

**THE 773rd MEETING  
OF  
THE MINERALOGICAL SOCIETY  
OF SOUTHERN CALIFORNIA**

**7:30 p.m., Friday June 14, 2002**

**Building E, Room 220  
Pasadena City College  
Pasadena, California**

**Featuring a Talk by  
Scott Ritchie  
on  
Recent Work on  
Tourmaline Queen Mt.**

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**JUNE PROGRAM**

Our June speaker will be Scott Ritchie who will give a presentation on recent work done on Tourmaline Queen Mountain in the Pala district of San Diego County. This is one of the classic pegmatite areas and has produced many fine specimens. Two of the mines on the mountain are the Tourmaline Queen, and the Tourmaline King.

**CERRO GORDO**

**Walter Margerum**

It has occurred to me that I really don't know much about Cerro Gordo even though I have been there several times. If you are going to the Cerro Gordo dig on June 30 the following might be of interest. If you are not going it might still be of interest. Most of the information provided has been excerpted either from USGS Professional Paper 408 "Geology of the Cerro Gordo Mining District Inyo County, California" by C. W. Merriam, or "The Story of Inyo" by W.A. Chalfant.

Cerro Gordo had three major phases of mining. The first was for silver, actually galena, and lead oxides containing high concentrations of silver. The main mining

being between 1869 and 1876. The second phase from 1911 to 1919 was for zinc. The final was the La Despreciada lead-silver lode find mined from 1929 to 1933. By 1949 all major mining was completed, and the mines started their long decay.

The most common account of the discovery of Cerro Gordo is that it was made by Pablo Flores who with several companions located the San Felipe claim in 1865 or 1866. The nearby Ignacio and San Lucas claims were found during the same period. By 1872 eleven mines were active in the area. The most important ones being the Union owned by Belshaw and Beaudry, the Santa Maria controlled by the Owens Lake Silver Mining and Smelting Company, and the San Felipe whose stock was ultimately controlled by the Owens Lake Company.

### **The Silver Phase**

Initially mining was conducted by randomly following surface indications with pits and tunnels. The complex structure of the veins made it difficult to determine the true legal ownership of many of the mines. The situation was compounded by the absence of specific mining district regulations. In 1872 regulations were adopted to bring conformity to the new Federal Mining Laws, and in 1873 U.S. Mineral Surveyors were active in the area. The inevitable litigation started in 1873 when the San Felipe Company claimed discovery title to the Union mine. Litigation continued through successively higher courts until 1876 when the litigants combined to form the Union Consolidated Company. By 1878 most of the rich lead silver ores were reaching depletion, and after a fire the Union furnaces were shutdown. For the next 30 years only sporadic mining was done, mostly by small companies and lease holders. The main accomplishment being the sinking of the vertical Belshaw shaft to a depth of 900 feet at the Union mine. In 1905 the Union mine was purchased by the Great Western Ore Purchasing Company. They attempted to smelt the old slags, but quickly went insolvent.

### **The Zinc Phase**

The mine was purchased by L. D. Gordon and Associates in 1914, and reorganized as the Cerro Gordo Mines Company, beginning the smithsonite phase of operation. During these years Cerro Gordo was a major source of the highest grade of zinc carbonate ores produced in the United States. New lead-silver ore bodies were discovered in the Jefferson diabase dike and chimney. An electric powerline was completed in 1917, and the 5.5 mile long tram was constructed to transport ore to Keeler replacing the shorter less efficient tram. By 1920 these ore bodies were depleted, and for the next 8 years the old stopes were worked only in a modest way.

### **The La Despreciada Phase**

By 1925 an important ore body was found at the La Despreciada claim west of the Cerro Gordo, under lease to the Estelle Company. The Cerro Gordo Mines Company had been illegally extracting ore from the La Despreciada, and in 1928

the Estelle Company is said to have been given a 30 year lease and bond on the Cerro Gordo Company. Ore extraction started in 1929 and continued until 1936. Since the La Despreciada find, no major discoveries have been made at Cerro Gordo even though discovery work continued until 1949.

### The Ores

The ores at Cerro Gordo can grouped as follows:

1. Massive silver lead (Union type)
2. Diabase dike silver lead
3. Sileaceous vein (San Felipe type)
4. Carbonate zinc.

The greater part of Cerro Gordo production was massive argentiferous galena of the Union type. This ore consisted of galena surrounded by cerussite, and anglesite. It contained about 34% lead with from 25 to 140 ounces of silver per ton. It also contained small amounts of tetrahedrite, sphalerite, bindheimite, pyrite, and limonite.

The diabase dike ore consisted largely of galena, cerussite and anglesite, but also contained tetrahedrite, sphalerite, pyrite, bindheimite, linarite, caledonite and chrysocolla. Most of the Copper production came from this ore.

The sileaceous vein ores consisted mostly of argentiferous galena and tetrahedrite, with malachite, azurite, and other oxidation products.

The smithsonite ores, called dry bone by the miners, were quite pure, and for the most part white. It contained calcite, limonite, hydrozincite, and rarely aurichalcite and willemite.

### The Minerals

In addition to the minerals described above many other minerals have been recorded from Cerro Gordo. Unfortunately it is not always possible to differentiate between the minerals from Cerro Gordo and those found in the adjacent mines. So I will provide you with a list and let you determine which came from where.

Achanthite	Anglesite	Atacamite	Aurichalcite	Azurite
Barite	Bindheimite	Bournonite	Brochantite	Calcite
Caledonite	Cerussite	Chloragyrite	Chrysocolla	Copper
Dufrenoyite	Fluorite	Galena	Geochronite	Goethite
Greenockite	Halloysite	Hematite	Hemimorphite	Hydrozincite
Jamesonite	Leadhillite	Limonite	Linarite	Lirconite
Malachite	Massicot	Melanotekite	Mimetite	Minium

Mixite	Plumbogummite	Planchete	Pyrite	Quartz
Rosasite	Silver	Smithsonite	Sphalerite	Stibnite
Stromeyerite	Tetrahedrite	Willemite	Wulfenite	

If you go on the dig it would be interesting to see how many of the above minerals you can find. On my last trip I found at least 16.

Even though Cerro Gordo is listed as a silver mine, its main production both in tonnage and value was lead. The general value of the ores from Cerro Gordo heard in Owens Valley is \$20 million, but Merriam gives a number between \$6.5 and \$15 million. The production figures are listed below.

<b>Commodity</b>	<b>Production</b>	<b>At today's prices</b>
Lead	35,783 tons	\$32.205 Million
Zinc	11,858 tons	\$9.486 Million
Copper	286 tons	\$0.418 Million
Silver	4,406,559 troy ounces	\$20.491 Million
Gold	2010.4 troy ounces	\$0.625 Million
<b>for a total of \$63.225 Million.</b>		

A not inconsiderable sum.

## IN MEMORIAM

### Ron Thacker

It is with great sadness that we report the recent passing of MSSC Honorary Member John Sinkankas. He was born May 15, 1915 in Patterson New Jersey. His interest in minerals dates from a visit to the New Street quarries in Paterson, when he was seven. The sight of crystals of apophyllite, prehnite, quartz, calcite, and others, proved "irresistibly fascinating and insured a lifelong interest in the Earth's crust and its products."

After completing high school John entered New Jersey State Teachers College, Paterson (now William Paterson College) with the idea of becoming a teacher. Because job prospects were poor when he graduated with a B.S. in 1936, he chose to enter the Navy to train as an Aviation Cadet. During World War II John was employed in flying patrol seaplanes engaged in convoy work and antisubmarine warfare in numerous places. When the war was over he decided to make a career of the Navy and accepted commissioning in the Regular Navy with the rank of Commander. He retired from the Navy as Captain in 1961 and settled in San Diego.

For a while, immediately after retirement, John Sinkankas joined the staff of the Lapidary Journal. During the short period of 1961-1963 he published fourteen articles in that Journal on topics related to gems and gem cutting. He also worked with Dr. Gustav Arrhenius as Research Assistant in Mineralogy at Scripps Institution of Oceanography; here he was involved with the study of lunar samples. For one year he also became a special student at the newly organized University of California, San Diego, where he studied mathematics and languages (particularly German).

Through the encouragement of his wife he eventually decided to devote full time to his own books and articles. To date he has published well over 130 papers in numerous hobby and professional journals, especially in Rocks and Minerals, Lapidary Journal, Gems and Minerals, Rock and Gem, Mineral Digest, Mineralogist, Gems and Gemology, Journal of Gemology, American Mineralogist, Mineralogical Record, Industrial Diamond Review, Lapis, Desert Magazine, Bookman's Weekly-Antiquarian Bookman, and others.

John Sinkankas' first book, "Gem Cutting - A Lapidary's Manual" (D. Van Nostrand Co.) appeared in 1955. This very successful book has now appeared in three editions (1955, 1962, 1984). Other well-received books include: "Gemstones of North America" (Vol. I, 1959; Vol. II, 1976); 'Gemstones and Minerals, How and Where to Find Them' (1961); "Mineralogy for Amateurs" (1964); "Mineralogy: A First Course" (1966); "Van Nostrand Standard Catalog of Gems" (1968); "Prospecting for Gemstones and Minerals" (1970); "The Studio Handbook of Minerals" (revision of book by Hellmuth Boegel; 1971); "Gemstone and Mineral Data Book" (1972); "Emerald and Other Beryls" (1981).

Some of his outstanding lapidary pieces are in the Smithsonian, including a 7,000 carat faceted egg of rook crystal and a 4,500 carat faceted egg of pale smoky quartz; also a step-cut golden beryl (over 2,000 carats). Likewise he has large gems in the Royal Ontario Museum in Toronto and in the American Museum of Natural History in New York. To cut stones of such immense size he had to develop a special large-sized faceting machine. John Sinkankas has a strong interest in granite pegmatite's, in fact, the abundance of these pegmatite's in the San Diego area urged the choice of that region for retirement. He was the first to identify hembergite among the species found in the pegmatites of the Little Three area in San Diego County.

He is a Fellow of the Mineralogical Society of America (since 1967); an honorary Fellow of the Gemological Association All-Japan; and holds memberships in the Mineralogical Association of Canada, the Rochester Academy of Sciences (honorary), the San Diego Mineral and Gem Society (honorary), the Cosmos Club, Washington, D. C., and The Mineralogical Society of Southern California (honorary). He is a Graduate Gemologist of the Gemological Institute of America, and also was given its Distinguished Associate Award In 1982.

For "his remarkable contributions to areas of endeavor for which he had no formal preparation, for bringing national recognition to and credit upon his alma mater, for

truly exemplifying the pioneering spirit held so highly at William Paterson College, and for numerous other achievements" the Board of Trustees of that College presented to John Sinkankas the Degree of Doctor of Humane Letters in 1982.

In 1940 John Sinkankas married Marjorie Jane McMichael of Paterson, New Jersey. They have four children: John William, George Martin, Sharon Jane (Tooley), and Marjorie Ellen (Coates).

In addition to his accomplishments outlined above, John Sinkankas also is interested in book collecting and bookbinding. He has commented: "One of the most important contributions that Marge and I have made to the earth sciences in the United States is to provide a source of materials via our Peri Lithon Books company which we run as a pair without any outside help." The business, now eleven years old, contributes by making available all sorts of publications, from reprints to multi volume works, and describes them thoroughly in its catalogs. The books are largely gemological-mineralogical although there are quite a few geological classics included." The name Peri Lithon was adopted from the Greek title of Theophrastus' book On Stones (ca. 450 B. C.), the oldest extant treatise on minerals.

## CALENDAR OF EVENTS

### JUNE

**1-2** Glendora, CA Glendora Gems  
Goddard Middle School , 859 E. Sierra Madre  
Hours: Sat 10-5 Sun 10-4  
Mark Thompson (626) 335-3814

**1-2** SanDiego, CA San Diego Lapidary Society  
A Bahr Shrine, 5440 Kearny Mesa Road  
Hours: 10 - 5 both days  
Richard Large (858) 693-0464

**15-16** Cayucos, CA San Luis Obispo Gem & Mineral Club  
Cayucos Vets Hall at the Pier, Cayucos Drive.  
Hours: Sat. 10 - 6; Sun. 10 - 5  
George Moore (805) 772-2321

**29-30** Culver City, CA Culver City Rock & Mineral Club  
Veteran's Memorial Auditorium, Culver Blvd. & Overland Avenue  
Hours: Sat 10-6 Sun 10-5  
Rosalie Peschel (310) 397-4336  
Linda Taibi  
Web Site: <http://www.gembiz.com/ccrnc/fiesta.htm>

**30** Cerro Gordo, CA Lone Pine Gem and Mineral Society  
 Field Trip to Cerro Gordo Mine. Meet at Lee's frontier Chevron at 8:00 AM.  
 Francee M. Pedneau (760) 876-4319

	
<p><b>R.E. PEDERSEN</b>          3901 N. Calle Entrada          Tucson, AZ 85749          (520) 760-0333</p>	<p><b>UNDERGROUND EQUIPMENT</b>          Wheat mine lights, chargers, batteries, parts          MSA mine lights, chargers, batteries, parts          Hard hats, belts, knee pads, etc.</p>



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