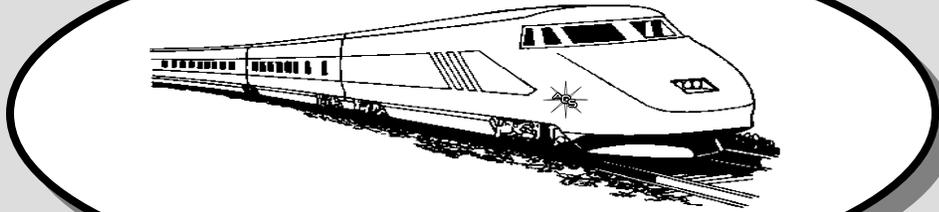


The Opal Express

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President's Message

By Pete Goetz

Well, as Arnold would say, "I'm back". I was never really gone, but hung around helping the organization when I could. I look forward to again serving as your AOS President for the next several years. However, I do have a request: in order for me to be successful, I will need your help. The one thing that seems to be consistent with "our" organization is the lack of active members. At the last meeting a member came up to me and welcomed me back. This made me feel good. So, I got to thinking, maybe a lot of "our" membership do not participate because they feel they are not being useful, or they don't know a whole lot about opal (I don't), or maybe more importantly, they don't feel welcome. This is simply not true, some of us may be a bit socially challenged, but we are good folks and we love to talk about OPAL. So, I urge you all to try and be more active. There are a number of tasks that need to be looked after for "our" annual OPAL & GEM SHOW, tasks for running a smooth General Meeting, tasks for finding Guest Speakers not only for "our" General Meetings, but for the OPAL & GEM SHOW, but what I would really like to see is more of you at the General Meetings.

For those of you who do not know me, my name is Pete Goetz, I am a past President of the AOS (I forgot the years), I am a teacher by trade (Chemistry and Physics), I have an interest in the Transportation History of San Diego County - 1850 to 1910; I collect large cent, current one cent, two cent, and three cents pieces, and of course spend to much money on OPAL.

Enough for now,
Pete

Members Only Website Password

To log onto the website's members only area at: http://opalsociety.org/aos_members_only_area.htm type: Name: "member" and Password: "brightness".

AOS Election Results

The AOS held it's elections at the February General Meeting. The offices voted on were for President and Vice-President. The results of the election are: President: Pete Goetz, and Vice-President: Corey Kuepper. We are lucky to have you two and good luck!

AOS Opal Evaluation Kit

As reported in the last month's newsletter Wes Roth had rediscovered an original AOS Opal Evaluation Kit that was created in the 1980's by the Society. Wes has mailed the kit from his home in Washington State to the AOS in Southern California. Here is a picture of the kit.

The kit contains three rows of 5 opals. The rows are "Base Color", "Fire Colors" and "Intensity", ranging from 1 to 5, with 5 being the best.

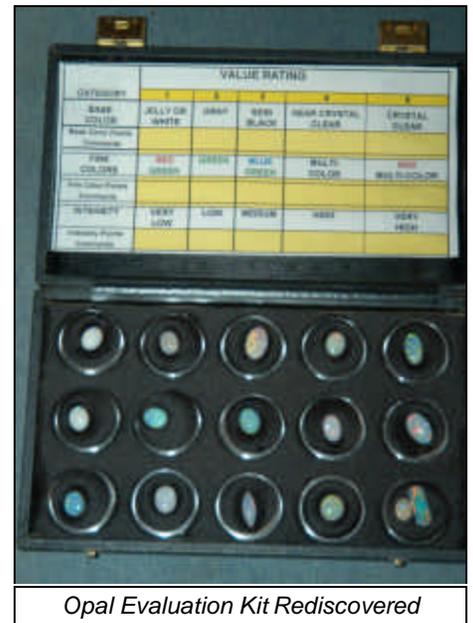
The AOS now have an "Intensity" #5 opal, the hardest to find. From this, we can build more kits. The AOS now can have a workshop to create these kits. Stay tuned on this topic.

Barbara McCondra Night Recap

The March meeting went very well with David Burton of Gems and Opals giving a recap of his experiences with Barbara McCondra in Yowah, Australia. We called Barbara in Texas and put her on the speaker phone for everyone to say hello.

David presented a slide show that Barbara had sent us a slide presentation of her opal mining operations in Yowah as well of photos of her when she was in Alaska. We all enjoyed seeing Barbara's mine in Yowah, her fabulous Yowah nut, and well as "Eskimo Nell".

As many of you know, Barbara is suffering from pancreatic cancer. We are keeping her in our thoughts and prayers.



Opal Evaluation Kit Rediscovered

Last AOS meeting, President Jim Lambert showed me a Slocum Stone that he had purchased. It was one of the best opal simulants I have seen. I found this article in an old Lapidary Journal. Slocum stones are now a collector item, a footnote in gemstone history. The Editor

Slocum Stone—A New Man-Made Material

By Mike Schowalter



Slocum Stone

Miner's Den, Royal Oak, Michigan 48073

Synthetic opals were originally developed by John Slocum in 1964. Opal experts who examined these man-made stones were amazed at their brilliance, patterns and complete color spectrum flash. As one opal authority told Slocum at that time, "You have matched, and perhaps exceeded, some of the finest precious opals in museums throughout the world."

Slocum felt a real sense of accomplishment back on 1964 but, strangely, he was not satisfied. True, he had matched the chemical and physical properties of magnificent natural opals but he had not overcome the shortcomings of the natural stone. His synthetic stones still had the deficiencies of natural stones as far as being subject to crazing, cracking and ready absorption of oily substances, even oils from human skin.

Jewelers who saw the 1964 Slocum synthetic opals were awed but several of them commented to Slocum that, as long as he had taken on nature's work, it was too bad that he hadn't been able to reduce the chance of damage in setting and the possibility of later crazing and loss of brilliance. Slocum decided to hold up offering his synthetics until he decided on whether or not he would try to improve them.

We asked Slocum why he had become interested in opals and the development of man-made stones. "Maybe," he responded, "it was like the fellow who had to climb the mountain because it was

there. Other gems had been synthesized but men had been fumbling for many, many years trying to duplicate the opal."

In terms of academic training, John Slocum is not an accredited gemologist, mineralogist or chemist. From a practical standpoint, however, he is all of these and has many important accomplishments in these and related fields. "So," we asked him, "was it just the challenge of doing the supposedly impossible that appealed to you?" "Not just that," he said, "I also naturally had in mind that if it could be done I might even make a couple of bucks." As he went on, we saw another side of Slocum. He's somewhat of a poet. This we realized when he explained why he thought opals were the most exciting and exotic of all gemstones.

"To me," explained Slocum, "it seemed that precious opals, unlike harshly dazzling diamonds or sapphires, had warmth and personality . . . as if flowers and sunsets were trapped within the stone. They have all the colors of emerald, ruby, topaz, and sapphires. It is a gem with internal fire and inner life therefore not like the cold solids of the spinels and corundums. Everyone is distinct and different. With the slightest turn, the colors change, like rainbows flashing in the night. Dancing patches of red appear and are then replaced by golds, greens, and blues. As you know, precious opal traps and gathers light to produce varying true prismatic hues more than most other gemstones.

"When I first started fooling with silicas, after deciding it shouldn't be too tough to make a synthetic opal, it was just a hobby or a project that I worked with off and on. When, after a couple hundred experimental batches and the worst messes you can imagine, I saw a tiny pinpoint of flash, I was really hooked. I'd done it, I'd developed a speck of opal fire. It shouldn't be hard to go on to success. The trouble was, I didn't know what it was about that batch that had been any different and what had caused the fire. It was a couple months later, after carefully logging the different components and all the steps in another hundred batches, that the next spot of fire appeared. This time I knew why.

"My trash service refused to pick up any more of my tons of scrap and I had to arrange my own haul-away operation. The material that was processed but worthless was enough to fill a small abandoned gravel pit. Eventually, the little side-line project that I had thought would take a few weeks covered a period of eight years from 1956 to 1964. Then, like a dummy, after I could produce absolutely beautiful synthetic opals, I decided that still wasn't good enough and I'd better get busy eliminating the natural stone's

fragility, tendency to craze, and to lose color. The object took over twelve years to work out."

The gem opal, stone of mystery and for centuries considered by many noble families as the most priceless of worldly treasures, is rapidly increasing in value and some of the Australian fields are not producing the quantities they once did. Even the good quality Mexican fire opal, once thought to be great in abundance, is



Slocum Stone

harder and harder to find in nature. Black Australian opals have always been more scarce than the white and were sold for considerably more than the white opal. Now a good black opal can sometimes retail for over \$2,000 a carat.

Slocum was aware of the growing scarcity of good natural stones when he decided not to market his synthetic opals 12 years ago. Perhaps he had so much respect for the beauty of natural opals that he didn't want to flood the market with synthetics which had about the same appearance and about the same physical faults. Perhaps his motives were less altruistic but in any case he has now introduced his new man-made material, the Slocum Stone, which looks very similar to opal but is very much tougher and less subject to damage.

Robert Crowningshield, eminent gemologist with Gemological Institute of America, has told Slocum that the G.I.A. group made an "eyeball" comparison of natural opal and the Slocum Stone. He reported that they couldn't tell the difference between a natural opal and the new Slocum Stone without magnification. Since Slocum has tremendous respect for Crowningshield's expertise and the integrity of the entire G.I.A. organization, Slocum has now decided he's ready to market his new and magnificent material.

When Slocum decided not to produce his synthetic opals in 1964, it was because he was determined to make a BETTER stone in terms of workability (cabbing or faceting) and one much tougher and less apt to craze or crack. So it was that 12 years ago he "went back to the drawing board." This time, he had no intention of making another synthetic with chemical properties identical to natural opal. Both natural and synthetic opals have 5% to 10% water content. Loss of the water from natural or synthetic opals results in shrinking and subsequent crazing and sometimes cracking. He knew that it had to be anhydrous in order to eliminate the possibility of drying out and crazing so that the Slocum Stone would be around for future generations to enjoy. He was determined to maintain the colors and ever-changing flash but with no water and with a more workable vitreous stone.

The "drawing board" that Slocum went back to is an extensive and very sophisticated laboratory in the Detroit area. Here, as one enters the outer office or reception room, there are panels of color photographs showing Slocum Stones and Slocum synthetics resembling every type of natural opal. Pictured also are common opal with little play of color, stones with horizontal banding, patch and colorful opals, the full range of flashing spectrum colors in natural precious opal and the breathtaking splendor of natural black opals. Displayed near these are pictures of their visual equivalents in Slocum Stones.

From here, through a locked door, there is an entrance to the display room where Slocum keeps his collection of rare natural opals, a representation of synthetic opals, and many, many varieties of the new Slocum Stone. At the far end of the display room is a steel encased door marked "private." It is in this private area that Slocum's laboratory and processing facilities are located. We could imagine but did not see microscopes, spectrophotometers, furnaces and perhaps vats with ray and beam devices. We did hear bubbling sounds, beeps and buzzers. Periodically, Slocum excused himself (apparently to attend to some processing) but we were not invited to see how the stones are made. If we had spent 20 years developing a secret process, we wouldn't be eager to reveal just how it was done, either. John Slocum has installed a "triple security system" of his own development for the protection of his laboratory.

"This much," John Slocum confided, "I see no harm in telling you. There are many, many steps. For example, it took 14 months to complete all the stages needed to form one 1710 carat broadflash stone. For every carat it requires the use of some 20 gallons of water. Of course, no water at all remains in the completed Slocum Stone. The procedure isn't at all like the crystal type synthetics which are 'grown' and progressively built up. The appearance of my end products rivals many of nature's finest opals, only with perhaps

more brilliant colors than the natural, and it is definitely tougher and less subject to damage."

Slocum does use the same basic material that is in the natural opal but his techniques result in a more resilient stone with vitreous luster. The Slocum Stone has a hardness range from 5.5 to 6.5, the specific gravity is 2.41 to 2.50, and the refractive index ranges from 1.49 to 1.51.

In part, because of the structural compactness and greater density, the Slocum Stone is easy to cut as a cabochon or to facet. In this respect it can be compared with the finest silicates for predictably excellent end results. Freedom from internal water, structural flaws, foreign inclusions or sand spots provides insurance against wasting time faceting or cabbing or carving a "disaster." Dangers of shattering, crazing, cracking or loss of color are almost entirely eliminated. Overheating during the polishing is not usually a problem if water and common sense are used. Normal opal working procedures are recommended. The heat transfer problems that occur in natural opal because of the internal water having a different coefficient of expansion from surrounding solids do not apply to the Slocum Stone. In natural and synthetic opals, heated water does expand and must find an outlet, sometimes with shattering results.

Brilliance of color spectrum range and improved strength and resiliency of the Slocum Stone involves both dehydration and a new physical structuring. Density greater than natural opal eliminates porosity and permeability. The importance of doing away with the porosity of opals (natural or synthetic) is that this eliminates the opal characteristics of absorbing oils and greases. The density of present synthetic opals is claimed to be 2.12 to 2.13. Some natural opals have in a density rating as high as 2.23. The density of Slocum Stone is 2.41 to 2.50 according to tests made by G.I.A. stones.

As with natural opal, the Slocum Stone tends, usually, toward horizontal sheet structuring or reflective planes. White light enters the stone, is bent and when intensified it is reflected in bursts of spectral colors. The formative processes, as in nature, are unpredictable and, in many senses, unexplainable. One batch may include a rolling flash that moves as the stone is tilted, blacks with a rolling flash of color alternating from bursts of flashes move from red to a brilliant royal blue. The next run will usually result in entirely different patterns and colors.

Slocum Stones do have the same patterns and colors as opals and, in many cases, closely resemble famous collection stones. However, this cannot be controlled in advance and the rarest varieties occur with about the same infrequency as in nature. The stone which highlights the Slocum collection has been named "The Firefall." This Slocum Stone weighs 982 carats and is a magnificent black.

Recently Slocum and his associate introduced their full line of Slocum Stones at the California Federation of Mineralogical Societies Convention and Gem Show in San Francisco, California. Here they showed rainbow patterns, pinfire, exploding flash, broadflash patterns, twinkle types, peacock tails, blacks, translucents and many other "types." Viewers at the show were enthusiastic and the top opal experts were even more totally astonished. They saw static patterns and mobile patterns plus combinations of one over the other. Many visitors said that, with the exception of museums, they had never seen any opals of the quality that was in Slocum Stones. Cabochons, faceted stones and rough matrix material were on display. The crystal, amber and other translucents attracted much interest as faceted gems.

Even though Slocum has had no formal training in chemistry or the physical science fields, he has initiated technical procedures for several industries that were incapable of resolving problems with their own staff or consulting experts. He has often been called a genius and he has proven it many times. Perhaps Slocum's greatest single asset is his cheerful confidence that just about anything can be done if it's worth the effort. He jokingly advises his friends that, if at first you don't succeed, try "a-gun."

As for the working properties of the Slocum Stone, it should suffice to say "Treat it the same as the natural opal" which was mentioned in the preceding pages. However, perhaps a short review of the procedures recommended by those who have worked with it will help others in achieving that "flawless" finish on both stones.

In the interest of conserving material, a high speed ultra thin blade (.006-.012) was used. No chipping resulted; and even on very thin sections for triplets, the material saws very well.

In dopping, the stones were alcohol cleaned and slowly heated to a "finger touch warm" temperature on an electric dop wax heater. This was to assure tight adhesion between the wax and the material to be cut. Since the material is supplied in pre-oriented slabs, the blank need only be aligned evenly on the stick to assure proper fire return in the finished stone. The cutters preferred the "old-style" silicon carbide methods for cutting. A finely dressed 220 grit wheel was used for the coarse grinding followed by well worn 320 grit, then 600 grit cloths. Though the Slocum Stone is usually unaffected by moderate heats, a constant dripping of water was still maintained for complete safety. Australian opal polishes beautifully with cerium oxide on felt and the same holds true for the Slocum Stone. "They tried several different polishes and mediums," said Mr. Slocum, "but they still preferred stick with the cerium oxide for consistently fine polishes."

"Diamond," continued Slocum, "is another fine medium for finishing the Slocum Stone." After the stone is shaped, a Crystal Pad with 270 mesh was used to completely smooth out all grinding marks. This required moderate pressure and a close inspection before going on to the successive steps. Grinding marks must be completely removed because diamond has a tendency to "drag out." Diamond particles traveling across the surface of a stone hit a scratch and then create finer scratches as they are swept away. Light pressure with 600 mesh, then 1200 mesh on Crystal Pads were used to complete the smoothing steps.

On Polypads, five minutes of light pressure with 3000, then 8000 diamond will bring up a finish rivaling the best cerium polish. "But just a couple of minutes on 50,000," suggests Slocum, "will bring up that notably superb finish."

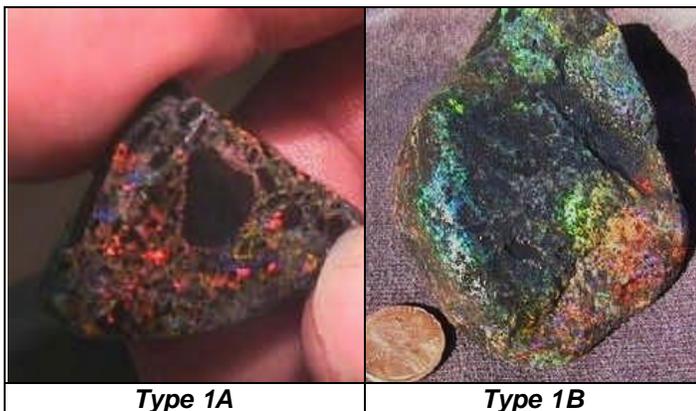
Asked what the next step was now that he had completed Project No. 1 we supposed maybe a new emerald or ruby. "No," Slocum replied, "Carroll Chatham is the master of that field." He hesitantly reached into his desk and produced a small tray of what appeared to be lapis, malachite, turquoise, and stronger yet some very convincing "Montana agates and cat's-eyes." Slocum continued, "Some of these are deliberate and some are experimental mistakes from project one."

From the LAPIDARY JOURNAL, Sept. 1976

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Andamooka Matrix Opal

There many varieties of Andamooka matrix. Listed and pictured here are four of the more common and basic types. Most other types are variations of these four basic types. The exception, and not mentioned is the "painted lady" which quite similar to



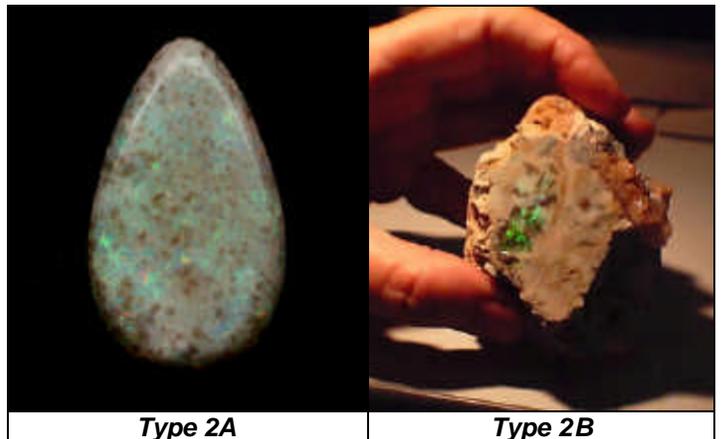
Type 1A

Type 1B

Queensland boulder opal.

Pictures type 1A and type 1B:

This type of matrix is opalized sandstone, commonly referred to as concrete. It is common and not very rare. It will take a sugar/acid treatment to darken it. As a side note, instead of cooking in acid



Type 2A

Type 2B

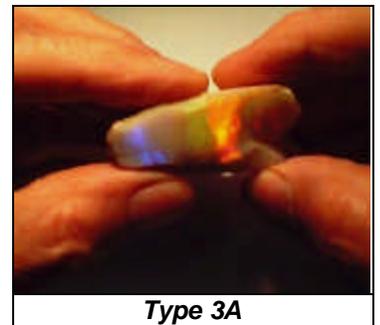
after the being sugared, because it is basically sandstone, it can be wrapped in foil and put on hot coals (BBQ) for a few hours and this will carbonize the sugar. It can be very colourful. This material will not polish on its own and needs epoxy or an Opticon type sealer to be polished.

Pictures type 2A and type 2B:

This type is true concrete. This material is also a sandstone matrix. However it is very hard and not at all porous. It will not darken with sugar/acid treatment. It will come to a high polish in the same fashion as precious opal. It appears more opal in nature and it can be quite colourful. This material is rare. The pieces pictured were mined over thirty years ago.

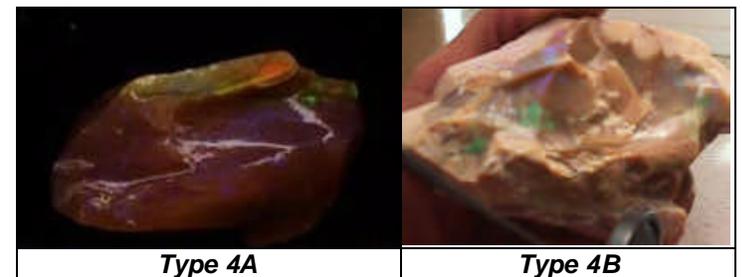
Picture type 3:

This type is the gem treating matrix. This material is silky in to the touch. It is more like precious opal, but porous enough to sugar/acid treat, but it can take time and patience. This material usually takes a polish without any further treatment. This type is a little more common but not to the point it can be marketed commercially. It is sometimes referred to as a "poor man's black opal". This is because once treated the matrix is black.



Type 3A

Very Colourful material can rival Lightning Ridge black opals in beauty, but not the expense. The piece pictured is an exceptional



Type 4A

Type 4B

example.

Pictures type 4A and type 4B:

This type of matrix is Gem matrix. It is veryhard and not porous. It will not colour treat. It can be cut and will polish just like opal. In some circle's it is considered opal.

From http://www.opulentopals.co.uk/types_of_opal.htm

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Here's an old article I found in an old 1957 GEM & Mineral Magazine. I'm not sure if this is a currently known opal sight or not; I did a little research on Edward Coleman and found that he is buried in Winnemucca, Nevada. He may have possibly lived nearby opal deposits of the Black Rock Desert deposits (Little Jo Mine, Angela Mine), or the Firestone opal deposit in the Santa Rosa Range near McDermitt. If anyone knows anything about Edward or the deposit, please contact the editor, Jim Pisani at editor@oaplsociety.org.
The Editor

New Opal Strike Reported in Nevada
By Gerald I. Hemrich, Contra Costa Mineral Society



Edward D. Coleman examines a chunk of basalt for opal. Opal found in the area is said to vie with the best from the famous Virgin Valley, Nevada, deposit.

What in time may rival the famous Virgin Valley opal deposit was located and staked last summer by Edward D. Coleman, of Winnemucca, Nevada.

Coleman and his son were hunting and fishing in northwestern Nevada during the late summer when Coleman recalled that they were near the spot where he had once found a stone, then unknown to him, that showed a play of beautiful fiery colors.

Like many other mineral and gem strikes, this was also an accidental discovery. As Coleman tells it:

"About 25 or 30 years ago I was riding the range in this area and got off my horse to 'throw a rock' at the 'bell-mare' or leader of a bunch of horses I was moving from one cow camp to another. Just when I was about to throw the piece of rock I caught a glimpse of 'fire'."

However, Coleman says he thought nothing more about it at the time, and it was not until he became a rockhound several years ago that the memory of this experience recurred to him. Then last summer, being near the Spot he remembered, he jokingly suggested to his son that they go see if they could collect fire opal. And that, with very little difficulty, is just exactly what they did.

Coleman duly recorded his claim - conformity with the laws of Nevada, but the season was too far advanced to permit much work. While the full extent of the deposit is not yet known, preliminary work indicates that it is large. The opal occurs as float, which was what Coleman originally found, and also in a basalt matrix. Test holes to a depth of several feet continue to yield opal. Probably by the end of this season a better estimate of the amount of opal available can be made.

The writer has examined various pieces of black opal, and feels that the better grades compare very favorably with good Virgin Valley material. The clear stones show a beautiful play of color - red, blue, green, orange, and even lavender. Coleman informs me that these opals run from the size of a pea to that of a hen's egg, and that the better grades have cut into beautiful cabochons without cracking or checking. Care must be taken, as with all fine opal, to avoid overheating the stones during the cutting.

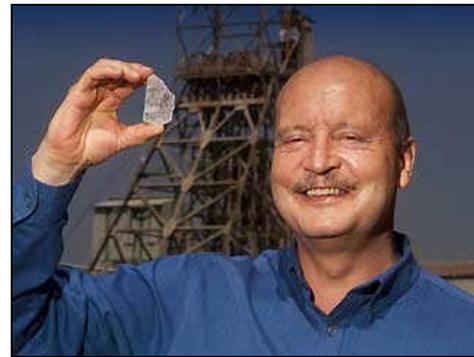
Since these are private claims, collectors should be warned that no trespassing or private collecting will be permit-red. However, if Coleman's present plans mature, his opals should be available for sale in limited quantities during the coming summer. Also, at the invitation of the Washoe Gem and Mineral Society, he plans to display some of his opals at the Society's show, July 20 and 21, at Reno, Nevada. From GEMS & MINERALS Magazine, JULY 1957

Egg-Sized Rough Diamond Sells for Record \$35M

February 26, 2010

AP - LONDON - A 507-carat diamond as big as a chicken's egg sold for \$35.3 million, breaking the record for the highest price ever paid for a rough diamond, the supplier said Friday.

The stone — which weighs just over 100 grams — was estimated to be among the world's top 20 high-quality rough diamonds. It was discovered in September at South Africa's Cullinan mine.



This file photo shows company CEO Johan Dippenaar holding the 507-carat white diamond recovered at the Cullinan Diamond Mine.

London-listed diamond supplier Petra Diamonds Ltd. said the gem was purchased by Hong Kong-based private jewelry retailer Chow Tai Fook Jewelry Co. Ltd.

The price reflected "the incredible rarity of the diamond, which combines its remarkable size with exceptional color and clarity, and at 507.5 carats it is the 19th largest gem diamond ever discovered," Petra CEO Johan Dippenaar said in a statement.

"It has the potential to produce one of the world's most important polished gems," he added.

The Cullinan mine, located east of Pretoria, South Africa, was sold by De Beers SA to a consortium led by Petra in 2007 for \$148 million.

The mine has turned out some of the world's largest gems, including the 3,106-carat Cullinan Diamond that was cut to form the 530-carat Great Star of Africa and the 317-carat Lesser Star of Africa set in the Crown Jewels of Britain.

From <http://www.foxnews.com/story/0,2933,587495,00.html>

The Leg of Mutton Nugget:
The Discovery of Australia's Famous 134 Pound Gold Nugget

By Daniel E Russell

On June 2nd, 1852 John Evans and his cousin Daniel Evans, natives of Oldham in Lancashire, England, set sail from Liverpool on board the ship Lady Head. Like the other nearly 400 men and women on board the ship, they were headed for Melbourne, Australia, eager to seek their fortunes in the newly discovered gold fields of Australia. Unlike most of the passengers who would find only disappointment and deprivation, the two cousins would strike it big by uncovering one of the single largest gold nuggets in Australian history: the "Canadian Nugget", also known as the "Leg of Mutton Nugget".

The journey to Melbourne took 83 days on board a cramped ship. When the ship finally disgorged its passengers, they discovered that the town was bursting at the seams with people caught up in the frenzy of the gold rush. Food prices were grossly inflated. The streets of the town had been reduced to quagmires. Shelter was scant, leaving many to sleep in the streets even in

driving rains. One anonymous writer described the arrival of the Lady Head in Melbourne:

"I may give you an instance of the utter destitution which some of these people are thrown into on their arrival here. When the Lady Head arrived here from Liverpool the weather was most inclement; wet pouring down in bucketfuls, and the dirt, slop, and mud more than knee-deep, not only the thoroughfares, but in every spot where it was possible for human beings to set foot. In this state of affairs I saw more than four hundred poor people thrust upon our wharves, without food or shelter, but what their scanty bedding supplied. In this state of affairs Mr. Cole allowed the poor sufferers the use of the sheds on his wharf; but which, from the traffic upon them previously, were wet, damp, and muddy, to an inconceivable degree, under foot. Happening to be there in the early part of the night, I was informed, and subsequently ascertained for a fact, that a young woman, the wife of an intelligent Scotchman, gave birth to her first-born child. And, oh, such a plight! Such a situation for an anguished mother to be in! Porters roaring, carters swearing, men, women, and children clamouring and screaming, and none, no not one, but the faithful husband and partner of that poor afflicted woman, to render either medical aid, or to minister the slightest consolation under the circumstances. It is melancholy to reflect on the increased amount of human suffering, which is patiently endured by new-comers here. (Earp, 1853)

Daniel Evans would himself recall of their first days in the chaos of Melbourne:

"We found hundreds of people without shelter; many lay in the streets, and many in the watch-houses. We found out a fellow townsman, and he let us sleep on the floor of his kitchen. We didn't stay long there; just enough to see about. Things were very high then, but the diggers spent money like dirt. Almost the first man we met on shore was drunk, and swore he'd spend £500 before he left the spot. We saw the man who found the big nugget. He was drunk, too, on horseback, and shouted out "I'm the boy who sold the nugget for £4000." They told us he was always drunk since he found it."

The "big nugget" which Evans mentions may have been discovered near Bathurst as there is mention of the discovery of a mass of gold in quartz worth £4000 shortly before they arrived in Australia.

Both Daniel and John were eager to begin their search for gold. They bought a tent, a blanket and some tools, and poked around a few of the diggings to the north and east of Melbourne. They moved with a loose-knit band of fellow argonauts for mutual protection. John Lees, who would later partner with John and Daniel Evans, described the appearance of the gold-seekers as they set out for the diggings:

"...dress'd in colonial style blue flannel slops, belts and billy cocks, some arm'd with revolvers, in fact all arm'd up to the teeth, with revolvers, double barrel'd rifles, pistols double and single, daggers &c all looking and feeling volumes of valour, bidding defiance to, and predicting the probable fate of any bushrangers that might interrupt our progress, we were like so many beasts of burden loaded with weapons of defence blankets tools et cetras and grub... I reckon this as romantic a scene as I have ever seen, the river the beautifully wooded and sloping sides of the valley, the numerous fire, with here and there a tent scatter'd along the valley, the groups of fortune hunters standing round the fires, and spinning yarns cracking jokes, speculating upon their doings at the diggings, a scene not to be forgotten in a day" (Anon, 1978)

In a placer field known as Sheepshead Gully the two Evanses were allocated a 16 foot square claim to work. In six weeks they had managed to recover a fair showing of gold, but the physical conditions of the site made further work impossible. There was no

clean drinking water available, and soon both men were crippled with dysentery.

When both were well enough to travel, they heard of a new gold rush at Ovens and decided to try their luck there. They were joined by John Lees, a fellow native of Oldham who had possibly emigrated to the gold fields with them aboard the Lady Head (accounts differ). The relationship between the Evanses and Lees was clearly close. Lees would write that Daniel and John "behaved like brothers to me." When Lees was short on cash, one of the Evans cousins loaned him the 11 shillings he needed to pay for his digger's license. Lees was beaten nearly to death by a drunken digging partner and abandoned in the bush, and managed to stagger into the Evanses' camp where his injuries were tended.

Pooling their money, they purchased a horse and cart for £84, guns to both protect themselves from highwaymen ("bushrangers") and to hunt for bush meat, and a three month supply of provisions. Flour cost 1s 6d a pound and salt cost 2sd 6d a pound; butter was a luxury item at 5s 6d a pound. After a 225 mile trek into the wilderness, they decided that Ovens held little more promise than the earlier diggings had offered and returned to Melbourne.

At Melbourne, William Poulton Green joined the party as its fourth member. Green had been a railway clerk for the London and Northwestern Railway at Wolverhampton in the UK before emigrating to Australia, and upon his arrival in Melbourne discovered that there was little demand for clerical staff. The four men heard rumors of good diggings opening up near Ballarat, west of Melbourne, and decided to try their luck there.

On November 17th, 1852 Daniel and John Evans, John Lees, and William Green caught the first steamboat across Melbourne's Harbor for the port town of Geelong. Throwing their blanks and rifles over their shoulders, they walked the 65 miles through the bush to the new diggings. Daniel Evans would later recall "We had hard work here to get food. We couldn't obtain any for love or money. We had no flour or damper, no salt; and for two days we lived only on what we shot, and very awkward it was to cook it too." (Damper is the Australian name for an unleavened soda bread cooked in the ashes of a campfire – a variant of this rustic staple appeared on the dinner plates of prospectors world-wide under a host of different names.)

They arrived at Ballarat on the 20th of November, and pitched camp just outside the diggings. At the time, the government of Victoria demanded that every gold hunter purchase a license to dig from the local gold commissioner or his agent, at the outrageous price of 30 shillings a month. The policy would, a little more than a year later, result in an armed insurrection by a group of Ballarat miners.

The four men spent the next ten days exploring and taking in the lay of the land. In the Ballarat diggings, the rule of thumb for gold mining was to sink a shaft downward through the barren earth until the gold-bearing strata of sediment was reached, then begin to tunnel horizontally to mine out whatever gold was present. Both John and Daniel Evans had practical experience as miners, having worked in the collieries of Lancashire. Their technical knowledge would stand them in good stead in the months ahead. Daniel Evans would later recall:

I was out one day and I thought I would have a look at some of the old holes, and I went down many of them between 30 and 50 feet deep. I liked the looks of two of them, and we set in to work and got about 11 lbs. of gold in about a week. We marked where the dip in the strata was, and began driving a level tunnel. The first day we got gold. We tried other holes after that. In one of them I went down I found a pillar left for support, so we cut down some trees and made props, took the pillar away, and got more than a pound of gold out of it. Then we thought we would try two new holes, but we didn't like the looks of them we began to sink; so we deserted them, and tried the old ones again till the find began to fall short.

As their small claim played out in December of 1853, the men searched for promising new ground to dig. Evans later wrote

One morning I threw my gun on my shoulder, and started off for another ramble, and about three miles off came to a likely place called Canadian Gully. I liked the looks of this amazingly, and went back and reported. Next morning all went over with the tent, and marked out two spaces. We began two shafts, 37 inches in diameter. Cousin Jack and I dug and sunk; Green and Lees hauled and carried. We soon came to good soil, and worked away in earnest at our hole. We found gold very soon, and worked night and day; in a few days we got down 50 feet, and got 8 lb or 9 lb of gold. Then we had a good offer for the hole, and sold it, and set to work upon the other shaft. This was a troublesome one, for the water rose at 20 feet, but we got more timber, cut and cased the shaft, and then got rid of the water, and soon came upon the clay and gold.

When the shaft reached a depth of roughly 66 feet the men hit bedrock, and began to drive a horizontal level. The tunnel was a mere 30 inches high and 36 inches wide, and the Evans cousins worked in rotation digging while Lees and Green carted away the waste earth. In one area Daniel Evans struck a patch of ground that yielded some handsome nuggets.

"This is the way to get gold," Daniel told his cousin as he showed off the rewards of his efforts, then chided him "you don't know how to get it."

The two men switched places. Not long after John Evans had crawled down into the hole, at roughly 5 pm on the 31st of January, 1853, his partners heard a commotion from the tunnel.

"I heard him laughing like mad and calling me," recounted his cousin Daniel. "I leant over the shaft, and he could hardly speak."

"What is it. Jack?" I said.

"I've found it!" said he. "And it's a big'un."

"Softly... for God's sake, keep quiet," Daniel begged his cousin, concerned that they would be overheard by other miners and mobbed by a stampede. "How big is it?"

"Three or four hundred weight," John Evans replied, and laughed again. While his estimate of the weight of the mass of gold was high, it was still clearly an enormous nugget by any standard.

I went and called Lees, and took him away from all the tents, and told him Jack had found a big nugget, and we must keep it dark. So I got an old sack, and sent it down the hole, and Jack soon sent up the gold; I slung it over my shoulder, and walked quiet-like through all the diggers till I came to our tent, and then I threw it down outside on the dirt heap, and went inside to consider what was best to be done.

Leaving Lees to watch the massive nugget, Daniel Evans walked the two miles to the ersatz office of the licensing agent for the area to ask for help in protecting their discovery.

Telling the agent that they had found a large nugget, the agent asked "How big, forty pounds?"

"Well, sir," Evans said. "I think it's twice forty."

"Oh, you're romancing," the agent replied. He did however dispatch three policemen and a mounted rider to return to the diggings with Evans. News of the enormous nugget had already begun to filter through the camp. At sunset, the policemen slung the sack bearing the huge mass of gold from a pole, and carried back to the government station.

The four men were immediately inundated with offers from other miners to buy the claim. One man offered £250, but they decided to hold out for at least £300.

The next morning John and Daniel Evans went to the government station to weigh their find. It was licensing day and the place was swarming with would-be miners eager to get their first digging permit, and with established miners seeking to pay their monthly fees. The two men waited until the crowd had dispersed before washing off the nugget. They then placed it on an old pair of potato scales to get a proper estimate of its weight.

The nugget weighed in at 134 pounds, 8 ounces.

Cleaned of mud, the giant nugget was roughly shaped like a leg of mutton, and it became known as the "Leg of Mutton Nugget" (other sources prefer to call it the Canadian Gully Nugget, or the Canadian Nugget). It was certainly an unromantic and uninspired choice of name for what was then one of the largest gold nuggets in the world.

While they were at the station, Lees and Green remained at the diggings guarding the claim. The Evans' sent word back to sell the hole if an acceptable bid was offered. A group of miners from Lancashire offered £300 for the claim provided that Lees and Green would allow them to make a trial of it first. One of them climbed down into the hole and began passing up earth. In the second basket, Lees discovered a nugget that weighed a respectable 55 ounces, 8 pennyweights. The Lancashire miners closed the deal on the claim without further hesitation.

Chaos descended on the diggings as news of the discovery spread. The frenzy brought thousands more to the area, and soon the region around Canadian Gully was pock-marked with gopher holes. The gold commissioners for the area sagely advised the four men to take their gold back to England, which they

enthusiastically agreed to do. "...as we went through the diggings they told us our mates had found another big nugget, but we didn't believe 'em, there's always so many romances flying about there," Daniel Evans would recall. "But we found 'twas true this time."

The gold commissioners arranged for the nugget to be carried to Melbourne under armed escort. The four men returned to Geelong, and caught the steamboat back to Melbourne. During the crossing, they were offered more than £10,000 for the nugget. Refusing the offer, they packed the Leg of Mutton and the rest of their gold for transport. The four men set sail for England aboard the Sarah Sands. After a long, but rather uneventful voyage, they arrived at Plymouth. The Leg of Mutton nugget was whisked away to the protection of the vaults of the Bank of England.

The amazing gold specimen was placed on exhibit for a brief time. One of the places at which shown to the public was "Wyld's Great Globe" in London's Leicester Square. This was a rather eccentric structure designed for the Crystal Palace Exhibition of 1851... a large building which contained a 60 foot diameter spherical chamber, the inside of which was decorated with a scale globe of the Earth. The Leg of Mutton was on display there as early as July 6th of 1853, less than six months after it was discovered (and probably less than three months after its arrival in the UK). Myles Pennington, a railway officer who had known John Lees before he struck it rich in Australia, recalled that it cost visitors six pence to see the nugget.

The nugget was so smooth that it could be made to shine by rubbing it with the hand. What struck everyone at the first sight was its smallness compared with its weight, but when attempting to lift it you found that you had got hold of something as regarded weight, that you had never handled before. The nugget was placed on a bench in the best possible position for being lifted and by placing it against my chest I did manage to raise it from the bench. There was on exhibition, at the same time, models of the largest nuggets on record, but they all sunk into insignificance when placed beside the famous nugget of Canadian Gully.

Ultimately, the enormous nugget was sold for its bullion value to the Bank of England, where it was melted down and cast into gold bars.

The Leg of Mutton nugget was not the last gigantic gold nugget discovered in Australia. It was eventually eclipsed by the Welcome Nugget, weighing 184 pounds, was discovered in 1858, and in 1869 the Welcome Stranger nugget weighed in at 190 lbs.

The colony of Victoria had started as a tiny penal colony in 1803, consisting of 308 convicts, 17 free settlers, 51 marines to serve as guards, and 12 government officials. The gold rush that

began in the early 1850's swelled the population from 77,000 to 540,000.

Precisely what happened to Daniel and John Evans and William Poulton Green after their return to England is unclear. John Lees voyaged at least once more in search of Australia gold, with mediocre results, then settled in Oldham to a life of financial comfort. His son was Charles H Lees, FRS, a prominent English physicist in the late 19th and early 20th centuries. From <http://www.mindat.org/>

March 2010 Gem & Mineral Shows

More shows can be found at <http://www.rockngem.com/showdates.asp>
 6-7--ARCADIA, CA: Show; Monrovia Rockhounds; LA County Arboretum, 301 S Baldwin Ave; contact Jo Anna Ritchey (626) 359-1624; e-mail: joannaritchey@gmail.com; Web site: www.moroks.com
 6-7--SAN FRANCISCO, CA: Show, "San Francisco Crystal Fair"; Pacific Crystal Guild; Fort Mason Center, 99 Marina Blvd.; admission \$6; contact Jerry Tomlinson, (415) 383-7837; e-mail: sfxtl@earthlink.net
 6-7--VENTURA, CA: 48th annual show, "The Ventura Gem Show"; Ventura Gem & Mineral Society; Seaside Park (Ventura County Fairgrounds), 10 W. Harbor Blvd.; Andy Anderson, (805) 987-0043; vgms_editor@roadrunner.com;
 12-14--VICTORVILLE, CA: 34th annual tailgate; Victor Valley Gem & Mineral Club; Stoddard Wells Road (graded dirt), 7 miles east of Dales Evans Pkwy.;

Fri. 8-5, Sat. 8-5, Sun. 8-5; contact VVGMC, (760) 243-2330, or Brett Ward, (760) 954-4323; e-mail: www.vvgmc.org
 13-14--SAN MARINO, CA: Show, "Colors of Gems"; Pasadena Lapidary Society; San Marino Masonic Center, 3130 Huntington Dr.; contact Marcia Goetz, (626) 914-5030; e-mail: joenmar1@verizon.net
 13-14--SPRECKELS, CA: Show, "Parade of Gems"; Salinas Valley Rock & Gem Club; Spreckels Veterans Hall, 5th St. and Llano St.; contact Ernie DeFever, (831) 422-3422; e-mail: minimad64@comcast.net
 13-14--TURLOCK, CA: Show; Mother Lode Mineral Society; Stanislaus County Fairgrounds, 900 N. Broadway; contact Bud McMillin, P.O. Box 1263, Modesto, CA 95353, (209) 524-3494; e-mail: terry.mcmillin@yahoo.com;
 18-21--SAN BERNARDINO, CA: Tailgate show; Orange Belt Mineralogical Society; Western Regional Little League Ball Park, 6707 Little League Dr.; contact Shane Ripley, (909) 557-3605; e-mail: OBMS_PR@yahoo.com;
 20-21--BAKERSFIELD, CA: 9th annual show, "Rock and Gem Rendezvous"; Kern County Shrine Club, 700 S. P St., contact Lewis M. Helfrich, (661) 323-2663; e-mail: lewsrocks@netzero.net
 20-21--ESCONDIDO, CA: Annual show: Palomar Gem & Mineral Club; Army National Guard Armory, 304 Park Ave.; contact Van Lynch, (760) 749-4164; e-mail: michelleandvan@hotmail.com
 20-21--VALLEJO, CA: Show and sale, "Spring Bling"; Vallejo Gem & Mineral Society; Vallejo Elks Lodge, 2850 Redwood Pkwy; contact Phylis Malack, (707) 745-3255; e-mail: vgms01@yahoo.com; Web site: www.iwired.org
 27-28--ANGELS CAMP, CA: Annual show and sale; Calaveras Gem & Mineral Society; Calaveras County Fairgrounds, Hwy. 49 at Frogtown USA, contact Tak Iwata, (209) 928-5579; e-mail: Tak2me@msn.com

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A Renewal Grace Period of two months will be provided. If your dues are due now you will receive two additional issues of the newsletter. Please note, however, that as the system is now set up, if your renewal is not received you will be **AUTOMATICALLY** dropped from membership thereafter. It is your responsibility to assure your dues are current.
 Thank you,
 The Editor



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**Volume #43 Issue #3
March 2010**

Some Topics In This Issue:

- AOS Election Results
- AOS Opal Evaluation Kit
- Barbara McCondra Night Recap
- Slocum Stone
- Andamooka Matrix Opal
- Opal Strike in Nevada
- Egg-Sized Diamond Sells for \$35M
- The Leg of Mutton Nugget

Important Dates:

Mar. 2 - Board Meeting

Mar. 11- General Meeting – Opal Cutting Seminar. Bring in you opals to get cut. We will have Pixie and Genie lapidary machines and expert instruction to show you how to cut that difficult stone.

— GENERAL MEETINGS —

2nd Thursday of the Month
7:00 pm - 9:00 PM

Garden Grove Civic Women's Club
9501 Chapman Ave.
Garden Grove, CA 92841
(NE corner of Gilbert & Chapman)

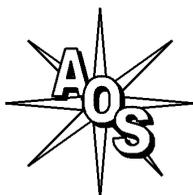
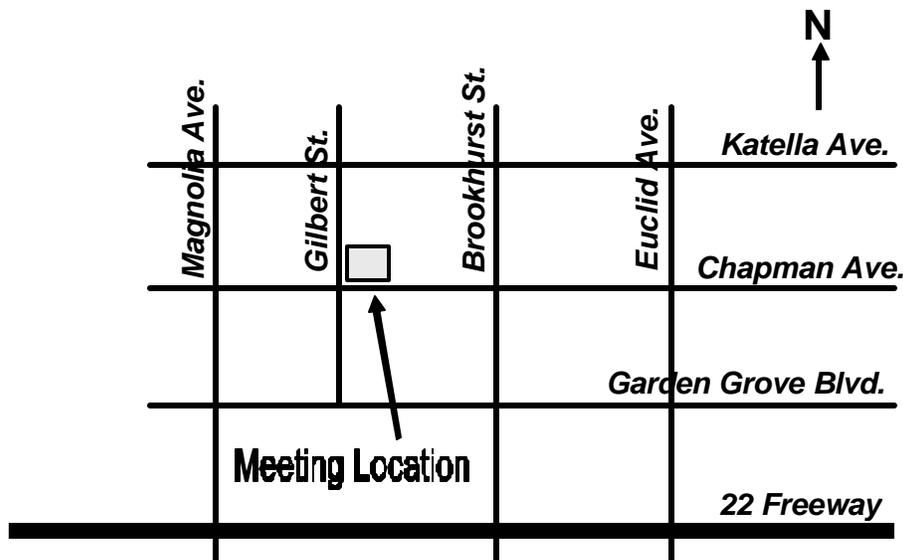
MEETING ACTIVITIES

Opal Cutting, Advice, Guest Speakers,
Slide Shows, Videos, Other Activities

TO:

March 11

Opal Cutting Seminar



The American Opal Society

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