

## BOARD OFFICERS ELECTED

President	JEF WRIGHT until 5-31-21 or replaced
Vice President	<b>VACANT</b>
Secretary	<b>Fred Floyd</b>
Treasurer	Toni Floyd

## BOARD OF DIRECTORS (APPOINTED)

CFMS Chairperson:	VACANT
Field Trips:	Melissa Takagi
Parliamentarian:	Chris Toft
Open workshop supervisors:	Alan Mazzola, Karen Wagner, Kari Raley, Ian Burney

Program Chair	<b>Karen Wagner</b>
Show Chair	VACANT
Newsletter Editor	<b>Carol Hiestand</b>
Website:	Ian Burney, Kari Raley

## STANDING COMMITTEES (APPOINTED)

Facebook Page	Admin
Ways & Means	Dawn Wright
Historian	Barbara Bury
Hospitality & Good Cheer	Judy Jessup
Meeting Displays	Barbara Bury
Calendar	VACANT
Picnic Coordinator	Moni Waiblinger
Refreshments	Dawn Wright
Redwood Rep	Barbara Bury
Librarian	Chris Toft

## CONTENTS:

Important Club Info:	p 1-3
Upcoming Shows	p 4-12
Old Geologist Tales	p 13-17
Mystery/fun photos	p 17-19
APRIL birthstones	p 20-21

## CLASSES & WORKSHOPS:

GREAT NEWS! Bob Johnson restarted **FACETING CLASSES**

**Weekends only** Flexible times, you **must call or email** him to schedule a class. PH: (760) 809-0152, email: [n78532@yahoo.com](mailto:n78532@yahoo.com)

## The PGMC Workshop Reopened March first!

Due to the Pandemic the following restrictions are in place:

- attendance is limited to 5 members at one time.
- this includes 1 supervisor and 4 members.

Members **MUST** make a workshop reservation at "[PalomarOpenWorkshop@gmail.com](mailto:PalomarOpenWorkshop@gmail.com)"

(Supervisors' email). Please wear a mask until further notice. If you're unable to attend, please notify a Supervisor, so someone else (on the waiting list) can have your spot.

Day	Time	Supervisors	
Monday	6:30 PM to 9:30 PM	Karen Wagner	(760) 213-5289
Tuesday	6:30 PM to 9:30 PM	Ian Burney	(760) 315-2626
Wednesday	11:00 AM to 2:00 PM	Alan Mazzola	(760) 758-9799
Thursday	1:00 PM to 4:00 PM	Kari Raley	(760) 738-3992

The Board thanks the PGMC Shop Supervisors for making the reopening of our workshop possible!

## CLUB NOTICES & IMPORTANT INFORMATION:

### JEF WRIGHT RESIGNATION:

This is to formally inform the Board that I am turning in my resignation as President of the Palomar Gem and Mineral club. I am giving you notice that my last day as President will be May 31, 2021. I feel I have given the club ample notice to find a replacement and I have to give a final day of my tenure.

It has been my honor and pleasure to be the President for the past 4 years, but unfortunately it has come a time in my life where I need to focus on other things in my life and this has to be one of the things in my life that I have to let go. I have thoroughly enjoyed working with all of you and wish nothing but the best for the PGMC in the future. Jef

### Do We Still have A Club?!?

As this newsletter goes to print (or email) our PGMC Board is greatly diminished....

As you can see by the above letter, Jef Wright is no longer our president as of the end of May. The club is very grateful for his many years of devoted service.

With our annual show scheduled for June 11 (set-up), 12 and 13, it is imperative that a volunteer step forward to assume this position, until our annual PGMC elections are held in November.

Our vice-president, Justin Engelmeyer, has permanently returned back to Minnesota, after finishing his studies at GIA. We also need a volunteer for this office.

Charles Shupe, Our PGMC California Federation Rep, has permanently relocated back to his home town of Galveston, Texas at the beginning of March. Charles also volunteered in Bob Johnson's faceting classes.

FYI: There is a stipend to cover costs incurred when attending the annual meeting of the California Federation.

Board Members and Committee Chairs have generously volunteered countless hours to make the PGMC the great club it is today. Many of us are suffering from "burn-out"! I myself, have been a member since 1998, and plan to continue volunteering on a more limited basis. I hope that members step up so that the PGMC is able survive for many years to come! It's up to you!

### URGENT APPEAL

If you are like me, and longing to get together with our fellow PGMC club members, we (your Board) are appealing to the general membership to help us find a new venue to hold our in-person meetings.

It is uncertain when/if we will be able to return to Redwood.

In the meantime, if anyone has any suggestions, please contact a Board member. The PGMC needs a local place with adequate parking, and room for 50+ members. Zoom meetings are great, but in-person is so much better!

ChrisToft, PGMC Parliamentarian

## HAPPY BIRTHDAY TO APRIL BIRTHDAY PEOPLE!!!

**Membership:** Dues for the coming year will be voluntary. Members have the choice to pay dues or defer for the year. Your membership will continue until January 2022 when that years' dues will be requested.

FEES: \$25 for individuals (18 and older), \$40 for families with 2 parents, \$35 for single-parent families

Mailing address: P.O. BOX 1583, Escondido, CA 92033 Ph: (760) 743-0809

Credit card donations and dues payments, please call Toni Floyd: (425) 281-6218

**PGMC ANNUAL GEM SHOW STILL ON FOR JUNE 12-13 IN ESCONDIDO – VOLUNTEERS NEEDED! PLEASE CALL OR EMAIL TONI FLOYD OR CHRIS TOFT.**

Palomar Gem and Mineral Club

340 N. Escondido Blvd., Escondido CA 92025

Saturday – 10 AM – 5 PM, Sunday 10 AM-4PM

Palomar Gem and Mineral Show – presented by the Palomar Gem and Mineral Club. Held in the California Arts Centers museum and ballroom. A beautiful indoor facility. Secure for vendors and comfortable for attendees. 30-35 dealers. COVID prevention measures will be in place!

Website: [pgmcshow@palomargem.org](mailto:pgmcshow@palomargem.org)

Gem show leaders

- Chair – Toni
- Vendors - Toni
- Sponsors– Archie
- Volunteers – Chris
- Vendor Floor map
- Advertising
- Printing advertising paper
- Demo coordinator
- Showcases recruitment and coordination
- Supply orders
  - Table covers
  - Wrist bands
  - Raffle tickets
- Friday Vendor check in - Toni
- Electrical and Cases
- Table set up
- Show signs set ups
- Saturday and Sunday
- Front door / cashier support - Toni
- Security

TUCSON, ARIZONA, USA

**Tucson Gem & Jewelry Show New Dates!**

**April 7 - 18, 2021**

Our exhibitors and attendees are excited to start conducting business after a long break and to support the economy to get back on track! We are looking forward to seeing you on April 7-18, 2021 at the upcoming JOGS Tucson Gem and Jewelry Show at the Tucson Expo Center!

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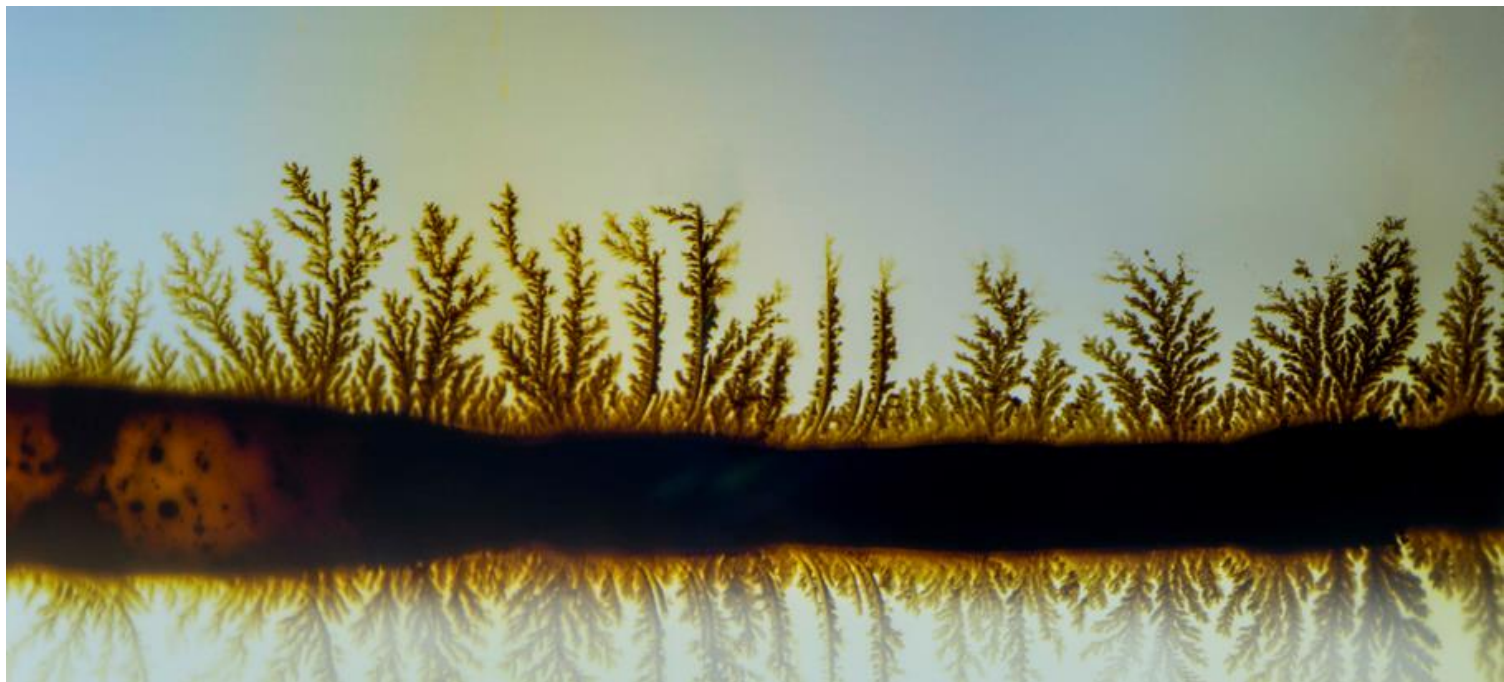
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[PAST SYMPOSIA](#)



## The Sinkankas Symposium

"The best gem mineral symposium in North America."  
— John Koivula, Analytical Microscopist, GIA

This agate from Minas Gerais, Brazil, contains an escape tube coated with manganese oxide dendrites that extend into the interior of the stone. FOV 16.94mm. Photomicrograph by Nathan Renfro, stone courtesy of the John Koivula Inclusion Collection.



## Sinkankas Symposium 2021

Tim Adams  
Patrick Dreher  
Dr. Peter Heaney  
William Larson  
Dr. Cigdem Lüle  
Nathan Renfro  
Dr. George Rossman  
Lisbet Thoresen  
Robert Weldon

The Rubens Vase, agate (18.6 cm h), Roman, c. AD 400. Walters  
Art Museum, inv. 42.562.



Seventeenth Annual Sinkankas Symposium  
Agate and Chalcedony (Virtual)  
April 24 – May 8, 2021  
*(pre-recorded sessions on-demand)*

co-sponsored by  
Gemological Society of San Diego  
and the Gemological Institute of America

Agate lily carving by Gerd Dreher, citrine mouse carving by Patrick Dreher.  
Photo by Robert Weldon. © GIA. Courtesy of the William F. Larson family.

[prevnext](#)

## SEVENTEENTH ANNUAL SINKANKAS SYMPOSIUM

### – AGATE and CHALCEDONY (VIRTUAL)

Named for one of the most distinguished and influential figures in gemology and mineralogy, the **Sinkankas Symposium** is an annual event featuring presentations by noted specialists working in diverse gem-related disciplines.

The theme of the 17th Annual Sinkankas Symposium is Agate and Chalcedony and will be in a virtual format this year. The virtual experience will feature a menu of nine pre-recorded 1/2 hour exclusive presentations available to view on-demand from Saturday, April 24, 2021 until Saturday, May 8, 2021 on the [Sinkankas Eventbrite page](#). You will be required to register in order to have access to these presentations.



Si and Ann Frazier, in El Cerrito, California. Photo: Jim Parrish.

The Sinkankas Symposium has been described as the most important gemological conference in North America by respected authorities on gemstones. Organized by **Roger Merk** for 13 years (2003–2015), the annual event is co-sponsored by the **Gemological Society of San Diego (GSSD)** and the **Gemological Institute of America (GIA)**. **Bill Larson** has been a generous supporter and speaker at the event since its inception.

This year's symposium is in honor of **Si Frazier** and **Ann Frazier** who have dedicated their lives to the study of the science, history, and beauty of agate and chalcedony. Si was a popular speaker at the Sinkankas Symposium and author of past Sinkankas Symposia articles.

## SEVENTEENTH ANNUAL SINKANKAS SYMPOSIUM

### – DATE, FORMAT & REGISTRATION

**DATE:** Saturday, April 24, 2021 – Saturday, May 8, 2021

Nine 30-minute pre-recorded presentations will be available to browse on demand at the Sinkankas Symposium EventBrite web page.

**REGISTRATION:** Open Now, online only. [2021-sinkankas-symposium.eventbrite.com](https://2021-sinkankas-symposium.eventbrite.com)

**COST:** Free. Registration required.

**PROCEEDINGS:** Free downloadable, print-friendly PDF. (No printed book this year.)

## SEVENTEENTH ANNUAL SINKANKAS SYMPOSIUM PROGRAM

### – SPEAKERS & TOPICS\*

Recognized specialists in fields ranging from geology and mineralogy to history, treatment, cutting and collecting will present on Agate and Chalcedony:

Tim Adams

Fabergé's Work with Agate and Chalcedony

Patrick Dreher

Dreher Carvings of Agates and Chalcedony

Dr. Peter Heaney

The Complex Mineralogy of Agates

William Larson

Collecting Crypto-crystalline Quartzes: A Conversation with William Larson

Dr. Cigdem Lüle

Chalcedonies of Anatolia: From Neolithic to Modern Day

Nathan Renfro

The Micro-World of Agate and Chalcedony

Dr. George R. Rossman

Cause of Color in Agate and Chalcedony

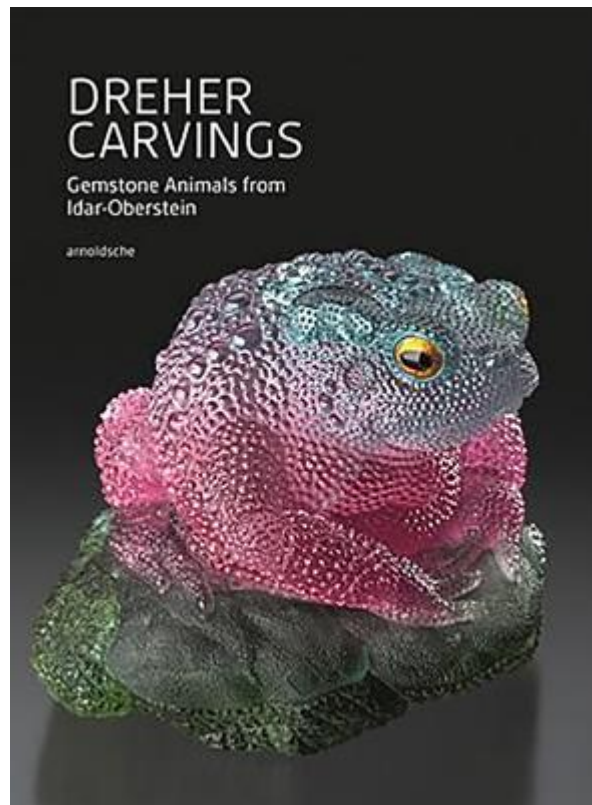
Lisbet Thoresen

The Cultural History of Agate and Chalcedony from Antiquity to the Renaissance

Robert Weldon

Challenges of Photographing Agates

*\* Presentations are subject to change without notice.*



**Wilhelm Lindemann, Will Larson and Ekkehard Schneider**  
**Dreher Carvings: Five Generations of Gemstone Animals from Idar-Oberstein**  
**(2018)**

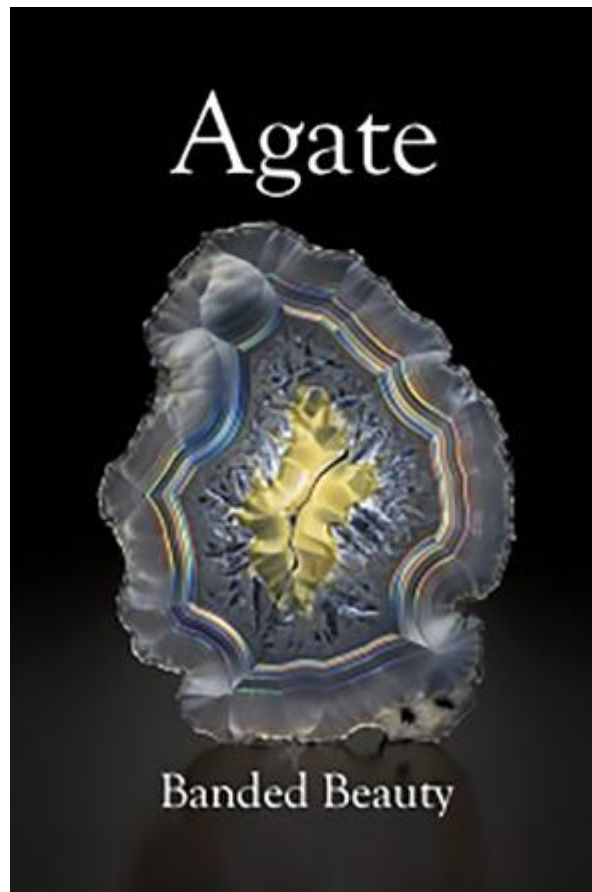
Selected masterpieces of lapidary carving by world-renowned gem carvers Peter and Gerd Dreher.

English. Hardcover with dust jacket, 240 pages, size: 22 x 29 cm, 200 color ills. Arnoldsche.

[GIA Library Holdings »](#)

[Amazon USA »](#)

[Arnoldsche Art Publishers »](#)



**Peter Heaney, Gloria Staebler with Bill Besse, Ann Frazier, Patricia Gray, eds.**

**Agate – Banded Beauty**

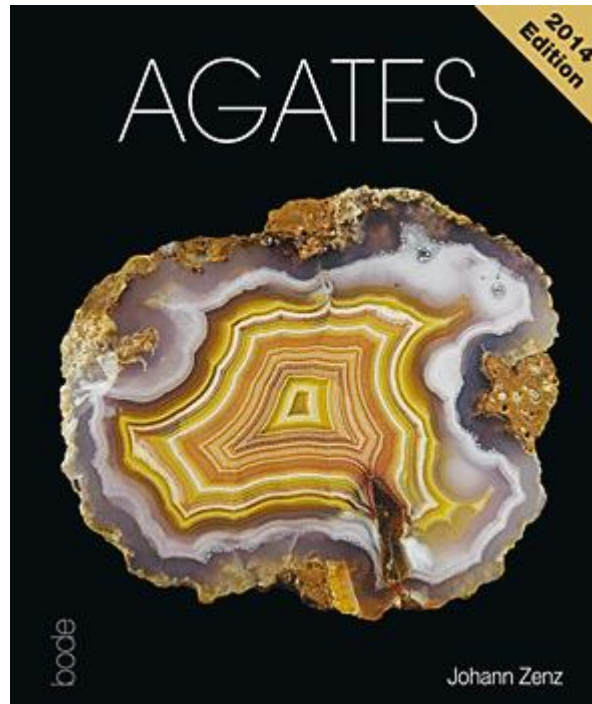
***Mineral Monograph No. 21***

**(2020)**

Contributions by: Peter Heaney, Si and Ann Frazier, Patricia Gray, Michael Gray, Alfredo Petrov, George Rossman, John Koivula and Tarun Adlakhaeds. Illustrations by: Robert Weldon, Jeff Scovil.

Perfect binding, 140 pages, size: A4. Lithographie.

**[Lithographie »](#)**



**Johann Zenz**

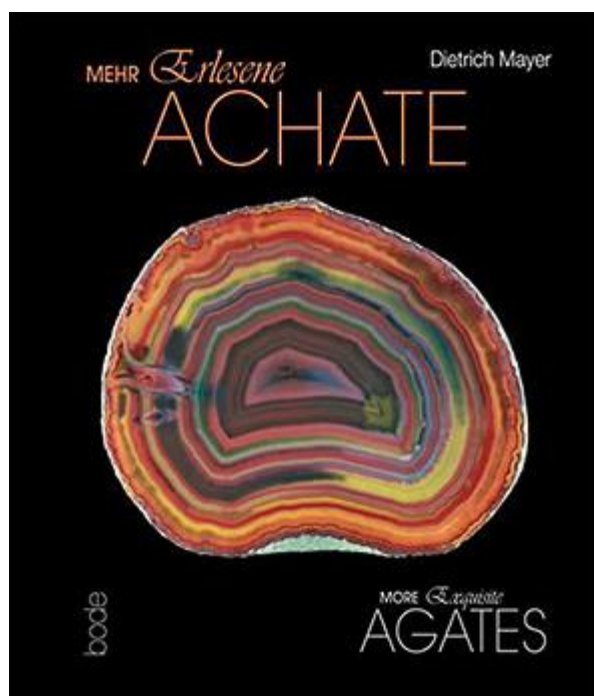
**Agates**

**(2014)**

This book is an updated, limited edition of the first of three volumes on Agate by Johann Zenz. English. Hardcover, 656 pages, size: 24x28 cm, 2,000 ills. Limited edition. Bode.

[GIA Library Holdings »](#)

[Bode »](#)



## THE CANADIAN KING - PART 4

By: Gene Ciancanelli

In Parts 1, 2 and 3, This story began with a call from Ian Paisley of The Paisley Mining Group asking for my services to advise him regarding a purchase offer of \$50,000 from Franco Western Petroleum Company for the Howland lease, which is within Utah's Howland Geothermal Field. The Howland lease is owned by Huron Gold Mines Ltd., a company within the Paisley Mining Group. First there was a visit to Middleton, Utah where I met Jack Von Hoene, managing agent for the Ryan Estate, which was the original owner of the Howland lease. Jack accompanied me on a field inspection of what soon was to become the Howland Geothermal Field. I then advised Huron Gold to drill their own well in the Howland Field. I assisted Huron Gold with raising the drilling money through an IPO stock offering. A well was successfully drilled and completed resulting in Ian Paisley and his associates making millions of dollars. The well was flow tested and found to be one of the largest geothermal wells ever drilled. The Howland Geothermal Field was unitized and Franco Western became the operator. Franco Western then bought Huron's lease for ten million dollars and I was dismissed.

## THE GYPSY GEOTHERMAL PROSPECT 1979

After my dismissal, all future dealings with Huron are through Frank Denton. Frank and I have a cordial professional relationship, but we never become close friends. A year later, Huron and PROSTEC were exploring the Gypsy Project in Nevada. Gypsy is a supposed geothermal property developed by the same PROSTEC geniuses, responsible for drilling the James Creek dry well. Previously, PROSTEC published a paper stating Gypsy is "a possible new discovery". The entire publication was wishful tripe. It takes chutzpah to announce a "possible discovery", without data from a single drill-hole. PROSTEC's "possible discovery" is based on wishful data extrapolation combined with a "best spin" analysis regarding geochemical and geophysical data.

One fall day the phone rings, Frank Denton requests an assessment of the Gypsy operation. I'm reluctant to again become involved with Huron following my dismissal by Ian, but Frank convinces me to disregard Ian's comments as an obnoxious drunk's ramblings. In November, I arrive in Austin, Nevada, population 90 people. The PROSTEC personnel are staying in the seedy (Austin has no other kind) Main Street Motel. I arrive on Saturday evening and can't find PROSTEC personnel at the motel or relaxing in the town's two bars. On Sunday morning there still are no PROSTEC personnel around and I decide to find the Gypsy Project. Frank has provided no maps to the Gypsy Project's location. All he knew was the project is "somewhere" west from Austin. That's about half the state of Nevada. All day long, I drive the dirt roads west of town, until finally, late in the afternoon and many miles to the west, I find a drilling rig. The rig is shut down and one man is changing the rig's engine oil. The mechanic is from Fallon, Nevada, hired to do periodic maintenance on the rig. He says, *"The drillers do no maintenance on the rig. They just beat the equipment to death"*. The mechanic is dissatisfied and is going to quit, because he drives, at his own expense, from Fallon out to the field to do this freezing work for \$4 an hour. After deducting his expenses, the mechanic is not earning the minimum wage he could make flipping hamburgers at McDonald's.

Day after day, I sit by the rig all day long, but no one shows up. One day, I'm bored and leave the rig at 11 AM. No one has been at the site for several days. I look over the project geology until 1:30 PM, when I return to the rig to eat lunch. I notice the daily drilling logbook is sitting open. I had closed the book that morning, after checking to see when work had last been done. In the morning the logbook indicated no one had been on site since the middle of the previous week, but during my absence someone stopped by to fill in the book. The logbook now contains entries showing continuous drilling operations have occurred during the days, when I knew no one had been present. The Gypsy Project has now descended to record falsification.

On Thursday morning, I arrive at the rig to find a driller, the mechanic, and a helper sitting doing nothing. They don't know what they are supposed to do, because at one point they overheard a discussion about moving the rig to a new location. (Gene) *"Why would you drive an hour from town, if you don't know what you are to do today?"* (Driller) *"If we wait around, someone will probably drive out and tell us what to do."* God knows the human mind is a terrible

thing to waste on guys like this. We sit around talking and waiting. I learn the drilling crew includes a foreman, who never visits the job, because he is living in Fallon with a prostitute, who works in a brothel. The foreman's son is the other driller and he rarely comes to work because he is also living with a prostitute across the state in Carson City. The \$4/hour mechanic is the foreman's brother. The mechanic is upset because he doesn't earn enough money to support a prostitute. Life can be cruel. This driller and his helper are not relatives. They resent the fact that *"they have to do all the work"*. It will soon become obvious that this resentment and no supervision results in the crew rarely doing any work. The men are doing nothing and I suggest, *"Isn't there something useful you could be doing while we are waiting?"* (Driller) *"Well, last week we were drilling out cement inside the casing on this well. I suppose we could continue drilling cement, but the broken water pump has to be fixed before we can resume drilling."* There is work to be done, like fixing the broken pump, but these two don't care and I'm just an observer. Three hours later, a rancher drives up and announces they are to move to a new location. The driller is not sure where to go, but decides it must be a location PROSTEC once showed to him. Based upon the rancher's word and the driller's best guess, the operation now moves to a new well site. The crew starts throwing equipment and tools on their flatbed truck. Then off they go to the new drill site. As the overloaded truck drives along, various tools and equipment are falling off into the sagebrush along the bumpy dirt road. Although they know stuff is falling off, they don't stop to retrieve anything. Two days later, drilling will resume and each time something is missing, they will shut down the rig and drive along the road searching for the lost tool or part. At no time will they make an effort to pick up all the "lost" items along the roadway. On each trip only the specific part or tool needed at that very moment is retrieved.

It takes two full days to move from one well location to another. Normally such a move takes less than eight hours, but this is not a normal drilling operation. The rancher has to leave before the move is complete, because he is going to Disneyland. I'm thinking, *"Why drive 500 miles to Los Angeles, when you are already in Fantasyland?"* Drilling begins on Wednesday afternoon, but they "unexpectedly realize" cement can't be mixed to set conductor pipe, because the water truck is in Fallon for repairs. The water truck arrives late in the afternoon, but now there is no water, because the rancher locked the well's pump before he left for Disneyland.

This is the most screwed-up operation that I've ever seen or ever will see and it is going to get much worse. I'm filled with anger, frustration, and disbelief, as I return to Austin to meet with PROSTEC's project manager, Jim Corbet. Jim is a young geologist with no authority. I suggest a telephone conference with PROSTEC's president, Dean Fenzel. Dean acknowledges this is a less than satisfactory operation, but he isn't too concerned. The drilling company is American Westward Drilling, a one-rig outfit owned by Marion "Pop" Joiner a Tulsa Oklahoma entrepreneur and Dean's "close friend". Now the "close friend" element enters the picture adding to the circus atmosphere. I know Pop Joiner and over the years he has occasionally called for information or advice, but I never did any consulting for him. Pop had a finger in more failed get rich quick deals than any person I ever knew. I liked Pop, because he was basically honest and had more bad luck than Homer's Odysseus. In one story that was told, Pop became aware of a small oil company that was considering selling an oil field. Pop went to a major oil company and told them that he knew of a deal worth hundreds of millions of dollars. He was willing to disclose this deal for a purchase commission and lifelong employment. The deal was struck and Pop disclosed the opportunity. Following successful negotiations, Pop went to the closing with his new future employer. The deal was signed and the check passed to the other company. On the drive back to the major oil company's office, the limo pulled to the side of the road out in the middle of nowhere. They threw Pop out of the limo and told him there was no commission or lifetime job. He could sue this big oil company but their lawyers could drag the lawsuit out for years and Pop knew he did not have the money to fight them. Pop hitchhiked to town with empty pockets and a bitter taste in his mouth.

For weeks, I witness PROSTEC's dysfunctional day-to-day operations at Gypsy. Meanwhile, I'm studying the geology and it's obvious there is nothing here. It is beyond belief that anyone would spend money on this sagebrush dog. Jim is the managing geologist of this circus, but he is rarely at the project site. PROSTEC's management style demands that Jim can always be reached by telephone and throughout the day there are numerous conference calls. Jim stays in Austin by his motel telephone, because cell phones don't yet exist. The drilling crew are an hour away and work slowly without supervision. During rare periods, when drilling actually occurs, rock samples coming from

the hole aren't collected or examined. Everyone in PROSTEC is a chief and no one ever trained, fresh out of college, Jim. Jim and I exchange information at breakfast and dinner. I'm at the rig all day, while Jim makes two 15-minute visits in the morning and late afternoon and then he races back to Austin for "telephone standby" duty. Each morning, Jim delivers Denver's daily operational plan, which the driller ignores without consequence.



Austin's finest gourmet restaurant offers an unforgettable dining experience.

Breakfast in Austin is a gastronomic experience not to be missed. There is only one restaurant open and it is the only café for 100 miles in any direction. The restaurant supports its own insect and rat ecosystem. I have been in that café in January, when it is below freezing outside and no fly has been alive in Nevada for months. A fly swarm buzzing through a thick cigarette smoke haze greets diners entering the café. (Now remember this is all true) The first morning, Jim orders scrambled eggs, which arrive with a cigarette butt mixed among his eggs. The next morning, he orders scrambled eggs and this time there is a burned match in his eggs. I guess Jim is a slow learner, because the third morning he again orders scrambled eggs. The eggs arrive with no matchstick or cigarette butt mixed in, but a very big black fly is lying dead right on top of the eggs. Jim starts to cuss and raise a fuss, until I cut him off by saying, *"Things are looking up for you. They are starting to serve meat with the eggs."* On the fourth day, Jim follows my advice and switches to fried eggs. These young fellows have a lot to learn that isn't in university textbooks.

I insistence, Dean and Frank visit the Gypsy project. That will be the last time Frank and I ever meet. Frank flies his own plane and I meet them at a deserted World War II emergency airstrip. The project is in such chaos and the equipment in such disrepair, that they decide to suspend operations until American Westward Drilling can get reorganized. The Gypsy project will prove to be American Westward Drilling's last drilling project. Naturally, Pop Joiner is furious with "Gene's interference". Pop has many friends in the geothermal industry and I soon acquire a reputation as a "trouble maker". I probably deserve that reputation. I repeatedly disclosed the stupidity, theft, and slipshod operations, that are a hallmark of the geothermal industry. My friend Doug once told me, *"Gino you must have flunked diplomacy in college."* In the coming years, I spoke with Pop from time to time, when he called needing a favor. Years later Pop thanked me for telling him his employees were worms picking his pocket.



A Gypsy drill hole. Picture taken on a cold day with mist rising off the warmer drilling mud tank.

A few weeks pass and operations are to resume on a Wednesday. I'm back in Austin, but no one is at the drill site. They're still in Fallon waiting on parts to fix the junk rig. Drilling eventually resumes and in four hours the rig once again breaks down. The next day, no one arrives until 2 PM, when the crew begins to break down the now broken rig to move back to the hole they were drilling when I first arrived. On Friday, they continue moving and randomly distributing tools and parts to join those still lost along the roadway back to the first location. These guys never learn from their previous mistakes. So far, I've never seen nor will I ever see the drilling company foreman or his son on the job site. The son is supposed to be working the night shift, but there is never evidence any work has occurred overnight. Father and son apparently prefer to conduct their drilling activities in Fallon and Carson City's brothels. On December 1<sup>st</sup>, my observations and concerns are relayed to Frank by telephone and letter. He asks me to continue to monitor the operation, because he's going to question the expenses being charged by PROSTEC.

Lacking authority, it is frustrating to sit around all day waiting for American Westward Drilling Company to do anything. I decide to do something useful which in reality is a waste of time, but I did find some ammonite fossils. I will map the local geology, which is a task PROSTEC's geologists seem to abhor. One well was located to test for geothermal fluid permeability along a fault between Paleozoic limestone and Tertiary ash-flow tuff. PROSTEC senior geologist, Dr. Walker, determined the fault's location. He actually bragged to me he mapped the entire area from his car without once leaving the vehicle, which I found to be entirely credible. The fault doesn't seem obvious to me and I want to better understand this structure. I immediately find several outcrops that prove the structure is not a fault but an unconformity. At Gypsy a Tertiary ash-flow tuff erupted onto an erosion surface on Paleozoic limestone that is several hundred million years older. The superheated volcanic rocks baked the soil overlying the limestone to a brick red color containing charcoal remains of former plant roots. There is no doubting the geology. It should be obvious to PROSTEC's geologists, if they bothered to leave their cars and walk around to look at the rocks. They even refused to look at the evidence when I tried to point it out to them, but their minds were made up and they did not want to be confused. There is absolutely no geologic reason to justify or drill this site. Continuing to study the geology by walking, not driving, across the project area, I find other evidence that this is not a viable geothermal resource area.

Those observations and concerns are communicated to Frank Denton. Negative news is never well received; especially by the Paisley Group.

Over the next few years, there are infrequent telephone conversations, when Frank Denton and his geologists “pick my brain” for free. Huron changes its name to Canada Thermal Company, but I continue to refer to them as Huron. Canada Thermal is now a geothermal consulting firm with PROSTEC as their only client. The blind are truly leading the blind in that relationship.

In 2009, the U. S. Department of Energy (DOE) awarded a five-million-dollar grant (again your money) to a small geothermal company to explore and develop the Gypsy Geothermal Reservoir. There is only one problem. There is no Gypsy Geothermal Reservoir. Nothing occurred at Gypsy after they received the DOE grant. Once again, taxpayers are fleeced by crooked politicians.



**March Mystery photo: Moab, Utah** Moab is a city in eastern Utah. It's a gateway to massive red rock formations in Arches National Park. Southwest, Canyonlands National Park features mesas and buttes carved by the Green and Colorado rivers, plus Native American rock art. Dinosaur tracks can be found at sites like Bull Canyon Overlook and Copper Ridge. In the city, collections at the Museum of Moab include dinosaur bones and archaeological artifacts.



APRIL MYSTERY PHOTO – ANY GUESSES?



## APRIL BIRTHSTONE – IS DIAMOND THE ONLY OPTION?



One of the intriguing things about birthstones is the fact there is no unanimous agreement on what each one should be and most sources site multiple stones for the same month! Different cultures have developed differing birthstone calendars and these have often been revised and changed over the years. The advantage this has created for the modern-day consumer is that it is now possible to choose from a number of stones for some months of the year according to your taste, ethical considerations and budget. April is a case in point, as traditionally diamond was regarded as the only birthstone for the month but there are actually four other birthstones that have been associated with it over the centuries which are also worth considering. In recent times, diamond's reputation as a gemstone has been sullied by its association with 'conflict' or 'blood' stones, which have been used to fund organized crime, violence, insurrection and civil war in many developing nations, most notably in Africa. Furthermore, diamond production has caused environmental damage in and

around many production sites, as well as courting accusations of labor exploitation. Furthermore, clever marketing of diamonds over the last century or so, largely by De Beers, has had the effect of inflating prices by a combination of increasing demand and deliberately restricting supply. For these reasons, some have chosen to shun diamonds as an April birthstone in favor of four interesting alternatives that have proven credibility as true April birthstones: sapphire; opal; white topaz; quartz. The inclusion of some of these gems as April birthstones stretches back to the ancient civilizations of antiquity, far pre-dating the use of diamonds. One such example is the Ayurvedic birthstone calendar from ancient India, which dates back more than 3,500 years. Furthermore, some stones that are similar to diamonds have also been included more recently. The main common element among all birthstones lies in the belief they bring good fortune and prosperity to their owners. Many of the ancient birthstones were largely dictated by the abundance (or absence) of particular gemstones in the environment surrounding each culture and they certainly had an influence on the modern birthstone calendars. The first attempt at standardization of the birthstone calendar was made by the American National Association of Jewelers in 1912. Since this time many other gemological societies have established their own calendars, the more modern of which often refer to “alternative” or “secondary” birthstone options for certain months. Some calendars do list diamond as the only birthstone of April but this is largely a consequence of the intense marketing and popularity of this stone over the past century. Two of the four alternative April birthstones, sapphire and opal, were long established for the month of April by many ancient cultures, long before diamond. White topaz and quartz were added more recently, largely due to their physical similarity to diamond, affording eye-clean color and scintillation (or ‘sparkle’). Sapphire was recognized by the ancient Roman, Slavic, Hebrew and Arabic calendars as the April birthstone. Sapphire is a precious variety of the corundum family of gemstones, which includes ruby, and it is in fact true to say that a ruby is effectively a red ‘sapphire’ (whereas a sapphire may be found in a spectrum of colours, including blue, pink, yellow, orange, green, black and white). Blue sapphire is the most popular but pink, green and yellow are increasingly in demand. Sapphire is said to conjure inner peace and serenity, whilst facilitating the release of anxiety and tension. This enigmatic stone has also been linked with relieving depression and frustration, as well as aiding spiritual enlightenment. Opal was hailed the birthstone of April in the ancient Tibetan calendar (sometimes referred to as the “mystical birthstone calendar” in ancient writings). Opal is a beautiful stone that is renowned for its refraction of a rainbow of color, a phenomena caused by layers of silica embedded within the physical structure of the stone. Opal is a fragile gemstone and as such must be handled with care. In chemical terms it is a “mineraloid,” an “amorphous” stone with no crystalline structure. The Romans regarded opal as a symbol of optimism and purity, while the ancient Greeks revered it as a source of wisdom. In modern times, opal is highly regarded for its aesthetic and fine reflective qualities. Some spiritualists also believe it helps people express their thoughts and feelings more effectively. White topaz has not been regarded as an April birthstone historically but it has come into modern use as such, largely due to its physical similarity to diamond. One of the key characteristics of white topaz is the ease with which cutters can facet the stone in order to generate spectacular scintillation. Spiritually topaz is said to help its owner abandon negative energy and trapped thoughts. Akin to topaz, quartz is also a popular alternative to diamond due to its physical similarity and it is especially popular as an April birthstone in the UK. Quartz is said to inspire creativity and it is available in the full spectrum of color but the white or colorless variety is most closely associated with April. A highly unusual member of the quartz family is the Herkimer Diamond. Herkimer diamonds are actually not diamonds at all but a form of quartz found only in Herkimer County, New York State, USA. They acquired the name “diamond” by virtue of the fact they form as double terminated crystals, or diamond shaped, crystals and they bear a close resemblance to the precious stone. To those for whom the month of April holds a special significance, it is reassuring to know there are a range of birthstones available with varying degrees of historical connections and modern spiritual interpretations. The main consideration is that you choose as stone to which you are drawn and feel you have a connection with.

