



NUGGETS

- Gold is rare on Earth because it is rare in the universe. Unlike iron or carbon, it isn't created inside stars. According to the Harvard-Smithsonian Center, it is instead made inside supernovas!
- The largest gold coin in the world is the 1 metric tonne Australian Kangaroo. It is legal tender and has a face value of \$1 million Australian dollars.

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The Prospector's Quill

VOLUME XLII, ISSUE V

MAY 2017

Blair Athol: Copper Mine in Colorado Springs

by
Calvin Johnson & Andrew C. Hawkins

Three GPOC members ventured out on a sunny spring day, looking for Spanish Monuments in El Paso County. We found a few monuments pointing up a popular, but now closed, hiking trail. Looking around at the trail head, we found some very large prospect tunnels and some very interesting green deposits! See photo below. Some were just bands of material about a couple of inches thick and in places, the green was over five feet thick! The formations match what is described as the Blair Athol Copper/Gold deposit and microscopic gold was contained in the samples we examined. The April "mystery mineral" at the GPOC General meeting was a

small sample of this deposit.

The Blair Athol mine is the only recorded mine with metal production in El Paso county! Lots of other "gold mines" are described in El Paso County, like "Stratton's Independence", but they probably mined New York or other eastern city or European investor pockets instead of ore!

The Blair Athol mine provided small quantities of mainly copper in the early 1900's. 1913 and 1914

Year	Ore (short tons)	Copper Pounds	Value
1913	298	10,632	\$1648
1914	25	2,644	\$352
	323	13,276	\$2000

were two productive years for the Blair Athol district. The figures shown in the table above are taken from Mineral Resources 47.

T.S. Lovering and E. N. Goddard wrote of the Blair Athol deposits in the USGS professional paper entitled "Geology and Ore Deposits of the Front Range Colorado" in 1950. Lovering and Goddard wrote "A good road leads from Colorado Springs to a point just north of Glen Erie, and from there an old and little-used wagon road leads to the mine. The property was examined by E. B. Eckel of the United States Geological Survey in 1932, and at that time, it had been abandoned for many years. It is known that some ore has been shipped and that the property has been worked sporadically over a long period of time, though it is

doubtful whether the operations have ever proved profitable to the investors. The copper content is very low.

The deposit has been developed by an open cut about 75 feet long, 50 feet wide, and 15 feet deep. It is in the upper part of the Lyons sandstone of Permian age."

The gold content of the area is low. Further, the deposit is such that there is virtually no placer material originating >>>> Page 4



Photo credit: Calvin Johnson

Photo of several prospect tunnels in the vicinity of the Blair Athol mine, Colorado Springs.

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The Gold Prospectors of Colorado (GPOC) was founded around 1974 as a non-profit organization for recreational gold prospectors in the Colorado area. Our membership at any given time has grown to over 600 members and continues to grow across the Front Range, the nation, and even the world!

GPOC Outings & Events Planner

In response to feedback from our members, we are adding a rolling three-month planning calendar to each issue of the Quill. Now you can see and plan for events months in advance—and make requests to the Planning Committee for outings and events in YOUR club! Also check the next page and the GPOC web site at www.gpoc.club for more info on events including location and start times.

MAY 2017

GENERAL MEETING SPEAKER: DAVE, PROSPECTORS GOLD AND GEMS, FT. COLLINS

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 GPOC @ School: Aspen Valley Ranch, Woodland Park	4 GPOC Board Meeting	5	6
7	8	9	10 GPOC Gen. Member Meeting	11	12 GPOC @ School: Prairie Heights Ele- mentary, Fountain	13 GPOC Let's Go Gold Panning!
14 Mom's Day— Call your Mom!	15	16	17	18	19	20
GPOC Let's Go						
21	22	23	24 GPOC Planning Comm.	25	26	27 GPOC Claims Comm. Territory Days
28 Territory Days	29 Memorial Day Territory Days			31		

JUNE 2017


SUMMER TIME FUN! CHECK THE FORUM FOR MORE DETAIL ON EVENTS/OUTINGS!

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 GPOC Board Meeting	2	3 NOMAD Race & C Springs Gem Show
4	5	6	7	8	9	10
11	12	13	14 GPOC Gen. Member Meeting	15	16 Gold Panning Championships	17 Gold Panning Championships
18 Dad's Day Gold Panning Championships	19	20	21	22	23	24 GPOC Claims Comm. C Springs Coin Show
25	26	27	28 GPOC Planning Comm.	29	30	

- **GPOC Board Meetings** are held the 1st Thursday of each month at **7 pm**, Gold Hill Police Station, 955 Moreno Avenue, Colorado Springs, CO, (access from W. Moreno Ave.). GPOC Members only.
- **GPOC Gen Membership meetings** are held the 2nd Wednesday of each month at **7 pm**, Elks Lodge, 3400 N. Nevada Ave, Colorado Springs, CO. The General Public is welcome!
- **GPOC Planning Committee Meeting.** **7 pm** at Denny's on Academy Blvd. & I25, CO Springs. GPOC Members Only.
- **GPOC Claims Committee** Meetings are held at WMMI at **10am**, the last Saturday of the month. GPOC Members Only.
- **GPOC New Member Orientations** are held on Saturdays indicated at 10am @ WMMI. March and June are also followed by a GPOC Power Class—where you can study the GPOC Rules, Ethics, and Regulations—and earn discounts on Power Permits.
- **GPOC New Member Outings** are held the Sunday after New member Orientations. Meet @ 9am in the Cabela's parking lot, off the Ridgeway Parkway exit off I-25, south side of Denver

JULY 2017

SUMMER TIME FUN! CHECK THE FORUM FOR MORE DETAIL ON EVENTS/OUTINGS!

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 	5	6 GPOC Board Meeting	7	8
9	10	11	12 GPOC Gen. Member Meeting	13	14	15
16	17	18	19	20	21	22
23/30 Burro Days (30th)	24/31	25	26 GPOC Planning Comm.	27	28	29 GPOC Claims Comm. Burro Days

Blair Athol: Copper Mine in Colorado Springs, *continued*

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ciated with minor amounts of azurite and oxides of iron and manganese. Vugs of chalcocite, rarely more than a centimeter in diameter, may form the centers of the malachite nodules. Although the ore minerals in most places occur only in minor amounts and not as solid masses of ore, the widespread presence of thin films of the green, blue, or black copper minerals in the highly colored sandstone may give a false impression of rich copper ore. The zone of copper mineralization extends about 200 feet along the strike of the sandstone and is less than 150 feet wide. Some float showing copper minerals was found in the bed of the stream flowing past the Blair Athol mine, but no signs of mineralization were seen in the lower beds of Lyons sandstone or in the Fountain formation between the Lyons sandstone and the Pikes Peak granite to the west."

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from it.

In fact, there is still misinformation about the deposits in this area that one can find online. For example "the area around Blair Athol is known to have good amounts of placer gold in its gulches which have gravel deposits". Several GPOC members have seen this a lot, but have never been able to find the source. There are draws in area, not gulches and no gravel!

Lovering and Goddard further wrote "The mineral deposit consists of white sandstone irregularly impregnated with small amounts of oxidized copper minerals. The ore occurs in small nodules and as copper stains in the sandstone, and most of it lies along bedding planes or in nearly vertical easterly fractures. The chief ore mineral is malachite~ it is asso-

Photo credits: Calvin Johnson



The Quill wants your feedback! Send us your story ideas, photos, artwork, summary of your prospecting trips, stories, and stuff you want to see published in the Quill. Got a great campsite that you want to share with your fellow GPOC prospectors? Know a nugget of Club history? Found your first nugget? Email us!

TheQuill@gpoc.com

Blair Athol: Copper Mine in Colorado Springs, *continued*

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"A strong fault cuts the Fountain formation near its contact with the granite, but there is no evidence of copper mineralization along the fault, and there are no hydrothermal veins in this region. It is believed that the concentration is local and clue to deposition from solutions that had dissolved in minute amounts of copper from minerals originally present in the Lyons sand- stone of this locality. The Blair Athol deposit is a typical red beds copper deposit but seems much less promising than those in Reel Gulch..."

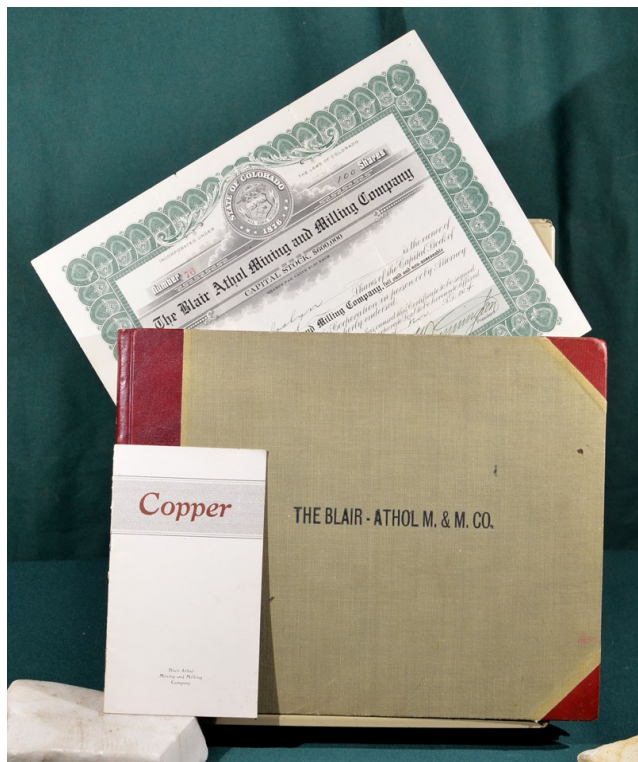
One author, Mel McFarland, wrote "Blair Athol was named by Colorado Springs founder William Palmer. The company operated on 40 acres that had been part of the Palmer property. It was actually leased from his daughter, Marjorie Palmer Watt. It was said that General Palmer knew of the copper deposit when he bought the property, but no development was done.

Work in the mine started in early 1914. In the summer of 1914 you could buy stock in the company, 500 shares for \$100 cash! "If you visit our property and are not satisfied, you may have your money back," the company advertised.

Blair Athol had an office in the Bennett Building downtown. The officers were P.A. Hartwick, president; George Birdsall, vice president; R.J. Livingston and J.W. Kistler. Directors were William E. Weeks, E.P. Miller and E.D. Weeks. Of these names, the best known is Birdsall, who also was an El Paso County sheriff and Colorado Springs mayor.

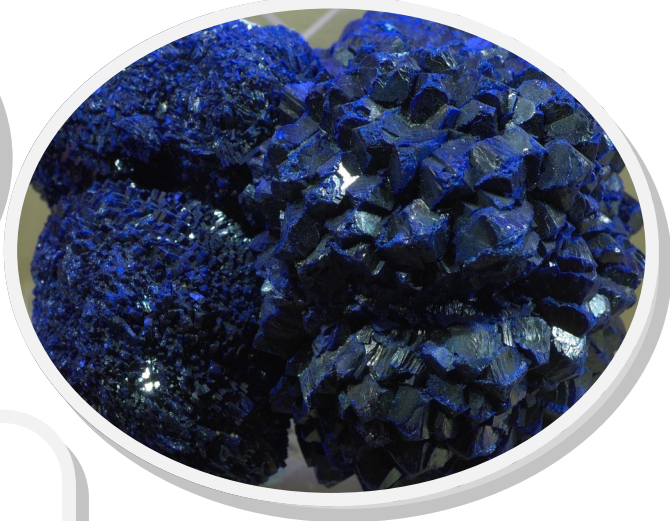
A pipeline going almost a mile into the mountains brought water to the Blair Athol mill. Wagons took the consolidated ore from the mill to the Pikeview station on the Denver and Rio Grande railroad. This is about where the railroad crosses over Garden of the Gods Road today. The ore was then shipped to Omaha for further processing.

During the summer of 1914, there were great plans to run electric lines to the mill and a rail line from Pikeview. I learned that Blair Athol did ship about six tons of concentrate a month through the summer. As mining operations go, that really is not much."



Malachite, Zaire. Author JJ Harrison.

Azurite. By Eric Hunt - Own work, CC BY-SA 2.5, <https://commons.wikimedia.org/w/index.php?curid=1361804>



Chalcocite vug. By Rob Lavinsky, iRocks.com – CC-BY-SA-3.0, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=10144188>



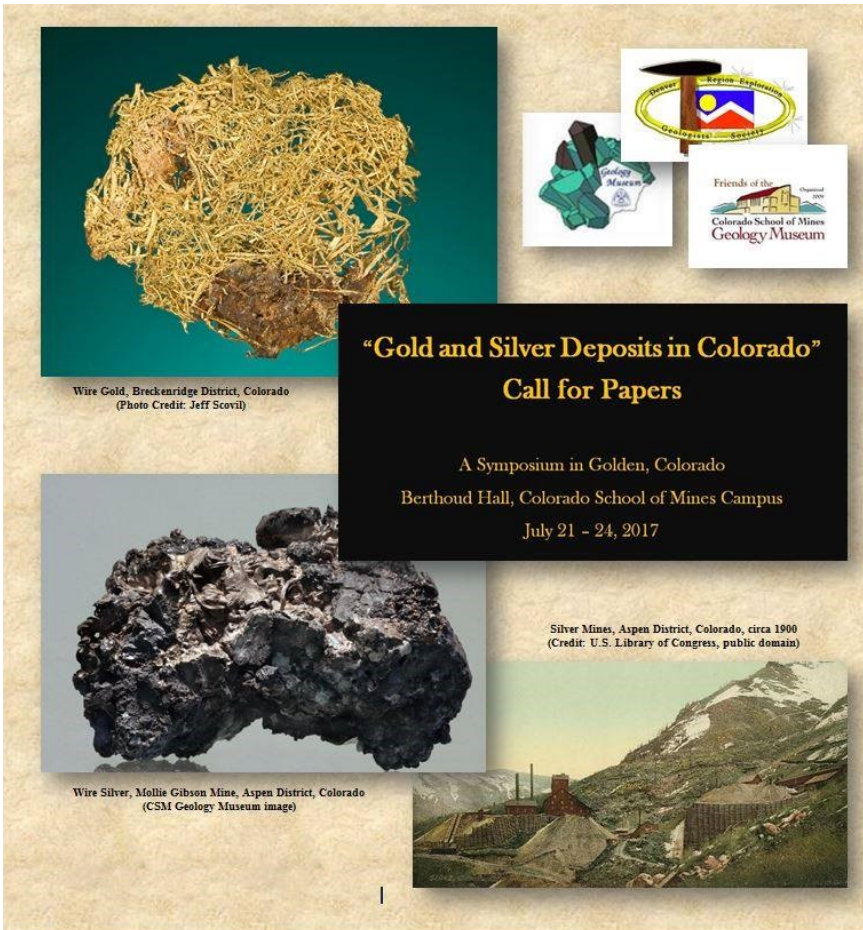
Symposium Notice: Gold and Silver Deposits in Colorado

Coming in July, a symposium to be held at the Colorado School of Mines Museum.

Thurs.–Mon., July 20-24, Gold and Silver Deposits in Colorado, a symposium cosponsored by the Friends of the Colorado School of Mines Geology

Museum, the CSM Museum, DREGS (Denver Region Exploration Geologists Society), and Friends of Mineralogy, Colorado Chapter.

The event will include a welcoming reception at the CSM Museum (Thursday evening), two days of talks (Sat.–Sun., July 22 - 23), a Saturday evening banquet with a speaker, and two days of



“Gold and Silver Deposits in Colorado”
Call for Papers

A Symposium in Golden, Colorado
Berthoud Hall, Colorado School of Mines Campus
July 21 - 24, 2017

Wire Gold, Breckenridge District, Colorado
(Photo Credit: Jeff Scovil)

Wire Silver, Mollie Gibson Mine, Aspen District, Colorado
(CSM Geology Museum image)

Silver Mines, Aspen District, Colorado, circa 1900
(Credit: U.S. Library of Congress, public domain)

field trips (Fri. July 21 and Mon. July 24) to historic Colorado gold and silver mining areas, focusing on the Front Range and

the northern half of the Colorado Mineral Belt. More information about the symposium is at: <https://www.facebook.com/LikeCSMGeoMuseum/posts/1822491981371516> . Reg-

istration cost will be \$100; students, \$50; banquet, \$40; each field trip, \$40. The registration form, including the list of field

trips, is now available on the Friends of Mineralogy-Colorado Chapter website, at <http://friendsofmineralogycolorado.org/gold-and-silver-depositsin-colorado-a-symposium/> .



GPOC will be demonstrating gold panning and offering supplies for purchase through the Prospectors Store at the Annual Burro Days this July in Fairplay! Join us!

Burro Days has been an annual event in Fairplay, Colorado since 1948. Burro Days celebrates the role of the burro in mining days of old.

Always held during the last weekend in July, the 69th Annual Burro Days will take place on Saturday, July 29 and Sunday, July 30, 2017.

Over 10,000 people participate in festivities such as: burro races, llama races, kiddies pack dog races, parades, contests, over 140 arts & crafts booths, over 30 food vendor booths, local musical entertainment, dance & BBQ, pancake breakfast, Cowboy Church services and more!

For more information, see:
<http://www.burrodays.com/index.htm>



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or email me - cindy@therockdoc.net

The Rock Doc at Prospectors Village



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between Buena Vista and Salida

Join our email list at "therockdoc.net"

Glacial Placer Gold Deposits, *continued*

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their moraines have the power to winnow the particles of rock and mineral matter according to size and heaviness. Such streams may form gold placer deposits in the well-known way by churning the load they carry and allowing the heavy minerals to sink to the bedrock. Placers may therefore be found in the deposits of glacial rivers if there are gold veins exposed in the glaciated area upstream. Nearly all the gravel which has been dredged for gold along the foothills of the Sierra Nevada was deposited by rivers derived in part from glaciers along the crest of the range, but most of the gold was probably picked up in the lower courses of such rivers. Since glacial rivers choke themselves and build up their channels progressively, their deposits are likely to be thicker and not so well concentrated as those of the more normal graded rivers which are not associated with glaciers.

Where a glacier-related placer is encountered, the field engineer should, as an early step in his investigation, search out and study all available technical literature relating to the glacial history of the region. In particular, he should seek any reliable information on past mining of the deposit or similar deposits in the district, the object being to determine if significant gold concentrations are to be expected and, if so, under what conditions they are likely to be found.

Two districts having glacier-related placers that are well described in the technical literature are those near Breckenridge and Fairplay, in Colorado. At Fairplay (Singewald, 1950), the actual moraines were mined locally but the most extensive and productive placers were found in outwash aprons extending away from the true moraines. At Breckenridge (Ransome, 1911, pp. 175-181), bench gravels associated with Pleistocene glacial deposits were mined by ground sluicing and hydraulicking while younger gravels derived from glacial moraines have been extensively dredged along the Swan and the Blue Rivers. Both districts are well described in the literature referred to. In general, glacial debris that has been scoured from highly mineralized bedrock areas may be expected to contain gold but it will probably have little or no economic value unless resorted by post-glacial streams.





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The Prospector's Quill Spring Edition

MAY 2017

Glacial Placer Gold Deposits

Reprinted from: Placer Examination - Principles and Practice Technical Bulletin 4, Bureau of Land Management, 1969

Glacial deposits. The mineral examiner working in the Western States may seldom encounter a placer directly associated with glacial deposits but, on the other hand, it is not unusual for a miner to assert that a particular deposit, particularly if its origin is obscure, is a "glacier" placer. For this reason the engineer should know about glacial deposits as they relate to placers.



The fundamentals have been well set out by Blackwelder (1932) as follows:

Since it is the habit of a glacier to scrape off loose debris and soil but not to sort it at all, ice is wholly ineffective as an agency of concentration for metals. Gold derived from the outcrops of small veins is thus mixed with large masses of barren earth. Attempts to mine gold in glacial moraines, where bits of rich but widely scattered float have been found, are for that reason foredoomed to failure.

On the other hand, the streams born of glaciers or slowly consuming
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Andrew's Glacier, CO. This work has been released into the public domain by its author, Jmpenzone at English Wikipedia.

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