there, no doubt about it, and New England sort of got left behind," Richards said.

Vermont's Gold Belt

But gold doesn't crop up just anywhere. To do any prospecting, it helps to know something about the geology of gold in general, and especially about Vermont's gold belt.

Richards has a map of Vermont's townships, with the ones that have gold circled in blue. They go right up the center of the state: Dover, Newfane, Jamaica, Plymouth, Ludlow, Sturbridge, Rochester, Braintree, Warren, Waitsfield, Moretown, Waterbury, Stowe, Johnson, Eden, Lowell, Troy.

Gold has also been found just below the Canadian border and just above it in Quebec, in the same north-south line as the Vermont findings, Richards said.

The gold is in or very near the talcose schist bed, "in the rock of the mountains that were there," Richards said. In other words, the gold and other metals that Vermonters are finding now in the Green Mountains are actually the deep roots of another, much earlier mountain chain, now almost completely eroded.

Brewster Baldwin, emeritus professor of geology at Middlebury College, said that in general "when molten rock crystallizes into a granite, there are fluids left over that seep out, and they seep up toward the surface, and they tend to deposit veins of quartz."

When the gold and other minerals from the molten magma cool, "they tend to crystallize and fill cracks, so you see these white (quartz) vein deposits. The gold may be scattered through these deposits, in tiny flakes you may not be able to see."

"This all happens quite deep, miles below the surface," Baldwin said. Kater, exposed veins erode and wash downstream. "That gold, being heavier than anything else, accumulates in the streams," he said.

Richards said Vermont gold also occurs in high-carbon slates, since the carbon tended to trap liquified gold. Like the granites, these slates erode and leave flakes of gold in streambeds, he said.

"From Bridgewater down is where the whole belt comes to an apex (narrows toward a point), especially in Plymouth," Richards said. "The greatest amount of pressure was put on the system in throwing up hydrothermal solutions and gold-bearing veins."

Thus the region around Plymouth, where the Richards Gold Mine is located, has consistently yielded more gold than anywhere else. Ruggeri said the old-timers of the region say that Calvin Coolidge got his start through his grandfather paying the local kids to bring in the pretty little yellow rocks they kept finding in the streams, and trade them in at the family's general store.

Richards has a copy of the First Annual Report on the Geology of the State of Vermont, by state geologist C. B. Adams. Written in 1845, four years before the electrifying news of the gold strike at Sutter's Mill in California, it notes that gold was allegedly found in Somerset.

Most dismissed the findings as the deliberate handiwork of someone "salting" the land with gold for speculative purposes, Adams wrote. However, he took note of the fact that "the geological formation is similar to that of the gold region of North Carolina."

A Golden Partnership

Ruggeri said he met Richards about five years ago, when both were exploring the rivers around Plymouth. He had equipment, such as a backhoe, and Richards had Western expertise, as did Morris, and the partnership was born.

Ruggeri and Richards and a friend explored the old Rooks mine shaft, which goes down hundreds of feet in Tyson. They rigged a block and tackle, and the first person down was so fascinated that he kept turning around to look at things, and the lines got twisted, and the block and tackle wouldn't work, and there were some very dark moments before it all got straightened out.

"Definitely not for the nonprofessional," Richards said of the expedition, which also involved crawling more than 100 feet through a very small side shaft.

Some people say that the Rooks mine was only a scheme to take people's money, Richards said, but he doubts that the miners would have worked that hard for nothing. The whole road going in is made out of tailings, the mine wastes, he said.

William Schuele, president of the Burlington Gem and Mineral Club, said Whittemore has lectured to them on his work reactivating the mine. Leaching out the gold involves an innovative process using bacteria, he said. Whittemore could not be reached for comment.

Re-opening Ludlow Site

In the end, the three partners acquired a site next to the North Branch of the Williams River, on the Smokeshire Road in Ludlow, which had been worked both in the late 1800s and in the 1940s. Richards said it had apparently been closed by the War Powers Act during World War II, and had never been reopened.

A Connecticut investment group bought it, expecting that it would be a bigger operation, Richards said When a closer inspection showed that using their large-scale equipment would be less profitable than working a mine the owned in the West. Morris and geologist Steven Savory found out about the place while looking through Vermont, and told Richards, who bought it.

Richards said he learned a great deal about the 1940's operation from Ferris Warren, a well-known goldbug in the area, who had worked for the Canadian mining engineer who ran it. There had been a 100-foot sluice box, Warren said. the evidence of which is clearly present as a 100-foot ridge of waste rock pushed over the sluice's sides. with the regrowth trees on it all of the same height.

Also on the site is what appears to be a shallow puddle, but is actually a pit of silt so deep that the partners have been unable to find its bottom — evidently a mine shaft. "We pulled about 80 feet of (one-inch diameter) cable out of there," Richards said.

A former telephone pole with spikes driven in it at regular intervals, found lying on its side near the old shaft, was evidently used as a ladder, Richards said.

Essentially, the Richards Mine is a former streambed, whose previous owners thought the former main channel was up against a nearby hill. Actually the old channel was nearer the river — hence the prospects, so to speak, that the partnership envisions.

Inviting The Public

With so much history behind it, the place has been beyond hiding. Richards and Ruggeri kept finding and evicting other prospectors during their initial visits, until finally Richards's wife Betty suggested capitalizing on the site's popularity rather than clamping down.

Today there is a sign "Richards Gold Mine" on the nearby gravel road, and there are trailers onsite where the Richards and Ruggeri families prepare for the elementary school classes, Scout troops, fellow prospectors, rockhounds, and curious tourists.

Pamphlets advertising the opportunity will be distributed all around the state, Richards said. Buttons have already been made up saying "Richards Gold Mine." The new roadside attraction even has a motto: "We Dig Gold."

One of the main things visitors will learn is how to pan for gold, a technique that in the beginning can take 15 to 20 minutes per load, but which can be much faster with practice. "Everybody has their own technique," Richards said as Ruggeri demonstrated, but there are certain basics.

Lots Of Water Needed

After digging near bedrock and even chipping out rock to get at the clays lodged in cracks, the first step is to thoroughly wash all dirt and sand off the big rocks.

The second step is to mix rocks and water thoroughly by hand, so even the tiniest flakes of gold dust can fall to the bottom.

The third step is to gradually wash out all but the finest sand. That can be done either by swirling the gravel and water in a circle or rocking the pan from side to side. In either case, the front of the pan is held close to a supply of water, and is tipped slightly downward so that a little bit of material keeps getting washed out when the water sloshes over the side of the pan.

Panning involves steady, gentle motions rather than rapid, forceful ones. In the end, black magnetite (iron) sand is likely to appear on the bottom — a heavy metal formed at the same time as the gold. Indeed, there are traces of gold in some magnetite sand, which big companies can dissolve out with chemicals and then collect through a process using mercury.

At last, a yellow grain or two, or none at all, or many more, will be visible in the sand at the bottom. Flakes can be picked out by hand or with tweezers, and are often put in a clear plastic or glass vial filled with water. Dust and sand too fine to be separated by panning can be saved and later processed using a special kit.

Processing equipment is available at Leisure Lines, among other places, or through the Keene Engineering catalog (9330 Corbin Ave., Northridge, Calif. 91324). Other equipment dealers advertise in Modern Gold Miner and Treasure Hunter, a new bimonthly magazine also carried by Stiles, or available by subscription for $15 a year (P.O. Box 47, Happy Camp, Calif. 96039).

The lucky person who discovers gold can sell it to Vermont mineral collectors or some jewelers and will find additional markets, including smelting operations, in the gold hunters' magazines.

The Friendly Miner

Richards is hoping that the new business will pass on to hobby prospectors the same attitude of friendliness and mutual help that exists among serious gold miners. In the old days, he said, the miners always wore brightly colored clothing and other eyecatching gear, in hope that passers-by would see them and come to visit and break up the isolation and loneliness.

Eventually the Richards Mine will use some of the new Western technology for processing bedrock, such as a huge "trammel" that works something like a rock tumbling machine to break up, wash, and sluice goldbearing material.

With gold priced at over than $400 an ounce, more people are looking at old deposits, Richards said. A U.S. Geological Survey update is in progress, he said, and companies tend to follow the geologists.

However, big mining companies usually want to buy or lease large tracts of land, and "that may be a problem for them," Richards said. Also, with Vermont's extensive permit process, "that keeps a lot of companies down right there."

In Georgia and North Carolina, "the ones that are doing real well are mom and pop kinds of things," Richards said.

"Vermont has an awful lot to offer," Richards said. "It's a mineral rich state."

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By COLIN NICKERSON

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On one occasion, Wass said, he came up with 14 tiny pieces of gold in a single panful of gravel.

"But I mean tiny — about the size of a flake of pepper," Wass said. "I don't really think there is enough (gold) in the state to make it monetarily worthwhile."

He added: "With the prices so high, you can pay for your pan, and maybe even pay for your gas if you work at it."

Lee Garsh, owner of the Junction Country Store in Bridgewater Corners is one of the very few who can claim to actually have made a profit money from Vermont gold.

He sells gold pans, rock picks and other rock-hunting equipment.

Garsh also sells small bottles containing minute quantities of gold "guaranteed to be from a local brook."

For the most part, Garsh said, his customers are "recreational panners."

But Garsh insisted there "at least few oldtimers from the area" who've panned many ounces of gold, and even found small nuggets, from the creeks of Plymouth and Bridgewater.

Lawrence Curtis, however, was skeptical.

"If you find people making money panning Vermont gold, let me know about it," he said.

Curtis preferred to remain close-mouthed about his own favorite spots for hunting gold.

"Oh, I keep my pan with me and stop at different places," he laughed.

In general, though, Curtis recommended looking for gold in the same spots in the stream where you'd angle for a fat trout — in the still water behind a boulder or at the bottom of a pool. The heavy gold, carried downstream by the torrents of the spring, tends to settle in quiet eddies.

Curtis said he was taught to pan gold "around 1930" by an oldtimer named Fremont Thompson.

"He'd been around back in the days of the gold rush," Curtis said.

Although gold can be found in every New England state (except, perhaps, for Rhode Island), Vermont has always had a reputation as the Eldorado of the northeast.

It began it the late 1800s, when gold fever raged high in the nation after the discovery of the metal in California.

Just a speck of "color," placer mining slang for the glitter of gold, spied in Buffalo Creek in Plymouth was enough to set off talk of a bonanza just waiting to be discovered in Vermont.

And in 1883 a commercial operation — the Rooks Mining Co. of Plymouth — was burrowing after gold in earnest....

GOLD

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* * * * *

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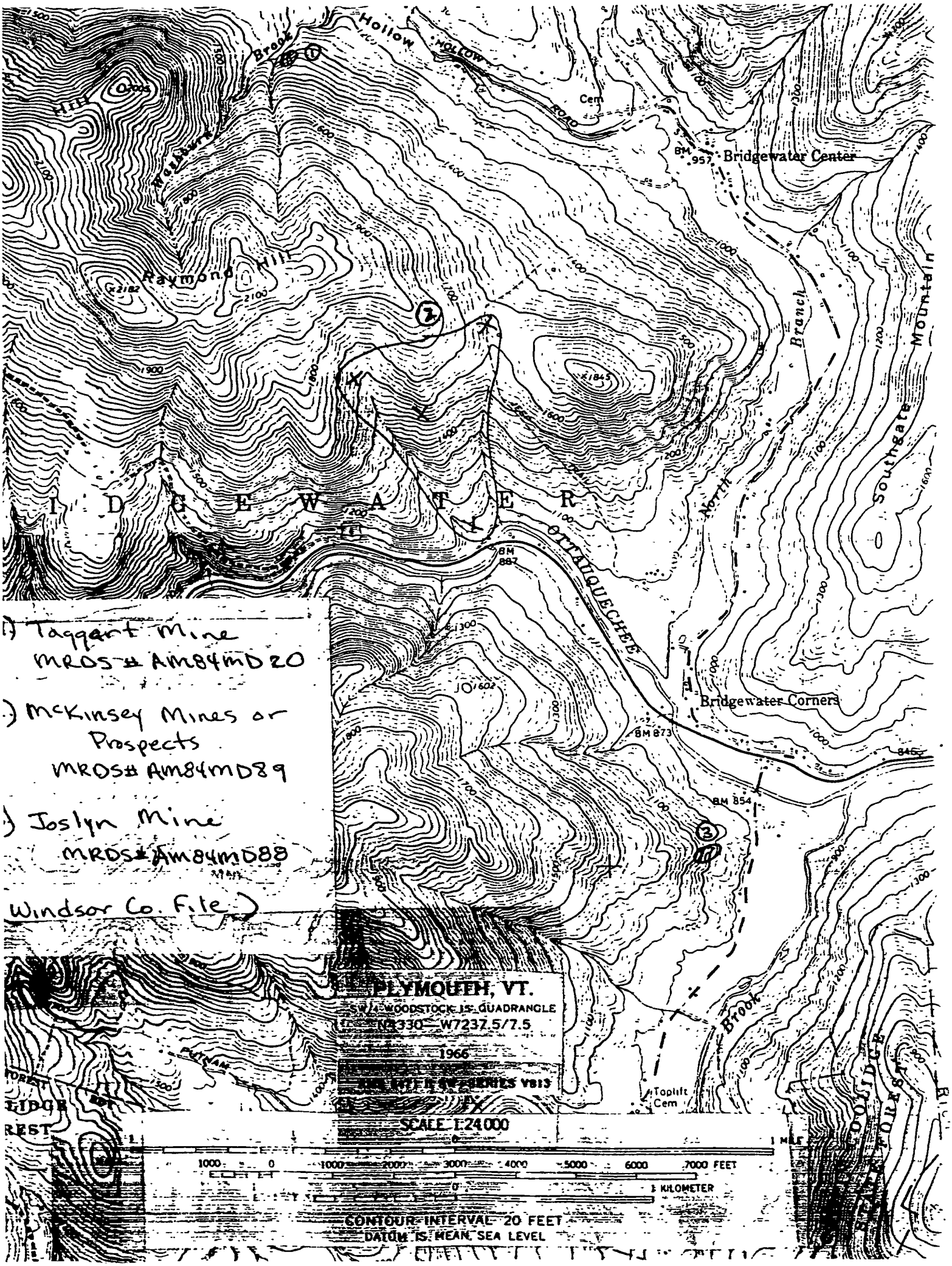
- Von Mueller, Karl, 1980, *Gold dredger's handbook* (47 pgs)
- Von Mueller, Karl, 1980, *Vibrating gold concentrators* (47 pgs)

... write for a price list from: Exanimo Press
23520 Highway 12
Segundo, CO 81070

* * * * *

SGL	available at the Office of the State Geologist, Waterbury	
VHL	available at the Vermont Historical Society Library, Montpelier	(802 828 2291)
VSL	available at the Vermont State Library, Montpelier	(802 828 3261)

X means that the article is included in this information packet.



1) Taggart Mine
MROS # AM84MD20

2) McKinsey Mines or Prospects
MROS# AM84MD89

3) Joslyn Mine
MROS# AM84MD88

Windsor Co. File)

U.S. MRDS-SITE FORM

RECORD IDENTIFICATION

D NUMBER B10 <> *RECORD TYPE B20 <X, 1, M> DEPOSIT NUMBER B40 <AM84MD89>

T DATE G1 <84, 09> (YR. MO.) *INFORMATION SOURCE B30 <1> *FILE LINK IDENT. B50 <>

ER(SUPERVISOR) G2 <Ratte', Charles A.> (last, first, middle initial) <McBean, Alan J.> (last, first, middle initial)

ER AFFILIATION G5 <VAEC> *SITE NAME A10 <McKinsey Gold Mines>

YMS A11 <>

LOCATION

DISTRICT/AREA A30 <>

Y A60 <Windsor> *STATE A50 <VT> *COUNTRY A40 <U.S>

GRAPHIC PROV A63 <01, Central Vermont>

GE AREA A62 <01080106, New England> *LAND STATUS A64 <01, , ( )>

ANGLE NAME A90 <Plymouth, VT (1966)> *QUADRANGLE SCALE A100 <24000>

QUAD NAME A92 <( )> SECOND QUAD SCALE A91 <>

ON A107 <1300FT>

ING A120 <>

G A130 <>

UMBER A110 <+>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED (EST) <Mines near brook between 1000 and 1650 feet elevation>

GEODETIC

*LATITUDE A70 <43-36-10N>

*LONGITUDE A80 <072-40-41W>

STRAL

HIP(S) A77 <> *RANGE(S) A78 <>

N(S) A79 <>

N FRACTION(S) A76 <>

AN(S) A81 <>

ON FROM NEAREST PROMINENT LOCALITY A82 <1.2 miles northwest of Bridgewater Corners, VT.>

ION COMMENTS A83 <Route 4 crosses to the north of the Ottauquechee River just west of Bridgewater Corners. Follow the next brook west of this point, northwest to mines.>

TIAL INFORMATION

TIAL SOMETIMES OR HIGHLY RECOMMENDED

McKINSEY

GEN. ANALYTICAL DATA C43 <

COM. INFO. COMMENTS C50 < The presence of Gold is questionable.

SIGNIFICANCE

	PRODUCER	NON-PRODUCER
MAJOR PRODUCTS	MAJOR < >	MAIN COMMODITIES PRESENT C11 < >
MINOR PRODUCTS	MINOR < >	MINOR COMMODITIES PRESENT C12 < >
POTENTIAL PRODUCTS	POTEN < >	
OCCURRENCES	OCCUR < C.V. P.B A.V. >	OCCURRENCES OCCUR < >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION (YES) (circle) PRODUCTION SIZE (SML) MED LGE (circle one)	PRODUCTION UND NO (circle one)

EXPLORATION OR DEVELOPMENT

STATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < 4 >	STATUS AND ACTIVITY A20 < >

DISCOVERER L20 <

YEAR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 < B > *YEAR OF FIRST PRODUCTION L40 < 1850's > *YEAR OF LAST PRODUCTION L45 <

PRESENT/LAST OWNER A12 < Harlan Booth (Booth Trust) Bridgewater, VT.

PRESENT/LAST OPERATOR A13 < McKinsey Mining Co.

EXPL./DEV. COMMENTS L110 <

DESCRIPTION OF DEPOSIT

DEPOSIT TYPE(S) C40 < Hydrothermal, vein

DEPOSIT FORM/SHAPE M10 <

DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 <

DEPTH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 < > *UNITS M51 <

DEPOSIT SIZE M15 (SMALL) M15 (MEDIUM) M15 (LARGE) (circle one) *MAXIMUM THICKNESS M60 < > *UNITS M61 <

STRIKE M70 < > *DIP M80 <

DIRECTION OF PLUNGE M100 < > *PLUNGE M90 <

DEP. DESC. COMMENTS M110 < Quartz vein with traces of sulfide mineralization

McKINSEY (cont'd)

kings are: SURFACE M120 UNDERGROUND M130 (BOTH M140) (circle one)

H BELOW SURFACE M160 < > UNITS M161 < >

STH OF WORKINGS M170 < > UNITS M171 < >

. OF WORK. COM. M220 < Shafts and pits reported in the area.

OVERALL LENGTH M190 < > UNITS M191 < >

OVERALL WIDTH M200 < > UNITS M201 < >

OVERALL AREA M210 < > UNITS M211 < >

GEOLOGY

OF HOST ROCK(S) K1 < L.C.A.M.B.-O.R.D.

ROCK TYPE(S) K1A < Schist and Amphibolite

OF IGNEOUS ROCK(S) K2 <

OUS ROCK TYPE(S) K2A <

OF MINERALIZATION K3 <

MINERALS (NOT ORE) K4 < Gangue: Quartz

CONTROL/LOCUS K5 <

REG TRENDS/STRUCT N5 <

ONIC SETTING N15 < Eastern Flank of the Green Mountains; Green Mountain Anticlinorium

FICANT LOCAL STRUCT. N70 <

FICANT ALTERATION N75 <

ESS OF CONC./ENRICH. N80 <

ATION AGE N30 < L.C.A.M.B.-E.O.R.D.

ATION NAME N30A < Stowe Formation

ND FM AGE N35 < O.R.D.

ND FM NAME N35A < Missisquoi Formation, Moretown and Whetstone Hill Members.

OUS UNIT AGE N50 <

OUS UNIT NAME N50A <

ID IG. UNIT AGE N55 <

ID IG UNIT NAME N55A <

XGY COMMENTS N85 <

GENERAL COMMENTS

AL COMMENTS GEN < McKINSEY (CONT'D.)

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 <> *RECORD TYPE B20 <X 1 M> DEPOSIT NUMBER B40 <AMB4MD20>

REPORT DATE G1 <84 07> (YR MO) *INFORMATION SOURCE B30 <1 3> *FILE LINK IDENT. B50 <>

REPORTER(SUPERVISOR) G2 <Ratte, Charles A. (last, first, middle initial)> <McBean, Alan J (last, first, middle initial)>

REPORTER AFFILIATION G5 <VAEC> *SITE NAME A10 <Taggart Mine (1859)>

SYNONYMS A11 <Fagneau Mine; Bridgewater Gold Mines>

LOCATION

MINING DISTRICT/AREA A30 <Bridgewater Gold Area>

COUNTY A60 <Windsor> *STATE A50 <VT> *COUNTRY A40 <U S>

PHYSIOGRAPHIC PROV A63 <01 Central Vermont>

MAINAGE AREA A62 <01.08.01.06 NEW ENGLAND> *LAND STATUS A64 <01 ( )>

QUADRANGLE NAME A90 <Plymouth, Vermont (1966)> *QUADRANGLE SCALE A100 <24000>

SECOND QUAD NAME A92 <( )> SECOND QUAD SCALE A91 <>

ELEVATION A107 <1280 FT>

UTM

NORTHING A120 <>

EASTING A130 <>

ZONE NUMBER A110 <+>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED EST <>

GEODETIC

*LATITUDE A70 <43-37-16 N>

*LONGITUDE A80 <72-41-00 W>

CADASTRAL

TOWNSHIP(S) A77 <> *RANGE(S) A78 <>

SECTION(S) A79 <>

SECTION FRACTION(S) A76 <>

MERIDIAN(S) A81 <>

*POSITION FROM NEAREST PROMINENT LOCALITY A82 <1.35 miles W, NW of Bridgewater Center, Vermont.>

LOCATION COMMENTS A83 <Mine entrance located 100' SE of Washburn Brook on the north slope of Raymond Hill.>

*ESSENTIAL INFORMATION

ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

TAGGART

COMMODITIES PRESENT C10 < PB | CU | AG | AU >
RE MINERALS C30 < Galena, Chalcopyrite; (Silver, Gold)
OMMODITY SUBTYPES C41 <
EN. ANALYTICAL DATA C43 < AU none; AG 1.27 oz/ton; CU 6.19%; Pb 6.29%
OM. INFO. COMMENTS C50 < Original report by company stated 10 tons crushed ore yielded 18.7 oz AU

SIGNIFICANCE

		PRODUCER	NON-PRODUCER
JOR PRODUCTS	MAJOR	CU, PB	MAIN COMMODITIES PRESENT C11 < >
NOR PRODUCTS	MINOR		MINOR COMMODITIES PRESENT C12 < >
TENTIAL PRODUCTS	POTEN		
CURRENCES	OCCUR	AG, AU	OCCURRENCES OCCUR < >

*PRODUCTION

PRODUCER	NON-PRODUCER
DDUCTION (YES) (circle) PRODUCTION SIZE (SML) MED LGE (circle one)	PRODUCTION UND NO (circle one)

EXPLORATION OR DEVELOPMENT

TATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < 4 >	STATUS AND ACTIVITY A20 < >

COVERER L20 < Mathew Kennedy
AR OF DISCOVERY L10 < 1851 > *NATURE OF DISCOVERY L30 < B > *YEAR OF FIRST PRODUCTION L40 < 1850's > *YEAR OF LAST PRODUCTION L45 < 1850's
SENT/LAST OWNER A12 < Craig M. Robinson, Bridgewater Corners, VT. 802 672-3792
SENT/LAST OPERATOR A13 < Taggart Mining Co, Bridgewater VT.
L /DEV.COMMENTS L110 <

DESCRIPTION OF DEPOSIT

OSIT TYPE(S) C40 < Lode, vein quartz
OSIT FORM/SHAPE M10 < Irregular, Tabular, Pinch and Swell
TH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 <
TH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 < > *UNITS M51 <
OSIT SIZE M15 (SMALL) M15 (MEDIUM) M15 (LARGE) (circle one) *MAXIMUM THICKNESS M60 < 3 > *UNITS M61 < FT
KE M70 < N5E to N10E > *DIP M80 < 70E
CTION OF PLUNGE M100 < > *PLUNGE M90 <
DESC COMMENTS M110 < Gold was very unevenly distributed and much of the quartz

DESCRIPTION OF WORKINGS

ngs are: SURFACE M120 UNDERGROUND M130 (BOTH M140) (circle one)

BELOW SURFACE M160 < 30 > UNITS M161 < FT >

H OF WORKINGS M170 < 50 > UNITS M171 < FT >

OF WORK. COM. M220 < Several Pits and one Adit are the extent of the workings.

OVERALL LENGTH M190 < 100 > UNITS M191 < FT

OVERALL WIDTH M200 < 50 > UNITS M201 < FT

OVERALL AREA M210 < 5000 > UNITS M211 < SQ FT

GEOLOGY

F HOST ROCK(S) K1 < ORD

ROCK TYPE(S) K1A < Quartz-mica granulite

F IGNEOUS ROCK(S) K2 <

US ROCK TYPE(S) K2A <

F MINERALIZATION K3 <

MINERALS (NOT ORE) K4 < Gangue; Quartz, Garnet

ONTROL/LOCUS K5 <

REG. TRENDS/STRUCT N5 <

NIC SETTING N15 < East Flank of Green Mountain Anticlinorium

ICANT LOCAL STRUCT. N70 <

ICANT ALTERATION N75 <

SS OF CONC./ENRICH. N80 <

ATION AGE N30 < ORD

ATION NAME N30A < Missisquoi Formation, Whetstone Hill and Moretown Members

ID FM AGE N35 <

D FM NAME N35A <

US UNIT AGE N50 <

US UNIT NAME N50A <

ID IG. UNIT AGE N55 <

ID IG UNIT NAME N55A <

GY COMMENTS N85 <

GENERAL COMMENTS

AL COMMENTS GEN < TAGGART (CONT'D)

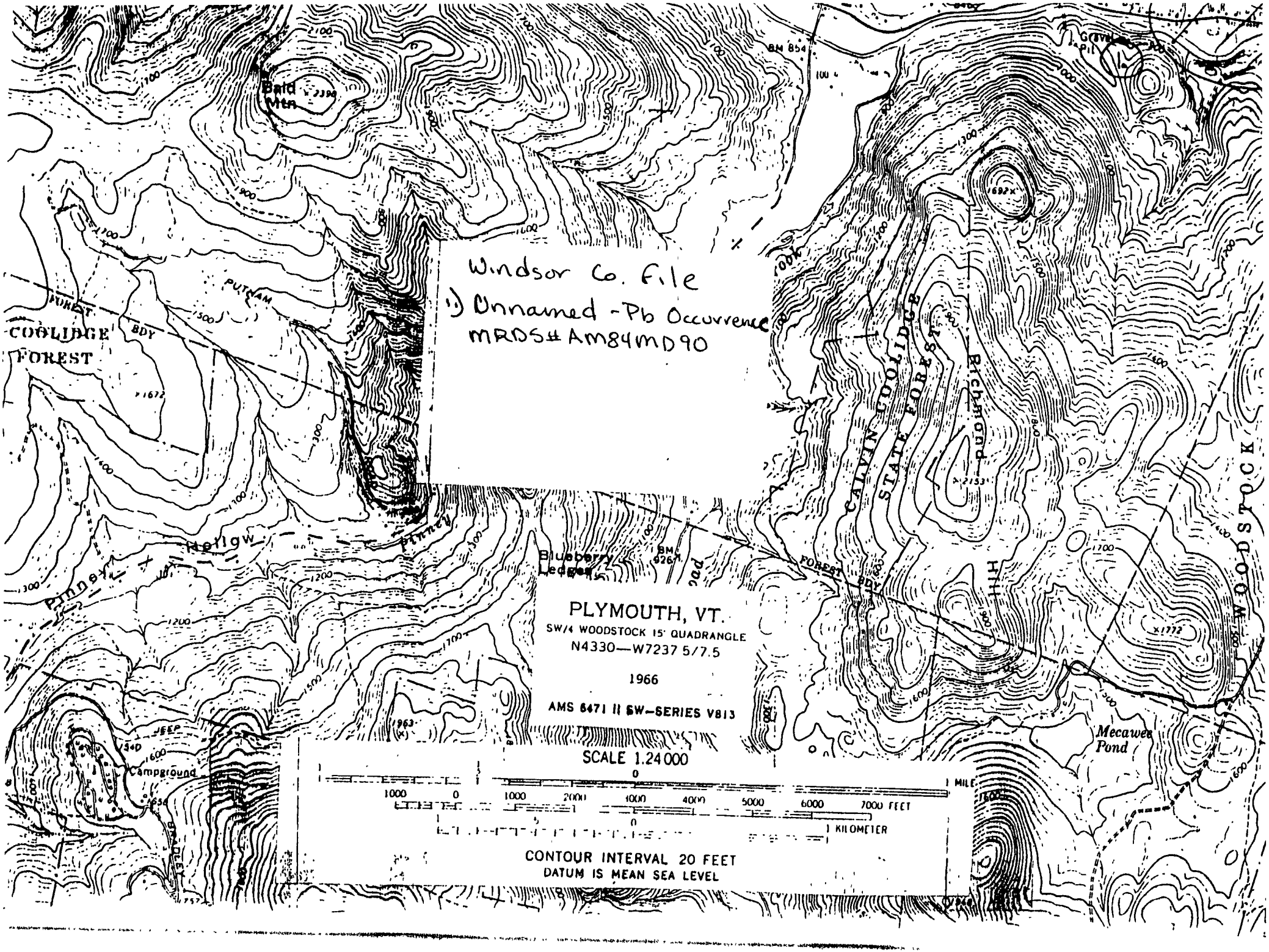
ICE 1 F1 < Morrill, P. and Chaffee, R., 1964, Vermont Mines and Mineral Localities. Dartmouth College Museum. (Hanover, NH) p. 9.

ICE 2 F2 < Grant, R.W., 1968, Mineral Collecting in Vermont. VGS Special Publication no. 2, p. 46.

ICE 3 F3 < Chang, P.H., Ern, E.H. and Thompson, J.B., 1965, Bedrock Geology of the Woodstock Quadrangle, Vermont. VGS Bulletin no. 29.

CE 4 F4 <

TAG-CART (cont'd


Windsor Co. File
1) Unnamed - Pb Occurrence
MRDS# AM84MD90
Bald Mtn
COOLIDGE FOREST
FOREST BDY
PUTNAM
CALVIN COOLIDGE STATE FOREST
Richmond
HILL
WOODSTOCK
Relgw
Pinney
Blueberry Ledges
BM 926
FOREST BDY
Campground
JEEP
BRADLEY
Mecawee Pond
PLYMOUTH, VT.
SW/4 WOODSTOCK 15' QUADRANGLE
N4330—W7237 5/7.5
1966
AMS 6471 II SW—SERIES V813
SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

RECORD IDENTIFICATION

D NUMBER B10 <> *RECORD TYPE B20 <X,1,M> DEPOSIT NUMBER B40 <AM84MD90>

T DATE G1 <84,11,09> YR. MO. *INFORMATION SOURCE B30 <> *FILE LINK IDENT. B50 <>

TER(SUPERVISOR) G2 <Ratte', Charles A. (last, first, middle initial) ; McBean, Alan J. (last, first, middle initial)>

TER AFFILIATION G5 <VAEC> *SITE NAME A10 <Unnamed>

NYMS A11 <Bridgewater Galena Occurance>

LOCATION

G DISTRICT/AREA A30 <>

TY A60 <Windsor> *STATE A50 <VT> *COUNTRY A40 <U.S.>

OGRAPHIC PROV A63 <01, Central Vermont>

AGE AREA A62 <01,08,01,06> *LAND STATUS A64 <01, , ( )>

RANGLE NAME A90 <Plymouth, VT (1966)> *QUADRANGLE SCALE A100 <24000>

D QUAD NAME A92 <( )> SECOND QUAD SCALE A91 <>

TION A107 <900,FT>

HING A120 <>

NG A130 <>

NUMBER A110 <+>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED (EST) <Minerals in outcrops around Bridgewater.>

GEODETIC

*LATITUDE A70 <43-35-20N>

*LONGITUDE A80 <072-37-40W>

ASTRAL

NSHIP(S) A77 <> *RANGE(S) A78 <>

ON(S) A79 <>

ON FRACTION(S) A76 <>

DIAN(S) A81 <>

TION FROM NEAREST PROMINENT LOCALITY A82 <In Bridgewater, VT.>

ATION COMMENTS A83 <Marvill and Chaffee report Galena in outcrops around Bridgewater, VT.>

ENTIAL INFORMATION

ENTIAL SOMETIMES OR HIGHLY RECOMMENDED

UN-NAMED

EPTH BELOW SURFACE M160 < > UNITS M161 < >
NGTH OF WORKINGS M170 < > UNITS M171 < >
SC. OF WORK. COM M220 <

OVERALL LENGTH M190 < > UNITS M191 <
OVERALL WIDTH M200 < > UNITS M201 <
OVERALL AREA M210 < > UNITS M211 <

GEOLOGY

GE OF HOST ROCK(S) K1 < O.R.D.
ST ROCK TYPE(S) K1A < gneiss, amphibolite
GE OF IGNEOUS ROCK(S) K2 <
NEOUS ROCK TYPE(S) K2A <
GE OF MINERALIZATION K3 <
T. MINERALS (NOT ORE) K4 < Gangue: Quartz
E CONTROL/LOCUS K5 <
J REG TRENDS/STRUCT N5 <
CTONIC SETTING N15 < Eastern Flank of the Green Mountains, Green Mountain Anticlinorium
NIFICANT LOCAL STRUCT. N70 <
NIFICANT ALTERATION N75 <
CESS OF CONC./ENRICH. N80 <
MATION AGE N30 < O.R.D.
MATION NAME N30A < Missisquoi Formation, Barnard Volcanic Member
OND FM AGE N35 <
OND FM NAME N35A <
EOUS UNIT AGE N50 <
EOUS UNIT NAME N50A <
OND IG UNIT AGE N55 <
OND IG. UNIT NAME N55A <
LOGY COMMENTS N85 <

GENERAL COMMENTS

RAL COMMENTS GEN <

UN-NAMED

N. ANALYTICAL DATA C43 <

M. INFO. COMMENTS C50 <

SIGNIFICANCE

	PRODUCER	NON-PRODUCER
JOR PRODUCTS	MAJOR < >	MAIN COMMODITIES PRESENT C11 < >
NOR PRODUCTS	MINOR < >	MINOR COMMODITIES PRESENT C12 < >
TENTIAL PRODUCTS	POTEN < >	
CURRENCES	OCCUR < >	OCCURRENCES OCCUR < P B >

*PRODUCTION

PRODUCER	NON-PRODUCER
ODUCTION YES (circle) PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION UND (NO) (circle one)

EXPLORATION OR DEVELOPMENT

TATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < >	STATUS AND ACTIVITY A20 < L >

SCOVERER L20 <

AR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 < B > *YEAR OF FIRST PRODUCTION L40 < > *YEAR OF LAST PRODUCTION L45 <

ESENT/LAST OWNER A12 <

ESENT/LAST OPERATOR A13 <

PL./DEV.COMMENTS L110 < Occurance has been noted. There has been no development to date. Location is unknown, therefore ownership is unknown

DESCRIPTION OF DEPOSIT

POSIT TYPE(S) C40 < Hydrothermal, vein

POSIT FORM/SHAPE M10 <

PTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 <

PTH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 < > *UNITS M51 <

POSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 < > *UNITS M61 <

RIKE M70 < > *DIP M80 <

RECTION OF PLUNGE M100 < > *PLUNGE M90 <

P DESC. COMMENTS M110 <

UNNAMED (CONT'D)

* GENERAL REFERENCES

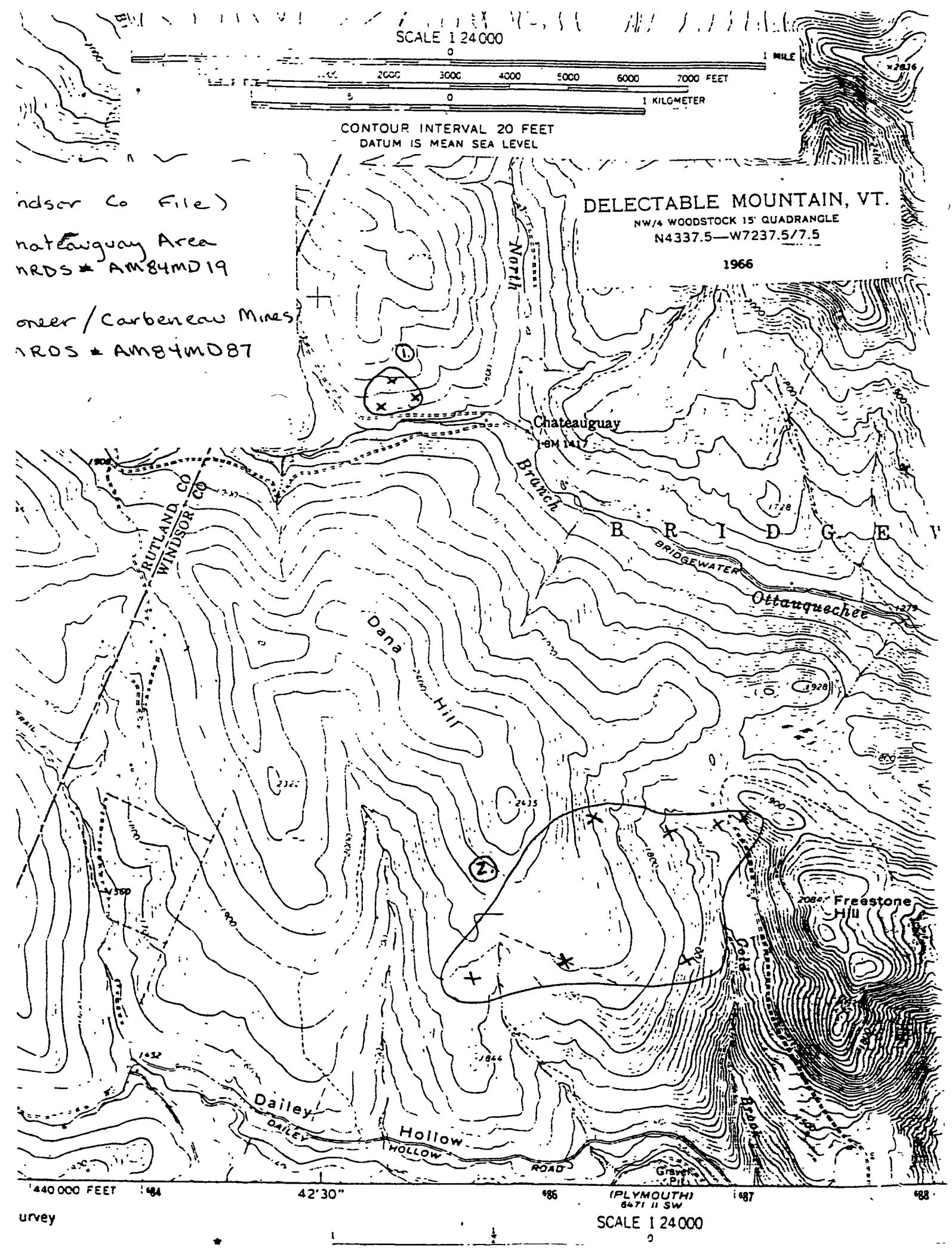
FERENCE 1 F1 < Morrill, P. and Chaffee, R., 1964, Vermont Mines and Mineral Localities. Dartmouth College Museum. (Hanover, NH) p. 9.

ERENCE 2 F2 < Chang, P.H., Erd, E.H. and Thompson, J.B., 1965, Bedrock Geology of the Woodstock Quadrangle, Vermont: VGS Bulletin no. 29.

ERENCE 3 F3 <

ERENCE 4 F4 <

UNNAMED (CONT'D



ndsor Co File)

nateauguay Area
nRDS # AM84MD19

oneer / Carbeneau Mines
nRDS # AM84MD87

urvey

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

*RECORD NUMBER B10 <> *RECORD TYPE B20 <X,1,M> DEPOSIT NUMBER B40 <AM84MD19>

*REPORT DATE G1 <84,11> (YR. MO) *INFORMATION SOURCE B30 <13> *FILE LINK IDENT. B50 <>

*REPORTER(SUPERVISOR) G2 <Ratté, Charles A (last, first, middle initial) ; McFeeley, Alice J. (last, first, middle initial)>

*REPORTER AFFILIATION G5 <VAFC> *SITE NAME A10 <Chateauguay Gold Area>

*SYNONYMS A11 <>

LOCATION

*MINING DISTRICT/AREA A30 <Chateauguay Gold Area>

*COUNTY A60 <Windsor> *STATE A50 <VT> *COUNTRY A40 <U>

*PHYSIOGRAPHIC PROV A63 <01, Central Vermont>

*DRAINAGE AREA A62 <01080106, NEW ENGLAND> *LAND STATUS A64 <01>

*QUADRANGLE NAME A90 <Delectable Mountain, VT (1966)> *QUADRANGLE SCALE A100 <24000>

SECOND QUAD NAME A92 <> SECOND QUAD SCALE A91 <>

*ELEVATION A107 <1700,FT>

UTM

*NORTHING A120 <>

*EASTING A130 <>

*ZONE NUMBER A110 <+>

*ACCURACY

ACCURATE (ACC) (circle)

ESTIMATED EST <>

GEODETIC

*LATITUDE A70 <43-39-43>

*LONGITUDE A80 <072-42-12>

CADASTRAL

*TOWNSHIP(S) A77 <> *RANGE(S) A78 <>

*SECTION(S) A79 <>

*SECTION FRACTION(S) A76 <>

*MERIDIAN(S) A81 <>

*POSITION FROM NEAREST PROMINENT LOCALITY A82 <3.8 miles NW of Bridgewater Center, VT; 0.4 miles W of Chateauguay, VT.>

*LOCATION COMMENTS A83 <Elevation and Geodetic coordinates are taken at a point central to the four dumps in the area.>

° ESSENTIAL INFORMATION

+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

COMMODITIES PRESENT C10 <Fe, Au>
ORE MINERALS C30 <Hematite ; (Gold)>
COMMODITY SUBTYPES C41 <>
GEN. ANALYTICAL DATA C43 <>
COM. INFO. COMMENTS C50 <The presence of Gold is questionable.>

SIGNIFICANCE

	PRODUCER	NON-PRODUCER
MAJOR PRODUCTS	MAJOR < >	MAIN COMMODITIES PRESENT C11 <Fe>
MINOR PRODUCTS	MINOR < >	MINOR COMMODITIES PRESENT C12 < >
POTENTIAL PRODUCTS	POTEN < >	
OCCURRENCES	OCCUR < >	OCCURRENCES OCCUR <Au>

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION YES (circle) PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION (UND) NO (circle one)

EXPLORATION OR DEVELOPMENT

STATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < >	STATUS AND ACTIVITY A20 <2>

DISCOVERER L20 <>
YEAR OF DISCOVERY L10 < > NATURE OF DISCOVERY L30 <B> YEAR OF FIRST PRODUCTION L40 < > YEAR OF LAST PRODUCTION L45 <>
PRESENT/LAST OWNER A12 <Duane Wilson, Bridgewater Corners, VT.>
PRESENT/LAST OPERATOR A13 <>
EXPL./DEV. COMMENTS L110 <It appears that a large quartz vein(s) was exposed at the surface and many small excavations were made on it.>

DESCRIPTION OF DEPOSIT

CHATAGUAY/cont'd

DEPOSIT TYPE(S) C40 <Lode, quartz vein>
DEPOSIT FORM/SHAPE M10 <Irregular>
DEPTH TO TOP M20 < > UNITS M21 < > MAXIMUM LENGTH M40 < > UNITS M41 <>
DEPTH TO BOTTOM M30 < > UNITS M31 < > MAXIMUM WIDTH M50 < > UNITS M51 <>
DEPOSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) MAXIMUM THICKNESS M60 < > UNITS M61 <>
STRIKE M70 < > DIP M80 <>
DIRECTION OF PLUNGE M100 < > PLUNGE M90 <>

<Quartz vein is Wispy. Many vugs are filled with limonite indicatin

REFERENCE 1 F1 < Beers, F.W., 1869, Atlas of Windsor County, Vermont. Beers, Ellis and Soule New York, 47 p.

REFERENCE 2 F2 < Chatelain, M., et al., 1970, Chateauguay - A study of social and historical patterns in 19th century Vt. Settlement: Off Campus Study Program, Soc. 63, Human Communities, Ottauquechee

REFERENCE 3 Regional Planning Commission, Woodstock, VT. unpublished report.

REFERENCE 4 F4 <

CHATTAGUAY (cont'd)

DESCRIPTION OF WORKINGS

*Workings are: (SURFACE M120) UNDERGROUND M130 BOTH M140 (circle one)

*DEPTH BELOW SURFACE M160		*UNITS M161		*OVERALL LENGTH M190	*UNITS M191
*LENGTH OF WORKINGS M170		*UNITS M171		*OVERALL WIDTH M200	*UNITS M201
				*OVERALL AREA M210	*UNITS M211

DESC. OF WORK. COM M220: Several (four or five) dumps are located in the area. None of them indicate that a large amount of material was moved.

GEOLOGY

*AGE OF HOST ROCK(S)	K1	O.R.D
*HOST ROCK TYPE(S)	K1A	Phylite and Quartz-Mica Granulite
*AGE OF IGNEOUS ROCK(S)	K2	
*IGNEOUS ROCK TYPE(S)	K2A	
*AGE OF MINERALIZATION	K3	
*PERT. MINERALS (NOT ORE)	K4	Gangue; Quartz; chlorite, pyrite
*ORE CONTROL/LOCUS	K5	
*MAJ REG TRENDS/STRUCT	N5	
*TECTONIC SETTING	N15	Eastern Flank of Green Mountain Anticlinorium
*SIGNIFICANT LOCAL STRUCT	N70	
*SIGNIFICANT ALTERATION	N75	
*PROCESS OF CONC /ENRICH.	N80	
*FORMATION AGE	N30	O.R.D
*FORMATION NAME	N30A	Missisquoi Formation Whetstone Hill and Moretown Members.
SECOND FM AGE	N35	
SECOND FM NAME	N35A	
*IGNEOUS UNIT AGE	N50	
*IGNEOUS UNIT NAME	N50A	
SECOND IG UNIT AGE	N55	
SECOND IG UNIT NAME	N55A	
GEOLOGY COMMENTS	N85	Relationship of quartz vein to cleavage/bedding of enclosing formation is unknown.

GENERAL COMMENTS

GENERAL COMMENTS GEN: Many of the small gold diggings in this area may have been only stock promotions. Actual gold production was never verified although quartz crushers were built.

CHAT (cont'd)

U.S. MRDS-SITE FORM

RECORD IDENTIFICATION

RD NUMBER B10 <> *RECORD TYPE B20 <X,1,M> DEPOSIT NUMBER B40 <AM84MD87>

T DATE G1 <84,09> (YR. MO) *INFORMATION SOURCE B30 <1> *FILE LINK IDENT B50 <>

TER(SUPERVISOR) G2 <Ratte', Charles A.> (last, first, middle initial) <McBean, Alan J.> (last, first, middle initial)

TER AFFILIATION G5 <VAEC> *SITE NAME A10 <Pioneer / Carbeneau Mines>

NYMS A11 <Mt. Hope Gold Mine>

LOCATION

3 DISTRICT/AREA A30 <>

Y A60 <Windsor> *STATE A50 <VT> *COUNTRY A40 <U,S>

GRAPHIC PROV A63 <D,1,E, East-central Vermont>

GE AREA A62 <D,1,0,8,0,1,0,6, New England> *LAND STATUS A64 <O,1,E, ,E,(,)>

ANGLE NAME A90 <Delectable Mountain, Vermont (1,9,6,6,)> *QUADRANGLE SCALE A100 <2,4,0,0,0>

D QUAD NAME A92 <(,)> SECOND QUAD SCALE A91 <>

ION A107 <2,0,8,0,E,F,T,>

ING A120 <>

G A130 <>

NUMBER A110 <+>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED (EST) <All mines are within a 0.5 mile radius of point>

GEODETIC

*LATITUDE A70 <43-38-18,N>

*LONGITUDE A80 <072-41-29,W>

STRAL

HIP(S) A77 <> *RANGE(S) A78 <>

N(S) A79 <>

N FRACTION(S) A76 <>

AN(S) A81 <>

ON FROM NEAREST PROMINENT LOCALITY AB2 <2.3 miles northwest of Bridgewater Ctr., Vermont>

ON COMMENTS AB3 <Mines are on the southeast and southwestern flanks of Dana Hill.>

TIAL INFORMATION
TIAL SOMETIMES OR HIGHLY RECOMMENDED

PIONEER

COMMODITY SUBTYPES C41 <

GEN ANALYTICAL DATA C43 <

COM. INFO. COMMENTS C50 < The presence of Gold is questionable.

SIGNIFICANCE

	PRODUCER	NON-PRODUCER
MAJOR PRODUCTS	MAJOR < >	MAIN COMMODITIES PRESENT C11 < >
MINOR PRODUCTS	MINOR < >	MINOR COMMODITIES PRESENT C12 < >
POTENTIAL PRODUCTS	POTEN < >	
OCCURRENCES	OCCUR < C.U. P.B. A.U. >	OCCURRENCES OCCUR < >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION (YES) (circle) PRODUCTION SIZE (SML) MED LGE (circle one)	PRODUCTION UND NO (circle one)

STATUS

EXPLORATION OR DEVELOPMENT

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < 4 >	STATUS AND ACTIVITY A20 < >

DISCOVERER L20 < Mathew Kennedy

YEAR OF DISCOVERY L10 < 1851 > *NATURE OF DISCOVERY L30 < B > *YEAR OF FIRST PRODUCTION L40 < 1850's > *YEAR OF LAST PRODUCTION L45 <

PRESENT/LAST OWNER A12 < Joel Gratwich 12 Pine Ridge Rd. Cumberland Foreside, ME.

PRESENT/LAST OPERATOR A13 < Oscar Washburn Goshen, MA.

EXPL./DEV.COMMENTS L110 < Kennedy discovered Gold in 1851 as a vein deposit and soon after, many quartz veins were being developed in search of a lode.

DESCRIPTION OF DEPOSIT

DEPOSIT TYPE(S) C40 < Hydrothermal, vein

DEPOSIT FORM/SHAPE M10 < Irregular

DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 <

DEPTH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 < > *UNITS M51 <

DEPOSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 < > *UNITS M61 <

STRIKE M70 < > *DIP M80 <

DIRECTION OF PLUNGE M100 < > *PLUNGE M90 <

DEP. DESC. COMMENTS M110 < Miners dug in any quartz vein which showed mineralization and many which didn't. Dumps show: vuggy qtz with possible weathered sulfides.

PIONEER (cont'd)

'orkings are SURFACE M120 UNDERGROUND M130 (BOTH M140) (circle one)

PTH BELOW SURFACE M160 < > *UNITS M161 < >

NGTH OF WORKINGS M170 < > *UNITS M171 < >

SC. OF WORK COM. M220 < 4 shafts and a tunnel reported by Morrill and Chaffee.

*OVERALL LENGTH M190 < > *UNITS M191 < >

*OVERALL WIDTH M200 < > *UNITS M201 < >

*OVERALL AREA M210 < > *UNITS M211 < >

GEOLOGY

GE OF HOST ROCK(S) K1 < L.CAMB.-ORD.

ST ROCK TYPE(S) K1A < Schist. >

GE OF IGNEOUS ROCK(S) K2 <

EOUS ROCK TYPE(S) K2A <

E OF MINERALIZATION K3 <

T. MINERALS (NOT ORE) K4 < Gangue: Quartz

E CONTROL/LOCUS K5 <

J REG TRENDS/STRUCT N5 <

TONIC SETTING N15 < Eastern flank of the Green Mountains; Green Mountain Anticlinorium >

NIFICANT LOCAL STRUCT N70 <

NIFICANT ALTERATION N75 <

CESS OF CONC./ENRICH. N80 <

MATION AGE N30 < L.CAMB.-E.ORD.

MATION NAME N30A < Stowe Formation

OND FM AGE N35 < ORD.

OND FM NAME N35A < Missisquoi Formation

EOUS UNIT AGE N50 <

OUS UNIT NAME N50A <

OND IG UNIT AGE N55 <

OND IG UNIT NAME N55A <

LOGY COMMENTS N85 <

GENERAL COMMENTS

RAL COMMENTS GEN < None of the hard rock gold mines in the state ever turned a profit. Maing probably never recovered any gold.

PIONEER (cont'd)

OMMODITIES PRESENT C10 <CU, PB, AU>
RE MINERALS C30 <(Chalcopyrite, Galena, Gold)>
OMMODITY SUBTYPES C41 <>
N. ANALYTICAL DATA C43 <>
OM. INFO. COMMENTS C50 <The presence of Gold is questionable>

SIGNIFICANCE

	PRODUCER	NON-PRODUCER
JOR PRODUCTS	MAJOR < >	MAIN COMMODITIES PRESENT C11 < >
NOR PRODUCTS	MINOR < >	MINOR COMMODITIES PRESENT C12 < >
TENTIAL PRODUCTS	POTEN < >	
CURRENCES	OCCUR < >	OCCURRENCES OCCUR <CU, PB, AU>

*PRODUCTION

PRODUCER	NON-PRODUCER
ODUCTION YES (circle) PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION (UND) NO (circle one)

EXPLORATION OR DEVELOPMENT

TATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 < >	STATUS AND ACTIVITY A20 <2>

COVERER L20 <>
AR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 <B> *YEAR OF FIRST PRODUCTION L40 <1890's> *YEAR OF LAST PRODUCTION L45 <>
ESENT/LAST OWNER A12 <Donn Ryker Woodbridge, Conn.>
ESENT/LAST OPERATOR A13 <Mr Patz, Boston, MA.>
L./DEV.COMMENTS L110 <>

DESCRIPTION OF DEPOSIT

OSIT TYPE(S) C40 <Hydrothermal, vein>
OSIT FORM/SHAPE M10 <Irregular>
TH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 <>
TH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 < > *UNITS M51 <>
OSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 < > *UNITS M61 <>
IKE M70 < > *DIP M80 <>
ECTION OF PLUNGE M100 < > *PLUNGE M90 <>
P. DESC. COMMENTS M110 <JOSLYN cont'd>

RECORD IDENTIFICATION

ORD NUMBER B10 <_____> *RECORD TYPE B20 <X,1,M> DEPOSIT NUMBER B40 <AM84MD88

ORT DATE G1 <84,06,09> (YR. MO.) *INFORMATION SOURCE B30 <1_____> *FILE LINK IDENT. B50 <_____

ORTER(SUPERVISOR) G2 <Ratte', Charles A. (last, first, middle initial) McBean, Alan J. (last, first, middle initial)>

ORTER AFFILIATION G5 <VAEC> *SITE NAME A10 <Joslyn Gold Mine

ONYMS A11 <_____>

LOCATION

NG DISTRICT/AREA A30 <_____>

NTY A60 <Windsor> *STATE A50 <VT> *COUNTRY A40 <U.S.>

IOGRAPHIC PROV A63 <01, Central Vermont>

NAGE AREA A62 <010801060, New England> *LAND STATUS A64 <__(__)>

ORANGLE NAME A90 <Plymouth, VT (1969)> *QUADRANGLE SCALE A100 <24000>

ND QUAD NAME A92 <_____ (_____)> SECOND QUAD SCALE A91 <_____>

TION A107 <1050, FT>

HING A120 <_____>

NG A130 <_____>

E NUMBER A110 <+_____>

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED (EST) <location from Morrill and Chaffee.>

GEODETIC

*LATITUDE A70 <43-35-03, N>

*LONGITUDE A80 <072-39-38, W>

ASTRAL

NSHIP(S) A77 <___:___:___> *RANGE(S) A78 <___:___:___>

ON(S) A79 <___:___>

ON FRACTION(S) A76 <_____>

DIAN(S) A81 <_____>

ION FROM NEAREST PROMINENT LOCALITY A82 <0.35 miles southwest of junction routes 4 and 100a, Bridgewater, VT.

TION COMMENTS A83 <Located on the eastern slope of Bald Mountain.

NTIAL INFORMATION
NTIAL SOMETIMES OR HIGHLY RECOMMENDED

JOSLYN

kings are: (SURFACE M120) UNDERGROUND M130 BOTH M140 *(circle one)*

TH BELOW SURFACE	M160		UNITS M161		OVERALL LENGTH M190		UNITS M191	
GTH OF WORKINGS	M170		UNITS M171		OVERALL WIDTH M200		UNITS M201	
C. OF WORK. COM.	M220				OVERALL AREA M210		UNITS M211	

GEOLOGY

E OF HOST ROCK(S)	K1	O.R.D.
ST ROCK TYPE(S)	K1A	Schist and Amphibalite
E OF IGNEOUS ROCK(S)	K2	
EOUS ROCK TYPE(S)	K2A	
E OF MINERALIZATION	K3	
T. MINERALS (NOT ORE)	K4	Gangue: Quartz
CONTROL/LOCUS	K5	
J. REG TRENDS/STRUCT	N5	
TONIC SETTING	N15	Eastern flank of the Green Mountains, Green Mountain Anticlinorium.
NIFICANT LOCAL STRUCT.	N70	
NIFICANT ALTERATION	N75	
CESS OF CONC./ENRICH.	N80	
MATION AGE	N30	O.R.D.
MATION NAME	N30A	Missisquoi Formation, Whetstone Hill Member
OND FM AGE	N35	
OND FM NAME	N35A	
EOUS UNIT AGE	N50	
EOUS UNIT NAME	N50A	
OND IG UNIT AGE	N55	
OND IG. UNIT NAME	N55A	
LOGY COMMENTS	N85	

GENERAL COMMENTS

ERAL COMMENTS GEN: Many of these alleged gold mines were opened but none of them ever operated profitably. Confirmation of gold by assay is found for only two mines in the literature.

Joslyn (cont'd)

* GENERAL REFERENCES

ERENCE 1 F1 < Morrill, P. and Chaffee, R., 1964, Vermont Mines and Mineral Localities. Dartmouth College Museum, Hanover, NH., p.9.

RENCE 2 F2 < Chang, P.H., Erh, E.H. and Thompson, J.B., 1965. Bedrock Geology of the Woodstock Quadrangle, Vermont. VGS Bulletin no 29.

RENCE 3 F3 < Adams, G.S. compiler, 1976, Bridgewater Vermont, 1779-1976. (no publisher).

RENCE 4 F4 <

JOSLYN (cont'd)

* GENERAL REFERENCES

FERENCE 1 F1 < Chang, P.H., Ern, E.H. and Thompson, J.B., 1965, Bedrock Geology of the Woodstock Quadrangle, Vermont: VGS Bulletin no. 29. >

ERENCE 2 F2 < Grant, R.W., 1968, Mineral Collecting in Vermont, VGS Special Publication no. 2, pg. 46. >

ERENCE 3 F3 < Perkins, G.H., 1904, mineral Resources of the State of Vermont: Vt. State Geologist, 4th report (1903-1904), p. 54-58. >

ERENCE 4 F4 < Perry, E.L. 1929, Geology of Bridgewater and Plymouth Townships, VT: VT State Geologists, 16th Report (1927-1928), pp 62-63. >

F5 < Morrill, P and Chaffee, R., 1964, Vermont Mines and Mineral Localities. Dartmouth College Museum, Hanover, NH., p. 9. >

Joslyn (cont'd.