## **UPDATED NI 43-101 TECHNICAL REPORT**

## **RED CLOUD MINE**

## MARIPOSA COUNTY, CALIFORNIA

USA



**Coarse Gold From a Pocket in Quartz Vein in 110 ft Shaft (Durgin photo)** 

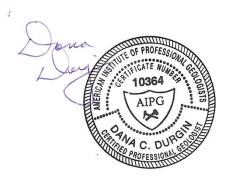
**Prepared for** 

RC MINING, INC January 18, 2016

Dana Durgin, QP and AIPG Certified Professional Geologist #10364

## DATE AND SIGNATURE PAGE

Dana C. Durgin, Certified Professionl Geologist #10364 Reno, Nevada January 18, 2016



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## 1.0 SUMMARY

This technical report was prepared at the request of RC Mining, Inc, a USA private corporation. The Company intends to become a public corporation listed on the TSX-V exchange. This Technical Report is intended as a qualifying report in connection with its filings with British Columbia and Alberta Securities Commissions and the TSX Venture Exchange, and possibly for USA and European exchanges. The report was written in compliance with disclosure and reporting requirements set forth in the newly revised (July 30, 2011) Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1.

## 1.1 Introduction

The Red Cloud mine is located in northern Mariposa County, California, near the historic mining town of Coulterville. The distance to the property by road from Coulterville is approximately 11 miles (17.6 km). The original (1880's) shaft is at a latitude and longitude of 37 44'20.5" North and 120 5'05.3" West.

#### 1.2 Geology and Mineralization

The Red Cloud mine is in the southern portion of the 120 mile-long (192 km) Mother Lode Gold Belt of central California. This is a regional band of hundreds of orogenic gold deposits localized in a series of sub-parallel to cross-cutting and anastamosing quartz veins which developed in schists of the Paleozoic Calaveras Formation and slates of the Jurassic Mariposa Formation. The Mother Lode Belt is in a plate collision-subduction zone environment. Large quartz veins visually dominate these deposits, but many of these are barren. Repeated movements on the faults hosting the veins frequently caused a banded vein appearance and gold was deposited late in the faulting and quartz deposition sequence, often among the bands or at the margins of veins. Strong alteration of adjacent wallrocks is common and these bodies may contain minable gold grades as quartz-ankerite vein stockworks and disseminated sulfides. The quartz veins often contain coarse and visible gold, sometimes in larger pockets, and they commonly contain a few percent sulfides, which are generally gold-bearing as well.

The Red Cloud is typical of the Mother Lode veins. It is a white quartz vein, often displaying banded textures and stockwork veining, hosted in the Mariposa Formation black slate wall rocks. It has produced abundant coarse gold, and the author has viewed coarse gold in samples from a shallow shaft and from a bulldozer cut. The vein can be reportedly traced over a strike length of 4500 feet (1370m). Near the old workings, the vein strikes N70E and dips 60 to 70 degrees to the northwest. In various places on the surface and underground it has been reported to be from 1 to 15 feet (0.3 to 4.6 meters) wide.

#### **1.3 Exploration and Mining History**

The Red Cloud vein was probably discovered before 1880, but the first mention of it was in the local newspaper in October 1883, when the mill was complete and crushing of ore was about to commence. The mine operated from 1883 to late in the 1890's. Stanton (1906) suggests

that the production exceeded \$1,000,000 in gold (or 50,000 oz at \$20 gold), and Castello (1921) suggested a total production of \$1.5 million (or 75,000 oz at \$20 gold). The mine was essentially idle until the 1970's, except for an unsuccessful attempt to re-open it in 1935.

In the early 1970's Mr. Terrill did some sampling and exploration, but his main achievement was to get the claim and mill site patented in 1976, thus acquiring deeded ownership. A 110 foot (33.5m) shaft was sampled at this time near the old shaft, which had collapsed at the collar. A VLF-EM survey was completed in 1980 in an effort to trace the vein to the northeast and check for other quartz veins nearby. In the mid 1980's the 110 foot shaft was refurbished, including a new head frame, and a crosscut was driven to the north to explore for parallel veins – unsuccessfully. However, quartz containing good gold values was mined from the vein adjacent to the bottom of the shaft, for about 60 feet along strike. A 25-tons-per-day pilot mill was constructed to carry out bulk-scale metallurgical testing using this material.

Additional metallurgical testing was done in the 1990's, but during the lower gold prices of the next several years the property remained essentially idle. In 2008 RC Mining commissioned a scoping study for a 100 ton per day mining and milling operation, from Whitney & Whitney, a mining consulting firm.

## **1.4 Drilling and Sampling**

There is no known drilling data before 1981. In that year Aurum Technology commissioned the drilling of three shallow NQ core holes for total of 410 feet. These were drilled to test EM-16 electromagnetic anomalies, but did not cross the main vein. They intercepted only small amounts of gold in quartz-ankerite veinlet stockworks and disseminated sulfides. There was also no systematic sampling during that time. There have been a series of small scale sampling efforts since 1970, including metallurgical sampling, but there was little or no systematic sampling. This limited sampling generally confirms grades and ore values suggested by work during the period of mining – 1880 to 1900.

## 1.5 Metallurgical Testing

Quartz vein material from the 110 foot shaft was used in a 25 tons-per-day pilot mill which was built in 1985. This mill contained a jaw crusher, a ball mill, a Denver Gold Trapper, flotation cells and a Wilfley concentrating table. A 15 ton batch was processed and a recovery of 89.5% of the gold was achieved. Several other batches, totaling 300 tons with an average grade of 0.5 oz Au/ton, were processed over a period of 3.5 months with similar results.

In 1992 additional tabling and flotation tests were conducted using similar material from the shaft and additional material from a cat cut to the southwest. They also tested direct flotation without gravity concentration. The conclusion was that significant gold would be lost to slimes and carbon particles if flotation was not used.

The overall conclusion was that the most appropriate processing for this ore would be gravity concentration to capture coarser gold followed by two stage flotation, and passing the tails over a Wilfley (or similar) concentrating table.

#### **1.6 Mineral Resource Estimates**

There are historic resource estimates available, however they are not well documented and cannot be verified due to lack of access to the old workings. It is apparent to the author that there is a substantial, if not well documented (and not NI 43-101 compliant, as most\_historic resources are not) resource present at the Red Cloud mine. The mine produced from 50,000 to 75,000 ounces of gold before 1900 from quartz vein ore estimated to average between 1.5 and 2 ounces of gold per ton. Sampling of the vein and processing of ore from the more modern short shaft and from surface cuts, confirms the presence of attractive gold grades. There is no quantifiable resource by current standards, but there appears to be good potential to discover additional potentially minable mineralization along strike and at greater depth, as commonly occurred at other mines in the district.

Neither the author, nor RC Mining, Inc., are treating the historical estimates as current mineral resources or mineral reserves as defined by NI 43-101

#### **1.7 Interpretation and Conclusions**

The orientation of the vein is reasonably well known, although drilling would be helpful. The biggest challenge is estimating the grade of the gold-bearing material which is the target. Because of the erratic distribution of the often coarse gold, it is quite easy to drill a nearly barren hole through what is in reality a high grade ore shoot and a grab sample may or may not have much gold in it. Drill holes only sample a very small volume. They work well in more disseminated gold ores such as those in Carlin-type deposits, but getting a representative sample of gold grades in Mother Lode style veins by drilling or by collecting a few samples is very difficult. The long-accepted mining industry adage for such deposits is "drill for structure; drift for grade." Because of the nature of the mineralization it will always be difficult to demonstrate a substantial resource ahead of mining. The most representative sampling of the Red Cloud vein is the several hundred tons milled in the late 1980's, which had an average grade of 0.5 ounces per ton.

In this case, it is the author's opinion that several holes should be drilled at an angle across the vein from the north side as ramp development proceeds to determine the exact attitude of the vein and to explore for vein splits or sub-parallel veins. This drilling will serve to guide the development of the proposed access ramp along the foot wall side of the vein. Short crosscuts regularly crossing the vein would very useful. Drifts could then be driven along the vein for bulk sampling, or mining of any ore-grade material encountered. This material can also be used for additional metallurgical testing and final mill design. It will also help to pay for the development costs. Rehabilitation of the original shaft is an alternative to the ramp.

The Red Cloud project has some advantages due to the nature of the mineralization and its location. As a relatively small underground mine, its surface disturbance will be minimal. The milling process will be simple and will not use cyanide or other very toxic reagents. The area is familiar with small scale mining and gold mining is a large part of its history. All of these should help to reduce permitting time and costs.

The author has reviewed the Red Cloud project data in detail, and has visited the site three times. He believes that the data presented by RC Mining, Inc., provide an accurate and reasonable representation of the Red Cloud project.

#### **1.8 Recommendations**

Permitting for a small underground mine such as this may be relatively easy, but it is still very important. It should include simple baseline environmental studies. Discussions of the program with local land owners to involve them in the project in a positive way before any negative attitudes can take hold will be important.

As noted above, at least some holes should be drilled from the surface on the north side as part of the ramp construction in order to define the location and attitude of the vein, with the added benefit of checking the hanging wall for vein splits or sub-parallel veins.

Engineering studies should also begin as soon as financing is available. Refurbishing the old shaft may prove to be the simplest way to provide ventilation and a secondary escape way as the decline approaches the 600 level. Alternatively, it could perhaps be used as the principal access.

The capital cost for the driving of a decline to the 600 level, building the processing plant and other pre-production costs were estimated to be \$8.1 million in 2008. A consultant's detailed cost analysis is provided in Section 26.0.

#### 2.0 INTRODUCTION AND TERMS OF REFERENCE

This Technical Report for the Red Cloud Mine in Mariposa County, California, has been prepared at the request of RC Mining, Inc – a private company.

This Report will satisfy RC Mining's obligation to file a technical report as public information in connection with its intended listing on the TSX Venture Exchange, as required under the policies of the various provincial Securities Commissions and the TSX Venture Exchange. It may also be listed on USA or European exchanges. This report is written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP and Form 43-101, revised in July 2011. Work on the property by RC Mining, Inc., and its principal owners between their mining activity in the mid 1980's and December 2015 has been limited.

The author reviewed pertinent prior reports and data relative to the regional and property geology, land status, history of the district and the project, past exploration efforts and results, methodology, interpretations, and other data necessary to the understanding of the project, sufficient to produce this report. The author carried out such independent investigations of the data and of the property in the field, as has been deemed necessary in the professional opinion of the author, so that he might reasonably rely on this information. The data acquisition and program planning has been carried out in a professional manner and the author has no reason to doubt the validity of results of this program.

The author is an AIPG Certified Professional Geologist and has worked at operating mines and on mineral exploration projects in the USA, Mexico, Venezuela and British Columbia for many years and is familiar with the regional and local geology.

The historic drilling, assay and geologic data required to produce this report were generated in several phases over the past 135 years. RC Mining and its corporate predecessors have controlled the property since June 1978. The last significant mining activity on the property was in the late 1980's. The available historic data has passed into the possession of RC Mining, Inc., and any additional available data is being sought.

As mandated by NI 43-101 requirements, the observations, conclusions and recommendations of the author in this report are derived from comprehensive reviews of the Red Cloud Mine database and an initial site inspection on September 26, 2014. The property was also visited in September and November 2015. The site inspections were designed to confirm geologic relationships and property access, and to understand the logistics of the proposed development program, as well as to do confirmation sampling.

The author believes that the data presented to him by RC Mining, Inc. are a reasonable and accurate representation of the Red Cloud Project.

Units of measure, conversion factors and currency used in this report are as follows:

## Linear Measure

1 inch	= 2.54 centimeters $= 254$ millimeters
1 foot	= 0.3048 meter
1 yard	= 0.9144 meter
1 mile	= 1.6 kilometers

#### Area Measure

1 acre	= 0.4047 hectare
1 square mile	= 640 acres, or 259 hectares

## **Capacity Measure (liquid)**

1 US gallon	= 4 quart or 3.785 liters
1 US ganon	- + quart of 5.765 mers

Weight

1 short ton		= 2000  pounds = 0.907  tonne
1 pound	= 16 oz	= 0.454  kg = 14.5833  troy ounces

#### **Analytical Values**

1%	Percent	Grams per Metric Tonne	Troy Ounces per Short Ton
1%	1%	10,000	291.667
1 gr/tonne	0.0001%	1	0.0291667
1 oz troy/tn	0.003429%	34.2857	1
100 ppb			0.0029
100 ppm			2.917

## Commonly used abbreviations and acronyms

AA	atomic absorption spectrometry
Ag	silver
Au	gold
CIM	Canadian Institute of Mining, Metallurgical and Petroleum
core	diamond drilling method, producing a cylinder of rock
FA-AA	fire assay with an atomic absorption finish
g	grams
g/t Ag	grams of silver per metric tonne, equivalent to ppm

2881 Fargo Way, Sparks, NV 89434 Tel/Fax 775-356-6121 diverdcd@gmail.com

grams of gold per metric tonne, equivalent to ppm grams per metric ton expressed in gold-equivalent.
hectares
meters
millimeters
kilometers
parts per million
reverse circulation drilling method
tons per day

All monetary figures used in this report are US Dollars.

## 3.0 RELIANCE ON OTHER EXPERTS

The author's principal task was to review the historic data made available by Red Cloud Mining, Inc., and to compile data from California and US government publications regarding the property and the surrounding area. This report has relied strongly on reviews by experienced professionals in the following areas:

- Land Status Ray Schilber, one of the principals of RC Mining, Inc, and copies of confirming government documents.
- Geology, Resources Reports by Stanton (1906)), Kim (1987), published reports by the US Geological Survey and the State of California.
- Planned Program Ray Schilber, one of the principals of RC Mining, Inc., personal contact

After his review, it is the opinion of the author that the data provided to him by RC Mining, Inc., were collected in accordance with standard industry practices, and there is no reason to doubt their validity. Copies of documents related to the acquisition of the property and the claim patenting process from the US Forest Service and Bureau of Land Management regarding the claims have been reviewed by the author, and indicate that RC Mining, Inc., controls these mineral rights

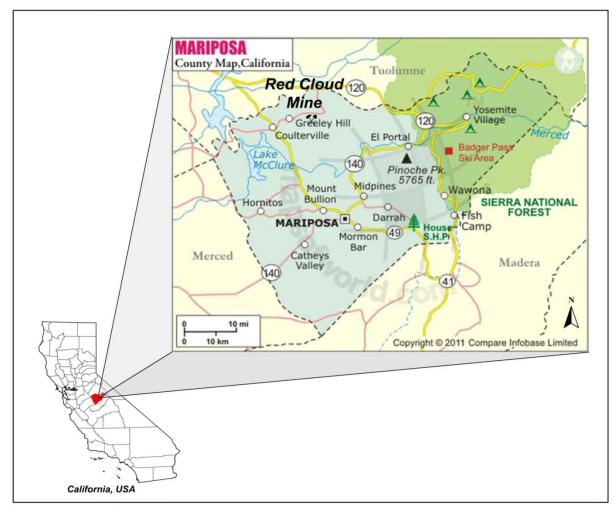
Conclusions regarding the Red Cloud Project and the recommendations presented in this report are those of the author, based on a review of the data and extensive personal experience as a geologist in the mining industry, particularly in the western USA, and do not necessarily reflect those of RC Mining, Inc.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

#### 4.1 Location

The Red Cloud Mine is located in Mariposa County, California, approximately 11 road miles (17 km) east of the town of Coulterville, which is approximately 35 air miles (56 km) east of the city of Merced. It is reached by driving 60 miles (96 km) northeast from Merced on

highway 140 to Mariposa, then 20 miles (32 km) northwest on highway 49 to Coulterville. To the Red Cloud Mine, drive northeast on Main Street which becomes Greeley Hill Road. Drive 6.3 miles to Greely Hill, and then right on Holtzel road for 2.7 miles (4.1 km) to Dogtown road. Turn left on Dogtown (paved) and proceed 1.1 miles (1.8 km) to the end of the pavement. Continue for 0.4 mile (0.6 km). After crossing the creek, take the left fork. Drive 0.5 miles (0.8 km) to the mine site.





## 4.2 Land Ownership

The Red Cloud Mine property consists of five unpatented mining claims of 20 acres each, and a patented mining claim and mill site of 21.5 acres, for a total of 121.5 acres. These claims are located in the south half of section 22 and the north half of section 27, Township 2 South and Range 17 East, MDB&M. The author has reviewed documents related to these claims and has no reason to doubt their validity. Sited over historic unpatented claims, these patented claims (survey numbers 6807 A&B) were granted to Mr. & Mrs. Terrill on December 17, 1976.

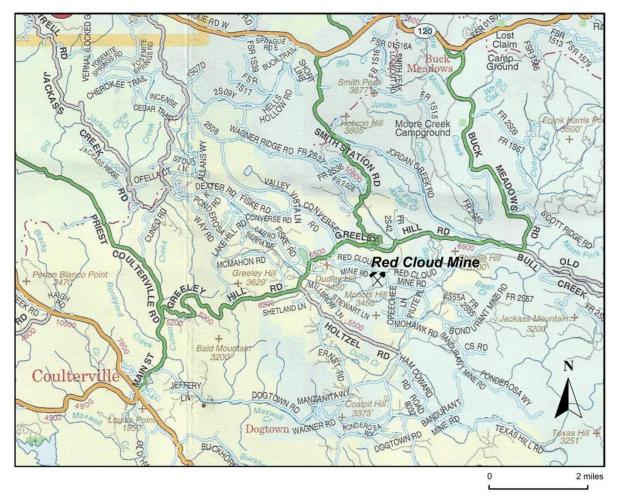


Figure 4.1b Red Cloud Mine Detailed Location Map

In 1972 Ronald Terrill purchased the Red Cloud claim from Jack Bell, who had held it for many years. On July 30, 1978, Mr. Ray Schilber purchased a 50% interest in the recently patented property from Terrill. His partner at the time, Michael O'Connor, purchased the remaining 50%. Their company was called Aurum Technologies, Inc. In 1985 O'Conner sold his 50% interest to Robert and Lois Ardery, his parents-in-law. Title was later passed to their family trust. On October 2, 1990, Mr. Don Gewelke purchased that 50% interest in the property from the Ardery family trust, becoming Schilber's new partner. The corporate entity became RC Mining, Inc. Five additional unpatented claims, Red Cloud #1-5, were staked at that time adjacent to the patented claims as shown in Figure 4.1c below. After being inadvertently allowed to lapse briefly, they were re-staked. Annual maintenance fees are up to date. All of these claims are now assets of RC Mining, Inc. Mr. Schilber passed away in the summer of 2015 and his 50% interest is now controlled by his wife Karen.

#### Table 4.1 Red Cloud Mine Claim Data

Red Cloud Amended Mining Location	Survey #6807	19.5 acres	Patented
Red Cloud Amended Millsite Location	Survey #6807A	2.0 acres	Patented
Red Cloud 1 Mining Claim	BLM #2091260	20 acres	Unpatented
Red Cloud 2 Mining Claim	BLM #2091261	20 acres	Unpatented
Red Cloud 3 Mining Claim	BLM #2091262	20 acres	Unpatented
Red Cloud 4 Mining Claim	BLM #2091263	20 acres	Unpatented
Red Cloud 5 Mining Claim	BLM #2091264	20 acres	Unpatented

#### **4.3** Terms of Agreements

At this point, there are no agreements in place, as the claims are owned by RC Mining, Inc. The principals of the company are Karen Schilber and Don Gewelke.

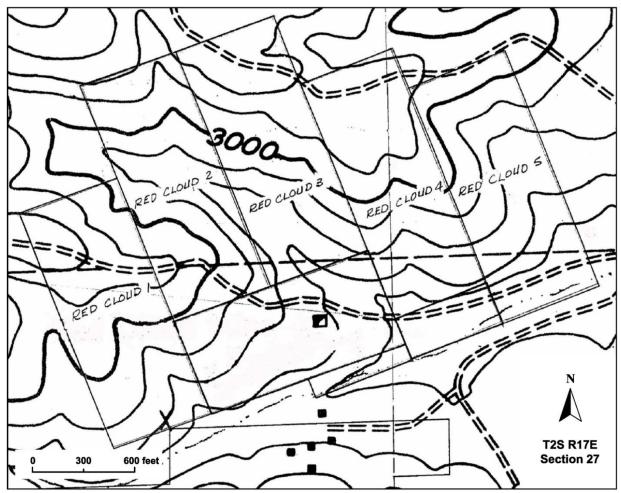


Figure 4.1c Red Cloud Mine Claim Map

# 5.0 ACCESS; CLIMATE; LOCAL RESOURCES; INFRASTRUCTURE; AND PHYSIOGRAPHY

The Red Cloud mine is in Mariposa County, California, 11 miles (17.6 km) east of Highway 49 from the small town of Coulterville. The first 10 miles (16 km) is on a paved road. The remainder is on a maintained gravel road to the mine site. The driving time from Reno, Nevada, is approximately 5 hours. From Los Angeles, California, it is 8 hours driving time and from San Francisco, approximately 4 hours.

The property is located in the foothills of the Sierra Nevada Mountains at an elevation of approximately 2850 feet (869 meters). The maximum topographic relief on the property is about 400 feet (122 meters), but in the immediate mine area, the slopes are relatively gentle. The vegetation is somewhat open second growth ponderosa pine and scrub oaks with grassy undergrowth and brush, typical of the foothills along the western slope of the Sierras at this elevation. Road access is good all of the year.

## 5.1 Climate

According to www.bestplaces.com, the climate in nearby Greeley Hill is quite moderate. The area receives an average of 33 inches (83.8 cm) of rain per year (USA average is 37 inches or 94 cm). Snowfall is 33 inches (83.8 cm). The number of days with any measurable precipitation is 59. On average there are 267 sunny days per year. The July high is 92 degrees F (33 C) and the January low is 29 degrees F (-2 C). The humidity is generally low. The climate should not inhibit any mining operations, although the current drought might potentially affect water supplies.

#### 5.2 Infrastructure

The Red Cloud mine is only one mile from a paved road. There is a power line to the mill site, used in the 1980's, which could be easily upgraded.

The daily necessities of life are easily available locally, with at least two food stores and gas stations within a few miles of the mine site. The larger city of Modesto is approximately a 90 minute drive to the west, where most major goods and services should be readily available and there are railroad facilities if needed. Many of the people living in the Coulterville area work in nearby Merced or Modesto.

The regional population is sufficient to provide workers for a smaller mining operation, but technical staff would probably need to be recruited elsewhere. The area is a pleasant place to live and housing would be readily available.

#### 6.0 HISTORY

According to Bowen and Gray (1957), placer gold was discovered sometime before 1849, probably by Spanish Californians. Agua Fria and Mariposa creeks were among the first to be worked. Within 20 years of 1849, hardly a gulch within the Mother Lode gold belt had been

left untouched. The presence of early arastras suggests that the Spanish Californians also had done the first milling of gold (Logan, 1935). The Mariposa mine was located in the spring of 1849, and by July a stamp mill had begun processing the ore. This was the first of the many mining operations that sprang up over the next few decades.

Activity at the Red Cloud mine was begun much later. Although it was probably discovered before 1880, the first recorded activity there was in 1883. "October 1883, machinery is in place and crushing is to commence from the Red Cloud vein which is very rich" (Mast, 1905, "from a local newspaper at a public library"). The principal period of operation was between 1883 and 1900. A series of short articles in the local newspaper, the Gazette-Mariposan, highlight a series of developments at the Red Cloud, and document the expansion of the mine:

<u>June 20, 1885</u> "...they have struck a bonanza...the ore is fabulously rich with gold..." <u>August 8, 1885</u> "...the last sinking on the vein is 100 feet below the 400 level..."

<u>April 3, 1886</u> "...the mill...has been running ore averaging \$30 to the ton (at \$20 gold that is 1.5 oz Au per ton)...the lower level is 380 feet below the surface, shows two chimneys 100 feet apart...the last chimney struck was very rich with a 4-foot vein..."

May 1, 1886 "...down 380 feet with a large vein showing free gold in abundance...the slate walls require no timbering."

<u>October 23, 1886</u> "Every day we hear of a fine body of ore being struck, that the vein is 10 to 15 feet wide, and the whole body of ore is being crushed. Another shaft of 100 feet will begin sinking in a few days." (location currently uncertain)

November 27, 1886 "About every week an additional rich strike is made in the vein ...ore averages \$60 per ton (3 oz Au per ton @ \$20 gold), some water trouble..."

<u>December 10, 1886</u> "The mine is 430 feet deep...from each 100 foot level they have a drift or level 100 feet each way, which shows a good paying grade all through. The average of the vein is about 5 feet wide."

Bowen &Gray (1957, pg 163) noted that in the middle 1890's the mine was taken over by the Red Cloud Mining Company of Boston. This company extended the shaft to 700 feet (213 m) and mined the two ore shoots down to below the 500 level. These were "lost" between the 600 and 700 levels (Author note – not indicated if this loss was by faulting or something else). Julihn & Horton (1940, pg 173) noted that, regarding mines in the East Belt, which includes the Red Cloud, "the cessation of mining there was largely due to the presence of a considerable volume of water, so that the cost of pumping proved excessive." This also could have been a factor at the Red Cloud, as the press report from November 1888 noted. Goodyear (1888) also noted, among many other mining and processing details, that the mine was pumping 5000 gallons of water per day (from a depth of less than 500 feet). Thus excess water may have been a problem at the Red Cloud – particularly if significantly higher volumes were encountered down to 700 feet in the 1890's.

Ownership of the property changed hands several times over the following decades. The only serious attempt to work the mine before the 1970's was in 1935. The property was leased for a short time by Fredericks and Hodge of Mariposa, California. According to Foster (1960?), "an abortive attempt was made to reopen the mine. The shaft was reopened to the 300 foot (91 m) level and re-timbering was begun, but not completed." Mr. Earl Robinson, an employee at that

time, said that "ore was stacked on the 100, 200 and 300 foot (91, 182 and 273 m) levels. It ran \$12 per ton (0.34 oz Au per ton at \$35 gold) on the 100 level and \$16.50 per ton (0.47 oz Au per ton at \$35 gold) on the 200 level." The standard mining practice during the 1880's and 1890's was to hand sort the ore underground and only hoist to the surface the higher grade material. Thus a substantial amount of at-that-time sub-ore-grade material was left broken and stacked in the workings, so it would be reasonable to assume that Robinson was correct, at least in general terms.

There was no further significant activity reported at the Red Cloud Mine until Ronald Terrill acquired the claim in 1972. An examination of the property was made in 1973 by De Silva, in which the area soon to be named the "Cat Cut", is described. He also mentioned that there was a 110 foot (33.5m) shaft with a three-foot (0.9m) wide vein assaying \$110 per ton (1.13 oz Au/ton @ then current \$93.72 per oz). It is not clear when the shaft was sunk. There is little documentation of the work that Terrill did, but it did include gold assays from his sampling and that of the US Forest Service. He petitioned the US Forest Service to patent the Red Cloud claim and mill site and it was approved December 17, 1976.

There were important changes in 1978. Schilber and O'Connor, working as Aurum Technologies, Inc., acquired the claims. In July 1980 an EM-16 electro-magnetic survey was carried out. Six lines were run in an effort to trace the vein structure to the northeast. Then three short core holes were drilled to test these magnetic anomalies. In 1985, the earlier 110 foot (33.5m) shaft, inclined at -70, was refurbished and a new head frame was installed. It had a concrete collar and timber lining, and a hoist driven by a diesel motor. The ladders and hoist have since been removed. Power was supplied by a 60 KW diesel generator. A crosscut was driven about 200 feet (67 m) to the north with the intention of finding additional sub-parallel veins, but without success. They considered re-entering the old workings, but encountered a caved area. They did find very good gold values in the vein near

the bottom of the shaft. Later that year, pilot-plant a mill, designed to process 25 tons of ore per day, was completed. It consisted of a jaw crusher, a ball mill, a Denver Gold Trapper, flotation cells, and a Wilfley gravity concentrating table. The design and construction of the mill was aided by consultants from the nearby Sonora Gold Mine.



Figure 6.0a Head Frame at 110 foot Shaft (Durgin Photo)

Several batches (approximately 300 tons) of vein material, grading 0.5 oz Au/ton derived from the 110 foot (33.5m) shaft, were processed over a period of 3.5 months. This comprises the most representative ore sample taken. This is discussed in more detail in the Metallurgy section of this report. A laboratory building was also built for the analysis of samples.

Little physical work has been done at the Red Cloud Mine since the mid 1980's. In 1990 Mr. Gewelke became Mr. Schilber's 50% partner and the company became RC Mining, Inc.



Figure 6.0b Pilot Mill Under Construction (Schilber photo)

#### 6.1 Historical Resource Estimates

Readers are cautioned that most historical estimates (including those at Red Cloud) are generally not NI 43-101 compliant and should not be relied upon. A Qualified Person has not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves. Consequently, their reliability and relevance should be regarded as suspect until proven otherwise. RC Mining, Inc., is not treating any historical estimate as current mineral resources or mineral resources or mineral resources as defined by NI 43-101.

During the principal mining period of 1883 to 1900, there were no known resource calculations made. There were comments in the local Gazette-Mariposan newspaper suggesting that there was gold in abundance in the ore shoots and the future was bright, but there was no resource calculated or suggested. The miners simply followed the vein, both laterally and downward, with little consideration of remaining resources. Underground exploration drilling was in a primitive stage at that time, thus probably not used. Miners often would cross-cut, drifting on

likely-looking crossing vein structures. Apparently there was no cross-cutting done at the Red Cloud. Mast (1905), who had been in the mine several times in the 1890's, stated that there was a prospective-looking vein crossing the main vein from the south side, on the east side of the shaft on the 400 level. Cross-cutting on this structure was debated, but not done.

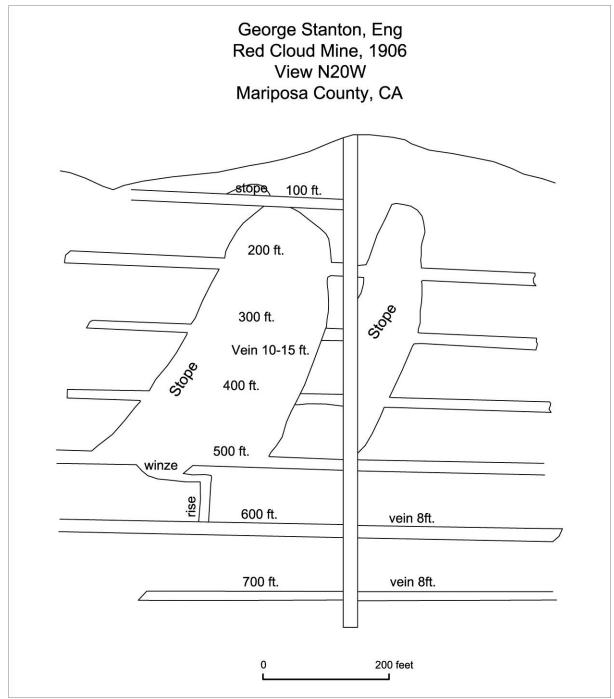


Figure 6.1 Red Cloud Longtitudinal Section (Stanton 1906)

The first suggestion of a resource estimate was by engineer George Stanton (1906). After discussions with supervisory personnel who had worked in the mine, some literature research 15 15

2881 Fargo Way, Sparks, NV 89434 Tel/Fax 775-356-6121 diverdcd@gmail.com

and after reviewing a longtitudinal section generated by Mr. Hopkins, who had been the superintendent near the end of the mine's productive life, he made the first resource estimate.

He inferred that one third of the strike of the vein, opened by drifting at 100 foot (33.3m) vertical levels, had been stoped as shown on the longtitudinal section above. He estimated the known production at about \$1,000,000. Other sources (Bowen & Gray, 1957, Castello 1921) have suggested \$1,500,000. At the then prevalent gold price of \$20 per ounce, Stanton's estimate represents 50,000 ounces of gold. Then, if the vein to be mined was conservatively 2.5 feet (0.76m) wide (a more realistic average might be 5 feet (1.5m), as indicated by Bowen & Gray, 1957), he calculated that there were 42,000 tons of ore "standing in the mine" between developed levels. He suggests a minimum grade of \$8 per ton (or 0.4 oz Au per ton at a \$20 gold price) – a grade derived from sampling of (lower grade?) mine dumps, not from mining records. He suggests all these as minimum figures, both in tonnage and grade. The average grade of the ore mined was probably well over one ounce per ton, as noted in the newspaper articles in the History section of this report. For example, if there are 42,000 tons of ore present, grading 1.5 ounces per ton, that would be 63,000 ounces of gold present in the old workings (author's calculations). Stanton also suggested that there is significant exploration potential along strike, down dip and in potentially present sub-parallel structures, as this often occurred at other mines in the district.

Vern Foster's brief report (1960?) indicates that he was told, by a person involved in the attempt to rehabilitate the mine in 1935, that there was broken ore stacked in the drifts on the 100, 200, and 300 levels which carried gold grades of \$12 to \$16.50 per ton. At the 1935 gold price of \$35 per ounce this calculates to 0.34 and 0.47 oz of gold per ton. In mines of the 1880 to 1900 time period, ore was commonly hand sorted underground and only the better grade material was taken to the surface. The sub-ore grade material was stacked in unused workings. He did not attempt to quantify the amount of such backfill remaining in the workings.

The only other attempt to estimate a resource figure was made by Dr. Yung Sam Kim in a 1987 report written for Mr. O'Connor and Mr. Schilber. He reviewed the literature, visited the property twice and collected four surface samples from an area now called the "Cat Cut" which the author also visited and sampled, to be discussed Section 9 of this report, as the original shaft had caved at the collar long ago. His resource estimate was based on the reports by Stanton (1906) and Foster (1960?), information in the reports by Bowen & Gray (1957) and Castello (1921), and on his own inferences.

Dr. Kim discussed three types of ore in the category that he called Proven Ore (in-place and un-mined vein material), Broken lower grade "ore" stacked in the workings, and Disseminated or stockwork ore in the slate wallrocks. De Silva (1973) stated that in the 110 foot (33.5m) shaft the mineralized area, including the 3-foot (0.9m) vein, was 8 feet (2.4m) wide with several "stringers of ore with good high values" in the wall rocks. Kim gave each of these a horizontal length of 800 feet (244m) (the workings are that long on Stanton's longtitudinal section). The author's comments are in parentheses.

#### "Proven Ore" Calculation – Dr. Kim

### A. In-place Vein Ore

100 ft (33m) vertically between the 500 and 600 levels (vein "lost" below 600 level in 1890's)

Vein width = 5 ft (1.5m) (marked as 8 feet (2.4m) on the levels above, Stanton section Horizontal length = 800 ft (244m)

Tonnage Factor = 10 cubic ft (0.28 cubic meters)/ton Calculation:  $100 \times 800 \times 5 / 10 = 40,000$  tons

He assumes a grade of 2 oz Au per ton (newspaper reports mentioned grades from 1.5 to 3 oz per ton, so this may be possible. Stanton suggested an overall grade of 2 oz).

Thus, In-Place Vein ore may contain 80,000 ounces of gold (or more at greater vein width)

#### B. Broken Ore in Workings – Dr. Kim

400 ft (122m) vertically. Between the 100 and 500 levels, workings were back-filled with low grade ore. (It is unclear what percentage of the space was backfilled, or the grade) Average width = 5 ft (1.5m) Horizontal distance = 800 ft (244m) Tonnage factor = 10 cubic ft (.28 cubic meters)/ton, assumes broken ore is 60% of solid Calculation: 400 x 800 x 5 x 0.6 /10 = 96,000 tons

He assumes a grade of 1 oz Au per ton (Foster's 1950 report suggests 0.5 oz per ton may be more realistic)

Thus, broken ore in workings may contain 96,000 ounces of gold (or Foster's 48,000 oz?)

#### C. Disseminated or Stockwork Ore in Vein Walls – Dr. Kim

500 feet (152m) vertically between the 100 and 600 foot levels Average width = 10 ft (3m) (5 ft or 1.5m on each side of vein) Horizontal distance = 800 ft (244m) Tonnage factor = 10 cubic ft (0.28 cubic meters)/ton Calculation: 400 x 800 x 10 / 10 = 400,000 tons

Assumes a grade of 0.5 oz Au per ton (this is probably very optimistic)

Thus stockwork or disseminated ore along the vein could contain 200,000 ounces of gold.

(Dr. Kim made this unsubstantiated calculation based on his very limited sampling of walls next to the vein on surface and sampling in the 110 foot (33.5m) shaft from 1970's.)

Dr. Kim's total estimate for these three "ore" types was thus:

In-place vein ore	– 80,000 ounces
Broken or backfill ore	– 96,000 ounces
Disseminated or stockwork ore	– <u>200,000</u> ounces
Total	376,000 ounces of contained gold

Dr. Kim also calculated a "probable" resource based on a single mention that the Red Cloud vein could be traced for 4500 feet (1372 m) along strike (Bowen and Gray, 1957) and on his assumption that mineralization would persist uniformly along strike, as he had estimated in the "proven ore" in the existing workings. The exception was that he used an average grade of 0.5 ounces of gold per ton. In the author's opinion this "probable resource" is a grand and unsubstantiated inference based on very little data other than the reasonable suggestion that the vein structure persists along strike and that at least some of it might be expected to be mineralized with gold, possibly with grades similar to those encountered in the Red Cloud Mine. This "resource" should not be considered as anything more than the reasonable possibility of additional mineralization being present along strike.

On the positive side, mining was actually done and grades of the ore mined were very good, as substantiated by several newspaper articles written concurrently with the mining and by contemporary reports by Goodyear (1888), Mast (1905), and Stanton (1906). Stanton stated that he had checked Wells Fargo bullion shipment records and that at least \$800,000 dollars worth of gold had been shipped. He also mentioned rampant high grading by the miners. He was confident that at least \$1,000,000 in gold had been mined. At the then-prevalent gold price of \$20, that represents at least 50,000 ounces of gold produced. Later, Castello (1921) made an estimate of \$1.5 million, or \$75,000 ounces produced. In addition, pockets of high grade coarse gold were found in the 110 foot (33.5m) shaft in 1985. Dr. Kim collected surface samples with high gold grades from what is now called the "cat cut". The author observed several small bits of visible gold in vein quartz samples in the same area in 2014. He also observed visible gold in samples collected from the 110 foot shaft in November 2015.

## 7.0 GEOLOGIC SETTING AND MINERALIZATION

#### 7.1 Regional Geology (condensed from Knopf, 1929 and Groves, et.al., 1998)

The Red Cloud Mine is located near the southern end of the Mother Lode Gold District, which is at least 120 miles (192km) long. Mineralization in the district is localized by a series of subparallel, regional scale reverse faults, dipping to the northeast. These are a regional scale manifestation of compressional deformation at a convergent plate margin. This occurred between 140 and 120 million years ago.

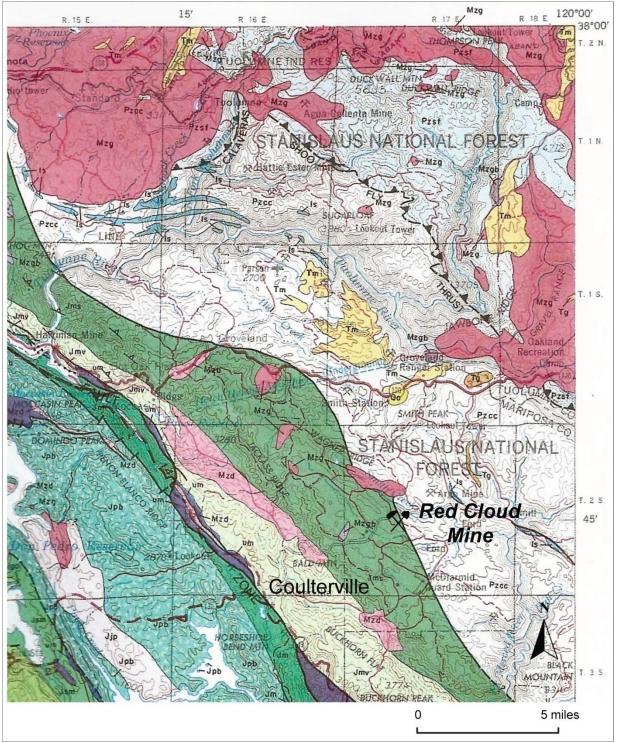


Figure 7.1 Regional Geologic Map (Wagner, et.al., 1990)

### Table 7.1 Legend to Accompany Regional Geologic Map

Dool Decomintion

<u>Symbol</u>	<b>Rock Description</b>
Pzst	Paleozoic siltstones, undivided
Pzcc	Calaveras Complex Metasediments
Jms	Jurassic metasediments – Mariposa Formation
Mzd	Mezozoic dioritic rocks
Jmv	Jurassic metavolcanic rocks
Um	Ultramafic intrusive rocks
Jpb	Jurassic Penon Blanco volcanic rocks
Jip	Pasper Point Formations (chert, tuff, basalt)
Mzg	Mesozoic granite
Mzgb	Mesozoic gabbro
Jsm	Salt Springs and Merced Falls slates

The principal host rocks for the gold mineralization are the Calaveras Formation (middle Paleozoic) and the younger Mariposa Formation (Jurassic). The intrusion of the granitic rocks of the Sierra Nevada batholith to the east is a late part of the large scale compressional event. They are dated as late Jurassic to early Cretaceous in age.

The Calaveras Formation is composed largely of black phyllites with subordinate amounts of quartzite and limestone. It also contains associated green schists, which were derived from metamorphism of basaltic tuffs. The Mariposa Formation is composed of black slates with some greywacke and minor conglomerate. Greenstones are also often present as thin interbeds and also locally as thicker beds. Some of the material in the greywackes is tuffaceous.

Near the end of the Jurassic, the Calaveras and Mariposa formations were intensely folded and invaded by more mafic intrusive rocks, followed by granodiorite intrusions. Toward the end of this compressive event, the major Mother Lode structures were formed and invaded by abundant large mesothermal or orogenic quartz veins. Rather than being a single great vein, it is a system of braided or anastamosing larger and smaller quartz veins, often sub-parallel and sometimes cross-cutting. The main Mother Lode structure is a zone from several hundred feet to over a mile wide. It is generally flanked on both sides, at distances of several miles, by similar zones of lesser width and intensity. In the southern part of the system, these are referred to as the East Belt and the West Belt. The Red Cloud mine is located in the East Belt zone in central Mariposa County.

## 7.2 Local Geology

Symbol

Within the East Belt of the Mother Lode, here some 15 by 20 miles (24 by 32 km) in size, the quartz veins are generally smaller, more widely spaced and less continuous than in the central Mother Lode, however many were significant gold producers. They also tend to have more abundant high-grade pockets (Julihn & Horton, 1940), and are thus sometimes referred to as "pocket mines". The East Belt has host rocks of both the Calaveras and Mariposa formations.

The Red Cloud mine is west of the Mariposa/Calaveras contact and has rather monotonous black slates and greenstones of the Mariposa Formation as its only host rock. An article in the Gazette-Mariposan newspaper (May, 1886) said that the slate wallrocks were solid and dense and required no timbering.



Figure 7.2a Quartz-ankerite Stockwork in Mariposa Slate (Durgin photo)

That is not the case at the surface. Because of the easily weathered nature of the Mariposa slates and the thick cover of brush and grass, there are few readily observed outcrops in the vicinity of the Red Cloud mine. Most of the early-day prospecting was done with a gold pan in the creeks and by walking the prospective ground looking for vein outcrops or quartz float.

The original shaft was sunk on a small quartz vein outcrop. Any original outcrops in the vicinity of the shafts have been erased by road construction or covered by small waste dumps. In the so-called "Cat Cut", several hundred feet southwest along the strike of the vein, only strongly weathered and crumbly slate was exposed in an 8 foot (2.4m) high cut. Perhaps 10 feet (3m) away from the vein, it contained a weak stockwork of quartz-ankerite veins (Fig 7.2).

The veins in the East Belt do not have a consistent attitude. The mines listed in Lulihn & Horton (1940) have strikes ranging all around the compass and dips from very shallow to nearly vertical. So it is not particularly odd that the Red Cloud vein trends N70E and dips approximately 70 degrees to the North, rather than sub-parallel to the regional northwesterly trend of the Mother Lode vein system. The Red Cloud vein displays textures ranging from massive white quartz with scattered slate inclusions to a well-banded or ribbon texture. This is common in the area (see Figure 7.2b), and throughout the Mother Lode system.



Figure 7.2b. Banded or Ribbon Textures in the Malvina Vein near Coulterville (Julihn and Horton, 1940, fig 38)

#### 7.3 Mineralization (Condensed from Knopf, 1929)

In the Mother Lode system in general, vast amounts of quartz were deposited in the many anastamosing faults, which were repeatedly opened by fault movements. However, this early quartz was largely barren. Most of the gold was deposited in later stages as free gold, in associated sulfides and with iron-rich carbonate minerals such as ankerite. Thus the gold may be found in the quartz with sulfides, as free gold in late veins, in fractured and ankerite-altered wallrocks with quartz-ankerite stockworks, and occasionally as disseminations in altered wallrocks. A particular mine could have had any or all of these ore types. Large volumes of

wallrocks were altered by carbonate-rich solutions, and the alteration of the wallrocks may have provided most of the silica that formed the veins. The commonly occurring sulfides were pyrite, arsenopyrite and minor galena, sphalerite and chalcopyrite. Some deposits contained tellurides in small quantities.

At all scales, the quartz veins often pinch and swell in size along strike and down dip due to repeated movement along the structures. Prominent ribbon banding in the quartz is also a result of repeated movement. Ore, especially the higher grades, occurs in shoots that are relatively short horizontally, but may persist to great depths. These shoots rake steeply downward, are significantly wider than the rest of the vein and generally contain higher grades. Many of the known ore shoots cropped out at the surface, but the tops of others were found as much as 3300 feet below the surface, referred to as blind ore shoots. These were often discovered by drifting along strike in poorly mineralized parts the vein

Two types of ore were recognized outside of the quartz veins. One was "gray ore", developed near veins in intensely altered andesitic rocks, and containing disseminated pyrite and arsenopyrite. These could be quite large and carry grades of up to 0.4 ounces of gold per ton. The other type was developed in intensely altered chloritic schists, altered to pyrite-ankerite-sericite schist, usually with quartz-ankerite veinlet stockworks. These were lower grade and may have averaged 0.1 ounces per ton. Both were generally found adjacent to a large but barren quartz vein.

At the Red Cloud mine, nearly all of the gold was produced from two ore shoots in the main quartz vein that were from 3 to 15 feet (0.9 to 4.6 m) thick and up to 200 feet (61m) wide horizontally along strike. Most of the ore had sufficiently coarse, visible gold that it could readily be hand sorted underground. Higher grade ore often contained several ounces of gold per ton. Stockton (1906) noted that the gold grades varied sufficiently greatly from place to place in the vein, due to erratic coarse gold distribution, often as small high grade "pockets", that it was difficult to calculate a realistic average grade. In the ore shoots the vein was often banded as in Figure 7.2b. The gold displayed in the photo on the cover of this report was taken from a pocket in the main vein, which was exposed in the newer 110 foot (33.5m) shaft, by Ray Schilber. It should be noted that small high grade pockets of coarse gold were common in many of the Mother Lode Mines. The most famous is the 16-to-1 mine in Alleghany, California (NE of Sacramento) where for decades rich pockets of coarse gold have been found in the walls of old workings using metal detectors. The largest gold specimen found there in 1993 weighed 18 pounds.

Most of the value recovered from the ore was as free gold. However, Goodyear (1888) noted that the value of the "sulphurets" (sulfides, mostly pyrite - whose average pre-milling content in the ore was 2.5%) contained in concentrate was \$100 to \$200 per ton, or 5 to 10 ounces per ton. Goodyear did not mention the concentration factor. The author also saw significant amounts of sulfides in vein material in the "Cat Cut" area. It had a very similar appearance to the sulfides in quartz vein material from the nearby Mt. Gaines Mine (Julihn & Horton, 1940) in Figure 7.3.

The Red Cloud mine did not produce ore from altered wallrocks, according to the references

consulted. However, quartz-ankerite stockwork veining is present near the quartz vein in the "Cat Cut" (see Figure 7.2a), and noted by De Silva (1973) in the 110 foot (33.5m) shaft. Sampling of such material returned low grade gold values in samples taken by Dr. Kim there and by others in the wallrocks to the vein in the 110 foot (33.5m) shaft (personal communication, Ray Schilber). Based on that same data, Dr. Kim (1987) included a wallrock ore category in his historical resource estimate.

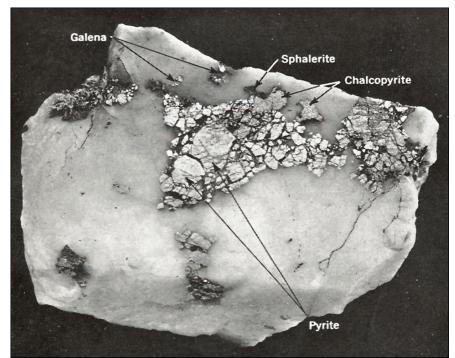


Figure 7.3 Sulfides in Quartz from Mt. Gaines Mine (Julihn and Horton, 1940, Fig 40)

## 8.0 DEPOSIT MODEL

The Mother Lode System in general and the Red Cloud Mine itself are examples of orogenic gold deposits (an earlier name was mesothermal deposits) which are present in many areas around the world. The following is a quote from Groves, et.al. (1998). "The so-called mesothermal gold deposits are associated with regionally metamorphosed terranes of all ages. Ores were formed during compressional to transpressional deformation processes at convergent plate margins in accretionary and collisional orogens. In both types of orogen, hydrated marine sedimentary and volcanic rocks have been added to continental margins during tens to sometimes 100 million years of collision. Subduction related thermal events, episodically raising geothermal gradients within the hydrated accretionary sequence, initiate and drive long-distance hydrothermal fluid migration. The resulting gold-bearing quartz veins are emplaced over a unique depth range for hydrothermal deposits, with gold deposition occurring from 15-20 km depth to the near surface environment."

The following is the author's simplified translation of that quote. In a plate collision, the oceanic plate is pushed under the continental plate (subduction). As this happens, over a long period of time, the sediments at the leading edge of the oceanic plate are scraped off against the

continental edge, squeezed, heated and sheared, which converts them to metamorphic rocks, generally schists and slates like the Calaveras and Mariposa formations. This shearing forms a very complex fault zone. The water contained in the sediments is heated with increasing depth. The hot water migrates up the faults and deposits gold and other vein materials at depths ranging from more than 15 kilometers to near the surface. In the Groves model, the Mother Lode system would be placed in the Mezozonal range in Figure 8.1

Most other classes of hydrothermal gold deposits have a comparatively limited depth range of gold deposition. In orogenic gold deposits the depth extent of gold deposition may be measured in kilometers rather than in hundreds of meters. Gold has been mined in orogenic vein systems (including the Mother Lode) from the surface to depths over 2.0 km (6500 feet).

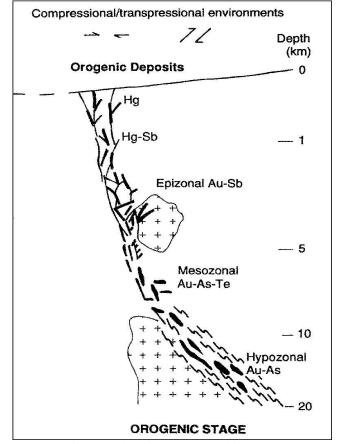


Figure 8.0 Orogenic Gold Model (Groves, et.al., 1998)

Details common to such orogenic gold deposits (Ash & Aldrick, 1996) are:

Structure: Regional scale complex reverse fault zones.

Deposit Form: Tabular veins in competent lithologies, stockwork veining in others. Typically a system of en-echelon or anastamosing veins at all scales. Low grade bulk tonnage ore may be present with disseminated sulfides

- Vein Texture: Sharp contacts, massive or ribbon banding or stockworks.
- Ore Minerals: Native gold, pyrite, arsenopyrite, galena, sphalerite, chalcopyrite, plus lesser amounts of telluride, bismuth or antimony minerals.
- Alteration: Broad zones of carbonate alteration, often with ankerite-quartz veinlets. Pyrite is common.

#### 9.0 EXPLORATION

With the exception of a brief attempt to re-habilitate the original shaft in 1935, the Red Cloud property was essentially idle from 1905 to the 1970's. By the 1970's Mr. and Mrs. Terrill held the claims covering the mine. In December 1976 the US Forest Service completed the lengthy process of approving the patenting of the claim, and the title was transferred to the Terrills.

#### 9.1 Sampling

Before 1973, a 110 foot (33.5m), single compartment shaft was sunk on the vein approximately 80 feet (24.4m) southwest of the original shaft which had caved at the collar long ago. Samples collected from the vein in the 110 foot shaft by De Silva (1973) showed excellent gold values, as did those collected by Schilber in the 1980's for processing in the pilot mill (verbal communication from Ray Schilber, see cover picture). Stockwork quartzankerite veining was also noted in the slate wallrock. Also at that time, a bulldozer excavation was made about 650 to 750 feet (198 to 229m) southwest of the original shaft along strike of the vein, where the author's interpretation of an old map suggests that there were some small old workings on the vein. This area, now called the "Cat Cut", also displayed abundant vein float material and the adjacent altered and stockwork veined wallrocks (see Figure 7.2a). A 12 inch vein was also exposed in a small surface working 50 feet (15m) east along strike. Several samples were collected for assay from both the shaft and the Cat Cut and assay sheets from the mid 1970's, reviewed by the author, show that many of them carried attractive gold values, up to several ounces per ton. The author also collected well mineralized samples from the Cat Cut area. However, exact locations and detailed descriptions of the earlier samples were not recorded. Unfortunately, like much of the data from the underground workings, the vein is there and the gold is there, but the sampling details are not well documented.

#### Table 9.1a Red Cloud Fire Assays Dated 1974 and 1975

Assayer	Gold (oz/ton)	Silver (oz/ton)
Robert Craig & Company	3.21	273.90
Metallurgist	0.658	94.80
Same	0.029	0.18
Metallurgical Laboratories	0.09	NA
Forest	0.10	NA
Service	6.33	NA
Sampling -	0.13	NA

2881 Fargo Way, Sparks, NV 89434 Tel/Fax 775-356-6121 diverdcd@gmail.com

from	0.64	NA
patenting	0.07	0.06
process	0.07	0.12
documents	1.62	0.14

The property was reviewed by Dr. Kim and a report was written (Kim, 1987). He collected four samples. The details are tabulated below.

#### Table 9.1b Dr. Kim Sampling 1987

Number	Description	Gold (oz/ton)	Silver (oz/ton)
#1	Random grab sample from old test pit, 400 ft west of sha vein is 4 ft wide	0.20 aft	None
#2	Random grab sample from o pile from 110 ft shaft	re 1.02	0.30

The author collected four samples during his visit to the property on September 26, 2014. All of these were from material exposed in the Cat Cut. See Figure 9.1 for locations.

#### Table 9.1cDurgin Sampling 2014

Number	Description	Gold (oz/ton)
RC-001	Weakly banded to massive white quartz 1-3% sulfides traces of barely visible gold.	0.137
RC-002	Select sample qtz-ankerite veinlets in soft slate – looking for gold in wall rocks – barren?	0.012
RC-003	Float, broken quartz with slate inclusions, trace sulfides – no gold?	0.001
RC-004	Float from small pit, massive white quartz, 5% sulfides, py cubes, tiny crystals of visible gold.	0.464

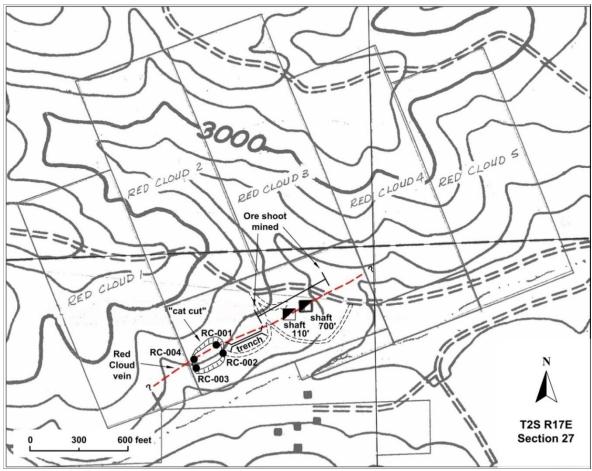


Figure 9.1a Durgin Surface Sample Location map

## Table 9.1d Durgin Sampling, Cat Cut September 2015 (a) Barted between BC 001 and BC 004 around 2015 2015

(collected between RC-001 and RC-004, except 2015-3)

Number	Description	Gold (oz/ton)
2015-1	massive white quartz vein float with minor sulfides - barren?	0.014
2015-2	massive white quartz vein float with minor sulfides – barren?	0.015
2015-3	sheared white quartz vein from Small shaft east of Cat cut	0.023
2015-4	massive white quartz no sulfides barren?	0.006
2015-5	massive white quartz no sulfides	0.004



Figure 9.1b Decending the 110 foot Shaft for Sampling 2015

With some difficulty the newer 110 foot shaft was re-entered in November 2015. It was necessary to clear quite a bit of debris to reach the bottom. A northerly trending partially caved crosscut extended at least 50 feet from the bottom of the shaft. Ten feet from the shaft, a segment of the vein was exposed in a drift that extended approximately 40 feet along strike to each side of the crosscut. It was from this area that a few hundred tons of material was mined (average grade 0.5 oz Au per ton) for processing in the pilot mill in the late 1980's. The exposed quartz vein was about 12 inches wide in a 5-foot wide sheared zone containing other quartz stringers and pyrite. This area was also partially caved, appearing to be too hazardous for systematic sampling. Approximately 25 pounds of grab samples of vein material were quickly collected from the floor. The assay results are posted in Table 9.1e below.

# Table 9.1e Durgin Sampling November 2015Sampling of Vein in 110 foot Shaft

Number	Description	Gold (oz/ton)
RC-2015 -1	Quartz vein material with sulfides	0.250
RC-2015-2	Quartz vein material with minor sulfides	0.127
RC-2015-3	Quartz vein material with minor sulfides	0.118
RC-2015-4mx	Mixed quartz vein material and sheared fault gouge with pyrite	0.196

#### 9.2 Geophysics, EM-16 Survey

In July 1980 Ray Schilber, now of RC Mining, Inc., commissioned an electromagnetic survey using an EM-16 instrument over the eastern portion of the property. John Motter of Whitney & Whitney in Reno, Nevada, was the geophysist for the survey and prepared the report (Motter, 1980).

The EM-16 variety of electromagnetic survey was most useful for finding structures (faults and veins) under thin alluvium or soil cover, particularly if the water table is relatively far below the surface. It was well enough suited for the limited objectives of this survey, which were to trace the vein to the east, as well as looking for crossing structures.

Six lines of very low frequency electromagnetics (VLF-EM), run roughly east-west, were surveyed. The positions and results of the survey are displayed on Figures 9.2a and 9.2b. The instrument was a Geonics EM-16 receiver using the Jim Creek, Washington VLF transmitter. Readings were taken at 50 foot intervals along the lines.

Strong anomalies were encountered in the vicinity of the caved shaft. These continued in a northeasterly direction to line 6, the last line to the northeast. A line run at the south edge of the Red Cloud patented claim shows that the vein does not appear to cross that boundary. Thus the survey satisfied its objectives. It would have been helpful, in hindsight, if other lines were run in a NW-SE direction further to the west in order to trace the vein to the southwest. The results of each line surveyed are plotted as vertical profiles or sections. Figure 9.2b is a good example. It shows an obvious sharp dip in the electromagnetic response strongly suggesting the presence of the Red Cloud vein, very near point #9 on this profile. It corresponds well with the known position of the vein and the tracing of the vein across the other lines.

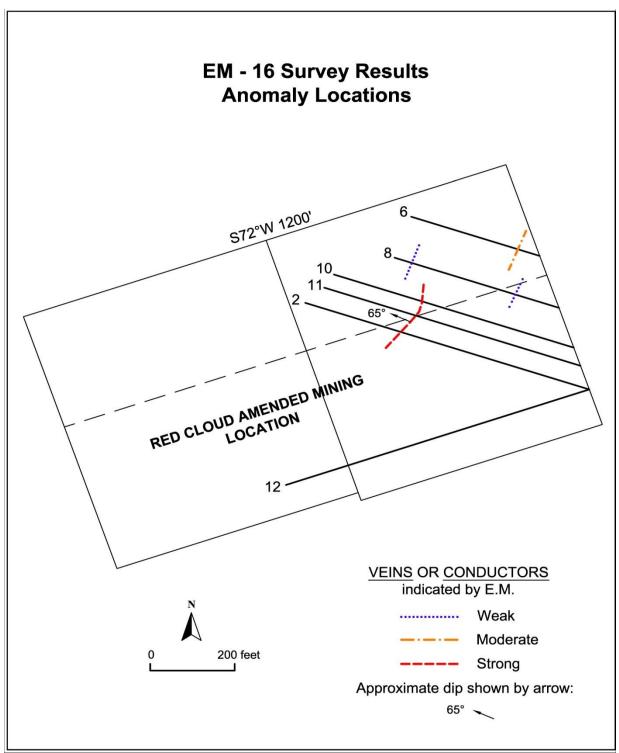


Figure 9.2a EM-16 Map With Interpretations (Motter, 1980)

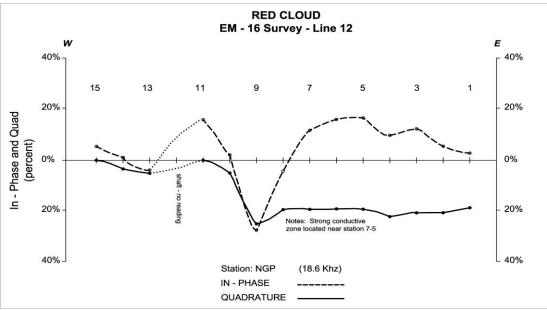


Figure 9.2b EM-16 Profile # 12 (Motter, 1980)

# 10.0 DRILLING

There is no known drilling data from the 1880-1900 period when the mine was operating, and it is unlikely that any drilling was done at that time. There is also no mention of drilling between that time and 1980. Again, it is unlikely that any drilling was done during that period.

After the EM-16 survey in 1980, the property owners decided to drill to confirm the geophysical results. In February 1981, three NQ-size (1.875 inch or 47.6 mm diameter core) vertically oriented core holes were drilled. The contractor was DMEX International. The first two were drilled at the north and south ends of the strong EM-16 anomaly zone. Hole #1 reached a depth of 150 feet (43.7m). Hole #2 reached a depth of 160 feet (48.8m). Hole #3 was stopped at 100 feet (30.5m). The first two holes did not intersect the vein, but were in the quartz-ankerite stockwork zone. The third hole was drilled outside of the anomaly zone as a water well and did not intersect mineralization.

There was very little mineralization encountered. That is not surprising, since none of the holes crossed the main Red Cloud vein and intersected only quartz-ankerite stockworks. Fire assay techniques showed no gold. The chloride bake process indicated the presence of traces of gold. As the author understands it, this is a semi-quantitative analytical process. It indicates the presence of gold, but has a rather high detection limit and is not as accurate as fire assay analysis.

# 11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

#### **11.1 Historic Sampling**

No information is available regarding sampling procedures, preparation, analysis or security for any sampling done prior to the mid 1970's. Samples from the mining period (1880-1900) 32 32

2881 Fargo Way, Sparks, NV 89434 Tel/Fax 775-356-6121 diverdcd@gmail.com

would have been done by fire assay, but it is not documented. For sampling done since that time the documentation is better, but incomplete.

## 11.2 Sampling Since Mid-1970's

The available data is tabulated below

Year	Sampler	Laboratory	Preparation Analy	vtical method
1970, 1976	Forest Service	Twinning	not stated	Fire assay
1974	Terrill	R.E. Craig	not stated	Fire assay
1975, 1976	Terrill	Metallurgical Labs	not stated	Fire assay
1980	Aurum Tech	R.E. Craig	not stated	Fire assay
1981	Aurum Tech	Rocky Mtn	not stated	Fire assay
1981	Aurum Tech	US Metals Co	not stated	Fire, fire+Cl bake
1985	Aurum Tech	Nevada Platinum	not stated	Fire, spectrographic
1987	Dr. Kim	not stated	not stated	Fire assay
2014, 2015	Durgin	ALS Chemex	crush split pulverize	Fire assay

#### Table 11.2 Sample Analytical Data Red Cloud Property

For example, nine Nevada Platinum 1985 assays of rock from the 110 foot (33.5m) shaft averaged 1.34 oz Au/ton and 1.2 oz Ag/ton, with a high of 1.90 oz Au /ton and 2.0 oz Ag/ton.

The author's four samples taken in October 2014 and others in September and November 2015 were processed by ALS-Chemex in Reno. Samples were crushed to -80 mesh, a 250 gram split was pulverized in a ring and puck pulverizer to -75 microns, then analyzed by fire assay with a AA finish or gravimetric finish for higher grades. The author collected the samples and they were in his possession until personally delivered to the lab.

# **12.0 DATA VERIFICATION**

The data collected before 1973 cannot currently be verified, as the old workings are not accessible. The author has read copies of all the information available during the compilation of this report. Inspection of the vein and samples acquired in the 110 foot (33.5m) shaft when it was refurbished in 1984 confirm the nature of the mineralization and the presence of abundant visible gold. Metallurgical testing of a few hundred tons of material at that time from the same area confirmed the presence and tenor of the gold (avg 0.5 opt Au). The author's November 2015 sampling of the vein accessed from the 110 foot shaft were small grab samples, and carried gold grades less than the metallurgical testing indicated. However, they were also much less representative than those much larger metallurgical samples.

Dr. Kim's sampling of the vein material in outcrop and float also confirmed the nature of the mineralization and to some extent the grade. The author's sampling also confirmed them.

There is no way to verify much of the assay data directly at this time as there is no access to

the main underground workings. The data does appear to be internally consistent and is consistent with observations of other such deposits in the district.

## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

#### **13.1** Ore Description

The material tested at the Red Cloud mine is white vein quartz which contains sparse slate inclusions, an average of 2.5% sulfides, largely as pyrite, and very fine to quite coarse native gold. Wallrock material mineralized with quartz-ankerite stockworks and disseminated sulfides may also be processed.

## **13.2** Historic Ore Processing

W.A. Goodyear (1888) described the mill which was operating at the Red Cloud mine. It was a 20-stamp mill with 800 pound stamps, crushing 1.5 tons per day. "Plates are silvered, the apron is 4 x 5 feet, the sluice is 47 inches wide, 11 feet long and inclined 1.5 inches in 14 inches. 75% of the gold is recovered in the batteries and 25% on outside plates." It used blanket concentrators. The ore contained 2.5% "sulphurets" (sulfides) and the sulphuret concentrate had a value of \$100 to \$200 per ton (5 to 10 ounces per ton at \$20 gold). The concentration actor was not mentioned.

## **13.3** Recent Metallurgical Testing

In 1985 a pilot-plant mill, designed to process 25 tons of ore per day, was completed. It consisted of a jaw crusher, a ball mill, a Denver Gold Trapper, flotation cells, and a Wilfley gravity concentrating table. The design and construction of the mill was aided by engineering consultants from the nearby Sonora Gold Mine. Batches of vein material derived from the 110 (33.5m) shaft were processed through the mill. Robert Beck (1988), a metallurgical consultant, described the processing of a 15 ton batch of material from that shaft.

The mill was set up to obtain four products: sand trap concentrates and flotation concentrates, as well as number one cuts and middling cuts from the cleanup table. The ore averaged 0.41 ounces of gold per ton and the recovery was 89.5%.

In the gravity circuit two sand traps were positioned between the ball mill discharge and the drag classifier, along with a Carter  $4 \times 8$  foot bumper table for the cleanup of flotation tails. The product from the cleanup table was largely iron oxides and a little pyrite. The gravity concentrate contributed 43% of the total concentrate produced.

The flotation cells were a double bank of Gardner-Denver  $36 \times 36 \times 32$  inch cells. The flotation concentrate contributed 29% of the gold in the overall concentrate. The ball mill liners retained 15% of the gold, and the remaining 2.5% came from the cleanup table. The mill processed a total of about 300 tons of material from the 110-foot (33.5m) shaft, with an average grade of approximately 0.5 oz Au/ton, over a period of about 3 months.

Beck suggested adding a cyclone or screw classifier and a jig at the ball mill discharge to improve the efficiency of the process.

Gene Phillips performed additional tabling and flotation tests in April, 1992, using material from the 110 foot (33.5m) shaft and a second sample from veins in the Cat Cut area. The material was passed three times through a sequence of jaw and rolls crushers. A Wilfley #13 laboratory concentrating table was used for the test. The conclusion was that a significant amount of gold would be lost to the slimes fraction and fine carbon material if flotation was not used.

Testing was conducted to study the recoveries of gold and silver directly from the ore by flotation. The first test used an acid flotation process in which the pH was raised and lowered to depress slimes. 94.7% of the gold and 95.1% of the silver were recovered, with a 0.5 opt head grade. The second test was designed to study the effects of pine oil on gold recovery after using conventional flotation reagents. This test showed a 5% increase in the recovery.

The general conclusion was that the first test method was the most amenable to flotation concentration of this ore. It will require two stage reagent addition with conditioning between the rougher and scavenger stages.

## 14.0 MINERAL RESOURCE ESTIMATE

The Red Cloud vein clearly carries substantial amounts of free gold and some additional gold in sulfides in the quartz and in stockwork vein material in wall rocks. It obviously had at least two ore shoots which had sufficient grade to be profitably mined in the 1880 – 1900 period, and to cause some excitement in the local press. The mineralization between the 500 and 600 levels was apparently not mined, and may be of minable grades. It is reasonable to expect that minable grade mineralization is present along strike to the southwest and perhaps to the northeast -- and surface sampling in the Cat Cut supports that expectation. In other mines in the Mother Lode region, including several in Mariposa County, many of the veins were mined to depths of several thousand feet. There were also multiple examples of ore shoots not exposed at the surface (blind shoots) as well as ore shoots offset by faulting and later found again. The vein structure is said to persist for 4500 feet (1372m) along strike. It would be reasonable to assume that there is excellent potential for additional high grade mineralization to exist along strike or at greater depths in the Red Cloud vein.

However, at this time there is simply not sufficient direct evidence, such as drilling intercept data or systematic sampling of underground workings, to make a gold resource calculation which meets current NI 43-101 or CIM standards.

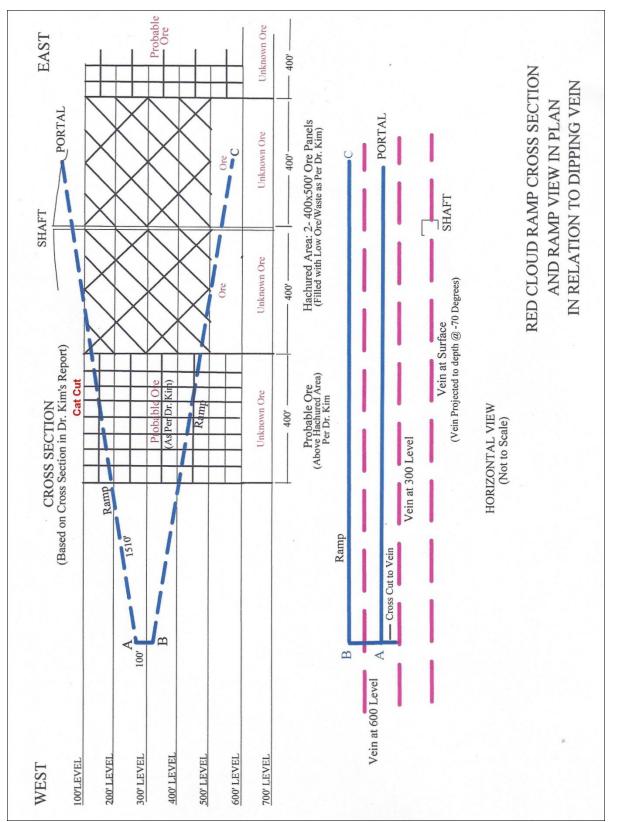


Figure 16.0 Red Cloud Ramp Longtitudinal Section (RC Mining, Inc.)

#### **15.0 MINERAL RESERVE ESTIMATE**

No reserves were calculated in this study. The only historic reserve estimate was that by Dr. Kim in 1987, discussed in the History section of this report.

## **16.0 MINING METHODS**

RC Mining, Inc. has considered re-opening the original shaft for use as the principal access route, and it is probably the best option in terms of cost. However, another choice is a 20 percent decline ramp driven in the hanging wall of the vein which may provide more flexibility. The downward extensions of the vein exposed in the Cat Cut to the southwest of the old workings and further to the southwest can easily be explored by underground drilling, and potentially mined by short crosscuts from the decline. Either option can also provide access to the old workings where the broken ore (backfill) and perhaps ore outside of the old stopes, described in Dr. Kim's 1987 report, can be extracted. The other objective is to mine the ore between the 500 and 600 levels and pursue the vein down dip. A ramp approximately 3200 feet long will reach the 600 level, as will a new shaft. The old shaft may be rehabilitated sufficiently to serve as a ventilation shaft and secondary escape way.

The actual stoping methods will be determined in later studies.

## **17.0 RECOVERY METHODS**

The recovery methods to be used at the Red Cloud mine are expected to be those recommended by prior metallurgical testing, although the processing may be modified somewhat by additional testing. The current plan is to build a mill capable of processing 100 tons of ore per day, whose capacity can be increased in a modular fashion. Because it is a relatively simple ore, the processing will also be relatively simple, although the specific equipment has not yet been selected. After passing through a primary jaw crusher and a ball mill, the coarse gold will be removed from the ore in a gravity circuit with a cyclone at the ball mill discharge. The gravity tailings will report to a two stage flotation circuit. There will also be a concentrating table similar to a Wilfley Table. In addition to its efficiency, another advantage of this type of processing is that there is no cyanide or other very toxic reagents used, which simplifies the permitting process.

#### **18.0 PROJECT INFRASTRUCTURE**

The access to the property is quite good and is largely on paved and well maintained county roads. Only the last mile (1.6 km) of road, which is narrow and graveled, may need any upgrading. The milling equipment installed in the 1980's is no longer there, although the building is still available. Two other buildings are still present and could be used as an office and a laboratory, but they will need remodeling. Any other structures needed, such as the mechanical shops and warehouse, will require design and construction. The existing power line could be upgraded, or power could be generated on site.

There is sufficient suitable space available for any anticipated surface facilities. While no

detailed planning has been done to date, no significant infrastructure problems are anticipated.

#### **19. MARKET STUDIES AND CONTRACTS**

The gold price at the time of this report is approximately \$1070 per ounce. This is a bit low compared to that of a few years ago, but many people expect it to improve soon. There are no contracts in place.

## 20. ENVIRONMENTAL STUDIES, PERMITTING, SOCIAL OR COMMUNITY IMPACT

RC Mining has done no such studies, at this early stage, regarding environmental, social or community impact. The mill constructed in the 1980's was permitted easily and the permits may be renewable. Ray Schilber of RC Mining has had informal discussions with the local permitting agencies and there are no readily apparent problems with permitting.

Of course, as the permitting process leading to production begins, at least some environmental studies will be required. At this early stage, there are no plans or designs for waste and tailings disposal, site monitoring or water management during operations.

It is possible, but very unlikely, that some unforeseen environmental problem, endangered species or important archaeological feature will be discovered. This could potentially delay the mine development program. Such obstacles can nearly always be overcome through cooperation with the regulatory agency, for example by re-routing a proposed road to avoid an archeological site.

The Red Cloud mine is only a few miles by road from Greeley Hill which is the nearest small town and about 11 miles (17.6 km) from Coulterville. The area within a 5 mile (9 km) radius is sparsely populated with scattered homes and it will be an underground mine, thus there will be little physical impact on the local community. There will be very little visual impact caused by the Red Cloud operation as the area is out of sight of all but the few people who might drive on the Red Cloud road. The economic impact may be significant. The operation envisioned by RC Mining will employ several people, many of whom may live in the immediate area. A mine also generates a significant amount of cash influx to the community from payroll and local purchases. The nearby Bondurant mine has operated sporadically in the recent past, so the local populace is familiar with such operations. Thus the concept of opening another small underground mine may be a positive thing to most of the people in the community. There have been no agreements or negotiations with the local community at this time.

Mine closure and remediation is a complex issue that has not been considered in any detail by RC Mining at this early stage of the project. Planning for these is an integral part of the mine design and permitting process. It will be addressed as planning and permitting proceed.

## 21.0 CAPITAL AND OPERATING COSTS

Whitney & Whitney, Inc., a Reno, Nevada Consulting firm which specializes in geology and mineral economics, did a scoping study for the development program and a cost estimate for the project in 2008. Don Magorian, a licensed mining contractor, participated in the study. It was his estimate that the 3200 foot 10' x 10' (3 x 3m) decline could be completed for a cost of \$2.1 million. Costs for rebuilding the mill were not included in the study, and the specifics of mill design would require more metallurgical testing. A cost was not stated.

Their conclusion was that at a production rate of 100 tons per day, with an average ore grade of 0.5 ounces of gold per ton, and a \$1000 per ounce gold price, the mine would produce an annual revenue of \$12,500,000 and should be profitable. Of course these figures need to be updated for current costs and gold prices as the project goes forward. Initial capital costs were estimated at \$10 million dollars.

#### 22.0 ECONOMIC ANALYSIS

Early in January 2016 the partners of RC Mining, Inc. provided a detailed cost breakdown for a proposed development and underground mining scenario using updated costs. It is displayed in the tables below. The details will need to be revised and refined as the project goes forward.

Red Clou	ud Mine Financial Forecast
in \$, except where	noted
5	336,000 total tonnage at mine
	0.5 average ore grade
	60 number of days in 2016 production
	100 daily volume 2016
	100 daily volume 2017
	100 daily volume 2018
	100 daily volume 2019
	200 daily volume 2020
	200 daily volume 2021
	300 daily volume 2022
	250 working days per year
	1000 spot market price per ounce
	182.88 cost per ton 201 [See Cost Breakdown Scenario One Sheet for Details on Cost]
	155.136 cost per ton 201 [See Cost Breakdown Scenario One Sheet for Details on Cost]
	143.136 cost per ton 201 [See Cost Breakdown Scenario One Sheet for Details on Cost]
	143.136 cost per ton 201 [See Cost Breakdown Scenario One Sheet for Details on Cost]
and the second	88.56 cost per ton 202 [See Cost Breakdown Scenario One Sheet for Details on Cost]
	88.56 cost per ton 202 [See Cost Breakdown Scenario One Sheet for Details on Cost]
	86.956 cost per ton 202 [See Cost Breakdown Scenario One Sheet for Details on Cost]
	40% tax rate
	10% Return on investment
5,032	2,900.00 capital investment
	10% discount rate
	5 depreciation period (years)

Figure 22.0a Red Cloud Financial Forecast

in \$, except where noted					8		
20 v	20 working days per month 250 working days per year	nonth ear					
	2016	2017	2018	2019	2020	2021	2022
Underground mining cost	5000	2688	1688	1688	4400	4400	10419
Milling cost	1000	1000	1000	1000	1000	1000	1000
Refining - assaying supplies	750	750	750	750	750	750	750
Utilities	272	272	272	272	272	272	272
Supplies	20	20	20	20	20	20	20
Legal permits and filing	50	50	50	50	50	50	50
Travel	150	150	150	150	150	150	150
Vehicle, Yard Equip Maint & Supplies 🦷	200	200	200	200	200	200	200
Site maintenance	150	150	150	150	150	150	150
Wages (employees)	1080	1080	1080	1080	1200	1200	2160
Wages (Supervisor(s))	1000	1000	1000	1000	1000	1000	1000
Outside Geological Consultant	1000	1000	1000	1000	1000	1000	1000
Additional mineral surveys	1000	1000	1000	1000	1000	1000	1000
Worker's witholding & compensation	1372	1372	1372	1372	1372	1372	1372
Liability insurance 5 million	96	96	96	96	96	96	96
Executive Management wages	1600	1600	1600	1600	1600	1600	1600
Lease	500	500	500	500	500	500	500
Contingency	3048	2585.6	2385.6	2385.6	2962	2962	4347.8
Total expenses per day	\$18,288	\$15,514	\$14,314	\$14,314	\$17,712	\$17,712	\$26,087
Memo: tons per day	100	100	100	100	200	200	300
Memo: cost per top	\$182 88	\$155.14	\$143 14	\$143 14	\$88.56	\$88.56	<b>\$86 96</b>

Figure 22.0b Red Cloud Cost Breakdown

5 Year Financial Forecast for Phases 1 through 3	t for Phases 1 th	ough 3					
	2014	2015	2016	2017	2018	2019 201	2019 2020 & Perpetuity
d Production	4500	12500	12500	12500	25000	25000	25000
Price Per Ounce	1200	1200	1200	1200	1200	1200	1200
Gross Revenues	\$5,400,000	\$15,000,000	\$15,000,000	\$15,000,000	\$30,000,000	\$30,000,000	\$30,000,000
Less: Costs	\$1,358,748	\$3,774,300	\$3,774,300	\$3,774,300	\$7,548,600	\$7,548,600	\$7,548,600
Pretax profit	\$4,041,252	\$11,225,700	\$11,225,700	\$11,225,700	\$22,451,400	\$22,451,400	\$22,451,400
preciation	\$375,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$625,000	G.
s: Taxes	\$1,466,501	\$4,090,280	\$4,090,280	\$4,090,280	\$8,580,560	\$8,730,560	\$8,980,560
Net Income	\$2,574,751	\$7,135,420	\$7,135,420	\$7,135,420	\$13,870,840	\$13,720,840	\$13,470,840
Return on investment	\$257,475	\$713,542	\$713,542	\$713,542	\$1,387,084	\$1,372,084	\$1,347,084
Gold tons left Years laft at production rate	263500 58 5555556	251000 20.08	238500 19.08	226000 18.08	201000 8.04	176000 7.04	151000 6.04
Total Return to Date	\$257,475	\$971,017	\$1,684,559	\$2,398,101	\$3,785,185	\$5,157,269	\$6,504,353

Figure 22.0c Red Cloud 5 Year Financial Forecast

## **23.0 ADJACENT PROPERTIES**

There are no currently operating mines or near-production properties within at least 30 miles (48 km) of the Red Cloud mine. However, Ray Schilber told the author that the Bondurant mine, just 2 miles (3.2 km) to the east, had been operating sporadically over the past several years. The mine's owner lives on the property adjacent to the Red Cloud. Of course there are many mines nearby in the East Belt area which were formerly in operation during the pre-1900 mining days or in the 1930's. The mindat.com website lists 27 small historic mines within 5 miles (8 km) of the Red Cloud. Web site www.westernmininghistory.com also has an abundance of data about local mines.

## 24.0 OTHER RELEVANT DATA AND INFORMATION

The author is unaware of additional information concerning the Red Cloud Project that is pertinent to this technical report.

## 25.0 INTERPRETATIONS AND CONCLUSIONS

The author has reviewed the Red Cloud mine data in detail, and has visited the site three times. He believes that the data presented by RC Mining provide an overall accurate and reasonable representation of the project.

From his review of the available data, it is apparent to the author that there is a substantial, if not well documented and not NI 43-101 compliant, resource present at the Red Cloud mine. It is quite apparent that the mine produced a substantial amount of high grade gold ore, variously estimated to be between \$1 million and \$1.5 million in gold at the then current price of about \$20 per ounce, or roughly 50,000 to 75,000 ounces. Very similar material has been more recently observed and sampled in the 110 foot (33.5m) shaft during the 1980's and from the Cat Cut area 650 feet or 200 meters southwest along strike from the original shaft.

Metallurgical testing has demonstrated that 90% gold recovery and perhaps greater is possible through a combination of relatively simple gravity and flotation methods. Therefore there are no anticipated metallurgical challenges to an efficient gold recovery.

The orientation of the vein is reasonably well known, although additional drilling would be helpful. The biggest challenge is estimating the grade of the gold-bearing material which is the target. Stanton (1906) noted that it was very difficult to determine an average grade at the Red Cloud mine due to the erratic distribution of coarse high grade gold, sometimes in pockets, in the vein material. This is an ongoing challenge in the exploration and development of orogenic gold deposits around the world. Because of the erratic distribution of the coarse gold, it is quite easy to drill a nearly barren hole through what is in reality a high grade ore shoot. The opposite is equally true – it is not difficult to drill a high grade intercept in an otherwise very low grade area. Drill holes only sample a very small volume of rock. They work well in more disseminated ores such as those in Carlin-type deposits, but getting a representative sample of gold grades in Mother Lode style veins by drilling is very difficult. The long-accepted mining industry adage for such deposits is "drill for structure; drift for grade."

The author has a long background of exploration and development work in gold deposits, most of them of the more disseminated variety, but it includes a year at a geologically similar orogenic gold mine in Venezuela. In this case, it is his opinion that several holes should be drilled at an angle across the vein from the north side to determine the exact attitude of the vein, check the width and grade (to some extent) of the vein, and to explore for vein splits or sub-parallel veins. This drilling will serve to guide the development of the ramp along the foot wall side of the vein. Drilling enough holes from the surface at a close enough spacing to confidently estimate a resource at the Red Cloud would be time consuming and perhaps prohibitively expensive. It would be better to drill short underground holes across the vein as the ramp development proceeds. Short crosscuts regularly crossing the vein would be even better. Drifts could then be driven along the vein for bulk sampling, or mining of ore-grade material encountered. This material can also be used for additional metallurgical testing and final mill design. It will also help pay for the development costs.

The Red Cloud project has some advantages due to the nature of the mineralization and its location. As a relatively small underground mine, its surface disturbance will be minimal. The milling process will be simple and will not use cyanide or other very toxic reagents. The area is familiar with small scale mining and gold mining is a large part of its history. All of these should help to reduce permitting time and costs.

# 26.0 RECOMMENDATIONS

As is always the case, the earlier that permitting can be started, the better the result will be, so that facet of the program should stay high on the list of things to be done soon. It should include simple baseline environmental studies to demonstrate the current conditions in the area before the development begins. Another important step that should start soon will be to discuss the program with local land owners to involve them in the project in a positive way before any negative attitudes can take hold.

Drilling is not included in the economic analysis. As noted above, at least some holes should be drilled from the surface on the north side in order to define the location and attitude of the vein, with the added benefit of checking the hanging wall for vein splits or sub-parallel veins.

Engineering studies should also begin, as soon as financing is available, to design both the surface facilities and the decline. Refurbishing the old shaft, which is caved at the collar, should also be studied. It may prove to be the simplest way to provide ventilation and a secondary escape way as the decline approaches the 600 level, or it could become the principal access route.

# 26.1 Red Cloud Mine Project Budget

The budget figures (prepared by RC Mining) in the following tables were updated early in January 2016. As the start of the program is dependent on acquiring financing which often takes time, figures will require some adjustments before the program proceeds.

Phase 1: Clean up and Site Preparation From start for total of 4 Months	ite Preparation al of 4 Months	Sub Totals To \$1,472,000	Totals
Phase 2: Pre-Production N From Production 1	Pre-Production Mine Development From Production Timeline start to 8 months	\$2,400,550	
Phase 3: Mine and Milling From 8 Months aft Investor Receives 1	Mine and Milling Equipment Installed for 100 Tons per Day Production Scenario 1 From 8 Months after Production Timeline start to end of the 2016 calander year Investor Receives 10% Equity Stake in The Red Cloud Mine with a ROI of 591.84% and net value of \$23,853,795	\$1,160,350 \$	\$5,032,900
Phase 4: Mine Development, Prod From Calander Year 2018 Investor Receives 20% Equit	Mine Development, Production increase to 200 Tons per Day Production Scenario 2 From Calander Year 2018 Investor Receives 20% Equity Stake in The Red Cloud Mine with a ROI of 727.81% and net value of \$59,620,539	\$4,103,700	\$9,136,600
Phase 5: Mine Development, Proc From Calander Year 2019 Investor Receives 30% Equit	lent, Production increase to <b>300 Tons per Day Production Scenario 3</b> ear 2019 30% Equity Stake in The Red Cloud Mine with a ROI of 795.48% and net value of \$99,266,589	\$4,298,000 \$13,434,600	13,434,600
Total Production Costs	on Costs \$13,4	\$13,434,600	

Figure 26.1 Red Cloud Production Timeline

Item	Cost
Project Manager Salary	80,000
CEO & COO Yearly Salary \$120k each	180,000
Security	30,000
Clean Up Mill Site – 8 Man Crew	15,000
Site Survey	15,000
Road and Site Grading, Leveling, Install Gates	25,000
Repair and Rebuild Buildings on Property	325,000
Upgrade Electrical Service to 440-3 phase	150,000
Build 6 Trailer Pads w/ utilities (water, sewer, electric)	120,000
Administration Trailer 8 x 16 ft	15,000
Employee Trailer for Shower, Changing and Lockers	25,000
Fencing of Mill Site and Property	30,000
Security Camera System, 24 hr Access	20,000
Fork Lift, Backhoe, Front Loader, Tractor and trailer	200,000
D6 Bulldozer	50,000
Contingency 15%	<u>192,000</u>
Total	\$1,472,000

## Table 26.1a Red Cloud Budget – Phase 1 Cleanup and Site Prep

## Table 26.1b Red Cloud Budget – Phase 2 Pre-Production Costs

Item	<u>Cost</u>
Geologist, Lab Manager (8 months)	80,000
Secure Storage Area for Dore' Bars	20,000
Earthwork and Concrete at Portal	120,000
Construct 10x10 ft Decline Ramp to 300 ft Level	1,150,000
Ventilation Shaft and Escape Way, 200 ft	280,000
Construct Lined Dewatering Pond, 50x50x5 ft	12,000
2 – 5000 Gallon Water Storage Tanks	5,000
Diesel Generator Backup	35,000
Air Compressor and 1000 gpm Pump	40,000
Gold Recovery and Assay Lab Furnace, Equipment and Supplies	25,000
Small Lab-scale Mill for High Grade Pocket Mining	30,000
Operating Capital (office equipment, supplies, tools, etc.)	100,000
Utilities (5k/mo for 8 months) and Insurance (20k for 1 yr)	60,000
15% Contingency	293,550
Broker's Fees	<u>150,000</u>
Total	\$2,400,550

# Table 26.1c Red Cloud Budget – Phase 3 Mining and Milling Equipment Installed

Item	<u>Cost</u>
Mill Manager	50,000
Mill Assistant	30,000
Hoist, Head Frame, Ore Cars	150,000
Mucker, Hoses, Exhaust Fans	50,000
4 Miners at \$60k Each for 6 Months	120,000
4 Jack-Leg Drills	32,000
Mine Lights, Helmets, Boots, Safety Equipment	12,000
Ore Bins and Conveyors	30,000
16-inch Jaw Crusher or Hammer Mill – 100 tpd production	250,000
Two Pulverizing Mills	150,000
Two 4-ft x 10-ft Concentrating Tables	50,000
Two Flotation Tanks	50,000
Hidden Sunken Safe	35,000
15% Contingency	<u>151,350</u>
Total	\$1,160,350

# Table 26.1d Red Cloud Budget – Phase 4 Development, Production Increase to 200 tpd

Item	Cost
Lab Assistant – 3 Months	10,000
Website Development	20,000
Underground Electronic Scanning Equipment	20,000
Earthworks and Concrete at Portal	140,000
Construct 10-ft x 10-ft Decline Ramp to 600 Level	1,310,000
Ventilation Shaft and Escape Way, 200 ft	550,000
Underground Equipment – Tamrock Jumbo, 2 yd LHD's	300,000
Enlarge Steel Mill Building	510,000
Second Mill Circuit to Increase Processing to 200 tpd	530,000
Additional Operating Capital (office equipment, supplies, etc	20,000
Utilities (7k/mo for 4 months)	28,000
15% Contingency	515,700
Broker's Fees 2 <sup>nd</sup> Intatllment	150,000
Total	\$4,103,700

Table 26.1e         Red Cloud Budget – Phase 5         Mine New Orebodies, Mill Increase to 300 tpd
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Item	Cost
Lab Assistant, 12 Months	40,000
4 Miners @ 60k/yr (6 months salary)	240,000
Crosscut 10-ft x 10-ft Decline to 300 ft Level	768,000
Ore Drifts 5-ft x 8-ft, 3000 ft at \$300/ft	1,100,000
Raise on Vein, 5-ft x 8-ft, 400 ft @ \$500/ft	200,000
Extend Ventilation and Escape Ways @ \$300/ft	300,000
Enlarge Steel Mill Building	250,000
Upgrade Mill, 24 x 32 Primary Crusher, Cone Crusher, Larger	750,000
Pulverizing Mill, Knelson Concentrator, etc.	
Employee Salaries for 12 More Months	580,000
Utilities and Other Expenses – 12 months	70,000
15% Contingency	<u>644,700</u>
Total	\$4,298,000

Grand Total \$13,434,600

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# 28.0 CERTIFICATE OF AUTHOR

I, Dana C. Durgin, do hereby certify that:

- 1. I am Principal Geologist of: Delve Consultants LLC, 2881 Fargo Way, Sparks, Nevada, USA 89434
- 2. I graduated with a degree in Geology from Dartmouth College in 1970. In addition, I obtained a Masters Degree in Geology from the University of Washington in 1972.
- 3. I am a member of the American Institute of Professional Geologists (CPG #10364), a Registered Professional Geologist in Wyoming (PG-2886), and a member of the Geological Society of Nevada.
- 4. I have worked as a geologist for a total of 40 years since my graduation from university. My career has focused on the exploration and exploitation of mineral deposits. I have worked extensively in the western USA, Mexico, Canada and Venezuela, including assignments as both an exploration and mine geologist. I have completed several NI 43-101 Technical Reports for projects in Mexico and the USA.
- 5. I have read the definition of "qualified person" in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6. I authored this Technical Report, and as a "Qualified Person", reviewed the available data. I am responsible for the preparation of the technical report titled "Technical Report, Red Cloud Mine, Mariposa County, California USA" dated October 31, 2014 for RC Mining, Inc., based upon my critical review of current and historical technical information.
- 7. I visited the Red Cloud Mine site on September 26, 2014, September 17 and November 17, 2015. I have had no prior involvement with the property that is the subject of this report.
- 9. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 10. I am independent of the issuer and have no financial or material interests in the property or with RC Mining, Inc.
- 11. I have read National Instrument 43-101 and Form 43-101F1, updated July 30, 2011, and the Technical Report has been prepared in compliance with that instrument and form.
- 12. I consent to the use and public filing of this Technical Report prepared for RC Mining, Inc., and to the filing of extracts from or a summary of the Technical Report in the written disclosure of RC Mining, Inc., as required, and confirm that it fairly represents the data of the Red Cloud mine.

Dated this 18th day of January 2015.

Dana C. Durgin