

# David H. Fell & Company, Inc.

# R E P O R T

Spring 2006 • Volume 16 • Number 2

**WE'LL SUPPLY THE METAL, YOU SUPPLY THE TALENT**

## New DHF 950 Palladium

If you're looking for a metal that is naturally white, requires no rhodium plating, is versatile, is tarnish resistant, and priced near white gold and below platinum metals, then DHF 950 Palladium is the solution for you. DHF 950 Palladium has all the necessary ingredients for casting and fabricating any white-colored jewelry piece.

### Casting

Much speculation exists as to which method can be used to cast 950 Palladium. At this time we recommend you maintain a high level of quality by sending your casting to a company that has the equipment as well as the process experience to maintain quality.

Casting DHF 950 Palladium is similar to casting in platinum because of the high temperatures and the equipment needed. Compared to the casting temperature of 14K White Gold (1892° F) and 10% Iridium Platinum (3372° F), palladium will cast at 2605° F.

Like platinum, sprue gates need to be as thick. Another great thing about Palladium is it has a lower density, which means the metal will fill a mold completely and with less turbulence.

When casting palladium it is recommended that you use a machine with a controlled atmosphere such as a vacuum-induction casting machine. For quality castings, these machines are appropriate because the melt temperature needs to be exact, the atmosphere needs to be controlled, and, most importantly, an argon gas must back-fill the casting area.

Note: Using hydrogen is not recommended because palladium absorbs the gas. If hydrogen is used, the result will be brittle castings.

### Fabricating

Fabrication is where DHF 950 Palladium will excel. If you will be bending or shaping wire and sheet, this metal is extremely malleable. At this time, we are still testing the alloy for sheet and wire, however, we can say with confidence that you can reduce any gauge up to 80% before annealing.

### Soldering

Soldering can be completed by using specially formulated palladium solders or by fusing. DHF Co. has created palladium solders that are an excellent color match. They come in easy, medium, hard. Low temperature platinum solders may be used as well.

While soldering, the piece may discolor a little. If a bluish color results it can easily be removed with a quick buff.

### Finishing

The DHF 950 Palladium should be finished with the same equipment and materials used for a platinum piece. However there aren't as many steps needed. When pre-finishing palladium use the same abrasives and polishing compounds used for platinum.

### Products Available

Since 950 Palladium can be cast and fabricated, DHF Co. currently offers this metal in casting grain and solders. In the near future, it will be available in sheet and wire.

If you would like more information about DHF 950 Palladium visit booth 61500 in the Equipment & Technology, Suppliers section at the JCK Show. You may also request information or place an order by calling 800-822-1996.

## Palladium for Jewelry

The use of palladium to make jewelry has increased significantly in the last 5 years. Retailers, bench jewelers, and manufacturers are finding the metal to be a better alternative for many reasons. Being a PGM (Platinum Group Metal), it is as rare as platinum. It is much more affordable than platinum or gold. The manufacturing capabilities are outstanding. And the superior white color matches the end-consumer's demand for white colored jewelry.

### Price

With the increasing cost of platinum and gold, palladium is becoming a logical alternative for the manufacturer, retailer, and end-consumer. From 2000 to 2005 platinum and gold prices have increased by a cumulative average of 160%. In the same 5 years palladium prices have decreased by 330%. Given this decrease in cost and the manufacturing capabilities described in the rest of this article, palladium is an excellent precious metal alternative.

### JCK Booth #61500 is SWEET!

Visit David H. Fell & Company in the Equipment, Technology & Supplies area to enjoy a delicious, sweet snack while you view our new products and services.

*continued on p 2*

# New PATTERN SHEET Patterns

**Y**ou've asked for it and now David H. Fell & Company is providing it. We've designed a new program to increase the selection of patterns available to metalsmiths, designers, and students during 2006.

Each quarter a new selection of patterns will be introduced, and will be available for a select period of time. This means, if you've wanted a particular pattern that we haven't produced for quite

awhile make sure to check out this and future issues of our newsletter.

This quarter, David H. Fell & Company is proud to release its first group of patterns.

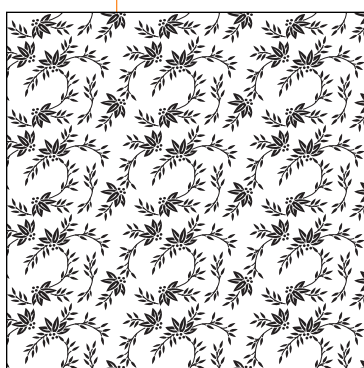
Like our current in-stock selection, these patterns come in 6"× 6" Sterling Silver Sheet and are available in 24 and 26 gauge until August 31, 2006.

If this is your first introduction to PATTERN SHEET then let us tell you

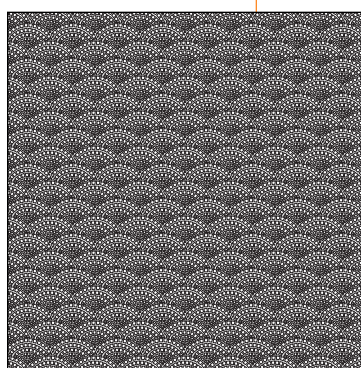
that this product will fulfill your needs for a product that offers a big return on investment, time savings, and too many manufacturing qualities to list. (Patterns are shown below at 50% scale.)



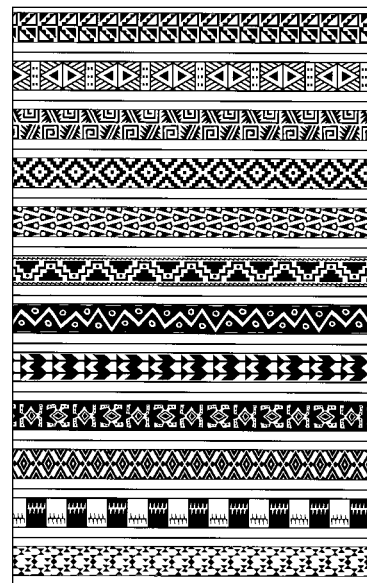
**Kitties Galore P364**



**Floral Vines P42**



**Cobble-Roman P227**



**Stackable Bracelet Sampler #1 P385**

## Palladium for Jewelry

*continued from front page*

### Manufacturing Characteristics

People don't think about the scientific characteristics of metals often, but the information in the table below can actually tell you a lot about how the metal will work when applied to making jewelry.

### 14K & 18K Palladium White Gold

Adding palladium to gold has been around since the turn of the 20th century. Like nickel, palladium serves as the bleaching agent to achieve a white color. Also when you use palladium white gold, you lessen the chance of problems typically associated with casting, sizing, and repairing a nickel-based white gold.

Adding palladium to gold has many benefits but there is one thing you want to make sure you have in check, the high temperatures. When you fabricate or cast palladium white gold, you must consider

the high flask and melt temperatures.

When casting we suggest using phosphate bonded investment rather than the normal gold investments. Once the palladium white gold pieces are cast we recommend that the flask be air cooled to a black heat and then quenched.

When fabricating with palladium white gold sheet or wire we recommend using low temperature platinum solder instead of karat white gold solders.

### 950 Palladium

The newest, or reinvented, metal on the block is 950 Palladium. (Also known as 95% Palladium.) This 950 Palladium shares the same characteristics as the Palladium White Gold for about 80% of the cost per ounce. For more info on this metal, see the front page article "New DHF 950 Palladium."

Price/Metal	Annealing Temp F	Density tr. oz./in <sup>3</sup>	Vickers Hardness	Melting Temp F	Melting Temp C	Approx. Price tr. oz.*
14K Yellow	1200 – 1300	6.89	140	1553	879	\$416.55
14K White	1400 – 1500	6.71	165	1693	996	\$417.53
<b>14K Palladium White</b>	<b>1300 – 1400</b>	<b>7.67</b>	<b>150</b>	<b>2296</b>	<b>1258</b>	<b>\$492.74</b>
18K Yellow	1200 – 1300	8.21	155	1668	927	\$529.75
18K White	1400 – 1500	7.71	265	1695	943	\$530.73
<b>18K Palladium White</b>	<b>1300 – 1400</b>	<b>8.38</b>	<b>130</b>	<b>2340</b>	<b>1313</b>	<b>\$575.95</b>
Pure Pd	1400 – 1450	6.33	81	2831	1555	\$371.45
<b>950 Pd</b>	<b>1420 – 1620</b>	<b>6.24</b>	<b>120</b>	<b>2442</b>	<b>1373</b>	<b>\$376.95</b>
10% IR/PT	1800 – 1900	11.35	115	3236	1788	\$1252.00

\*Based on these market prices: Gold \$667 • Platinum \$1304 • Palladium \$352 • Silver \$13 • Iridium \$400

## Bruce Busby Nominated for CLSDA BOD Membership

At a recent meeting for the board of directors of the Collateral Loan and Second Hand Dealers Association (CLSDA) customer representative, Bruce Busby, was offered the opportunity to support the California pawnbroker community through a seat on the board. After only a short while (2 seconds), Bruce Busby happily accepted the offer and the opportunity to stand shoulder-to-shoulder with California pawnbrokers and the industry in the day-to-day struggles.

Sam Shocket of King's Jewelry & Loan in Los Angeles was very excited about the decision to invite vendors to the board of directors.

"Bruce is listening to the issues affecting pawnbrokers with the mindset of taking action. He is going to be out there on the road, in the pawn shops, to emphasize that all pawnbrokers will benefit by coming together as members of CLSDA, but more importantly, as the pawn industry of California."

When we asked Bruce what he



hopes to accomplish in his new position on the board he responded by saying,

"As a representative of DHF Co. and CLSDA, I want to assist pawnbrokers in achieving an extremely high, if not the highest, level of precious metal accountability that they can receive. More importantly I want to get involved in the issues affecting the California pawnbroker because in the end, whatever affects the pawnbroker, affects the vendors that serve them."

Some of the current items Bruce will be assisting CLSDA with are: informing California pawnbrokers about California Bill AB 1497, telling non-members the importance of becoming a CLSDA member, and assisting pawnbrokers to be compliant with the Patriot Act.

If you would like more information about CLSDA you may call Bruce at (800) 822-1996 or Sam Shocket at (213) 383-5555.

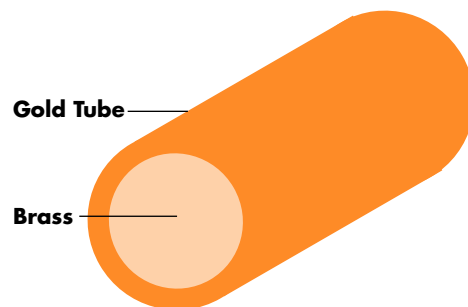
## Gold-Filled Wire

David H. Fell & Company is proud to announce the addition of gold-filled wire to its selection of products. Gold-filled wire, sometimes called rolled gold, is a wonderful choice for wire jewelry makers that want to add the look of gold for a much lower price. It is appropriate for all types of jewelry. For most people, it will last their entire lifetime without showing signs of wear.

Gold-filled is made by forming a tube of karat gold and filling the tube with a base metal, usually jeweler's brass. The karat gold content is 5% or  $\frac{1}{20}$  of the total wire. See illustration at right.

want to include Gold-filled on your list of items to order from DHF Co.

DHF Co. Gold-filled Wire comes in 22, 24 and 26 gauge. It is available dead-soft, in any length or quantity.



Gold-Filled Wire Example

### A Few Facts About DHF Co. Gold-Filled Wire

- DHF Co. Gold-filled wire lets you create high fashion jewelry at a fraction of the cost of solid gold and sells extremely well because of the fascination with gold.
- There is 100 times more gold in DHF Co. Gold-filled than any gold plate.
- Basically, DHF Co. Gold-filled wire is a good metal for a good price. It should always be represented properly and never misrepresented to your customer as solid gold.

If you're a student, hobbyist, or small-scale designer looking to give one of your wire pieces a golden look, you'll

## David H. Fell & Company, Inc.

*Precious Metals Refiner and Manufacturer of Quality Mill Products*

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### DHF Report

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# Sampling Techniques

Samples are all around us. We get them in the supermarket, we get them in the nursery, and we get them in the mail. We get samples because we want to gain a reasonable idea of what we'll be receiving when we purchase the full version. Sampling makes perfect sense for the miner because miners need to have a reasonable idea as to how much profit an area of land will yield over a period of time.

After Chris Ralph published, *Understanding Sampling Techniques*, in the December '05 *California Mining Journal* we asked if he could share with our mining readers the importance of sampling, how to sample effectively, and the main tools.

## Why should I bother Sampling?

No mineral deposit is uniformly rich, in fact most are extremely variable. If the deposit is a good one, some spots may be rich, some will be lower grade but still rich enough to be profitable, but much will be too low in grade to work profitably. When rock is too low in grade to be processed at a profit, it is waste and should be discarded. Every ton of material treated, which does not pay for processing and yield a profit, is lost money. And every ton of ore accidentally tossed on to the waste heap is potential profit lost.

The big operators spend huge amounts of money to sample so they know in advance what they have to work with at their mine. They have a good idea before mining begins how much waste and how much ore they have. They sample all their ores as they are mined to insure waste is discarded and all profitable ore is processed so the valuable materials are extracted. Successful mining companies know that the investment necessary for a good sampling program is well worth the time and dollars expended.

Far too often small operators, in a mistaken attempt to reduce costs, conduct little or no sampling before beginning to mine. An active, accurate and efficient sampling program is critical to the operations of a profitable mine.

## How to take better Samples

For samples to yield useful information they need to be taken without bias, taken in a consistent manner and the sample location must be accurately located in space. In sampling, the goal is to characterize the extent and grade of deposit, determine its size, typical grade and other characteristics. The famous "nugget effect" occurs when a sample includes a nugget or other piece of high-

most difficult to sample properly. You will get better results when you carefully plan all the elements of your sampling program in advance, and then stick to that plan.

## Sampling tools

Samples can be taken with picks, shovels, drills, backhoes and many other tools. Other tools such as GPS and surveying equipment are used to accurately locate the site of each sample. The particular tools and techniques to be used should be carefully planned out during the design of the sampling program. Each program will vary somewhat with the deposit, but the goal of sampling is to learn what you have, and that information is critical to allow the management to accurately guide and plan the mine's operations.

Chris Ralph has a degree in Mining Engineering from the Mackay School of Mines in Reno. He has worked for precious metal mining companies conducting both surface and underground operations. After working in the mining industry, he has continued his interest in mining as an individual prospector. He can be reached through

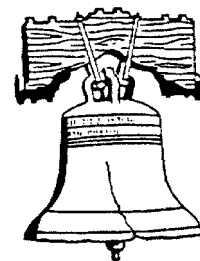
the internet at  
chrisralph218@hotmail.com.

*Every ton of material treated,  
which does not pay  
for processing  
and yield a profit,  
is lost money.*

grade material, giving an over all value much higher than the true average.

Some deposits are like chocolate chip cookies with a few "chips" of high grade spread thinly through the "dough" of the whole deposit. Many placers tend to be like this and as a result these types of deposits are very difficult to sample as you will get a few samples with very high values where the good stuff was included, and many more that are very low in grade where the high grade was not included in the assay. Larger volume bulk samples and a combination of both the high and the low results need to be considered to give a true average. There are hard rock deposits with characteristics like this, and they are among the

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## DHF Employee Profile: Leoni Armendarez

**I**f you saw the technique Leoni Armendarez uses in each step of the melting process you would probably think he has a degree in metallurgy. The reality is, Leoni has not recorded a minute of time in a classroom discussing the affect copper and borax have on a gold refining lot. More importantly, he has over twenty-eight years of hands-on experience melting precious metals. Of which twenty-three of those years have been with David H. Fell & Company.

Leoni started melting precious metals in 1973 for a company called Bear Paw Mining. It was a small refining outfit that operated 24 hours, six-days a week. It was a great place for Leoni to begin in melting, but given the hours of operation, he eventually decided he wanted something different for himself and his family. So through an industry connection he came to meet David Fell.

"It's hard to find people that really enjoy what they do. Leoni was wide-eyed and bushy-tailed when he came to work for me. Ever since then he's been an extremely hard worker and valuable asset to our refining department," says David Fell.

Since the first day Leoni started working for DHF Co. he has found his job responsibilities to be very rewarding. "I like working at David H. Fell & Company for two reasons, 1) it's challenging, and 2) I know I will leave at the end of the day feeling I've completed 10 hours working for something that is important to me, to customers, and to the owners."

When Leoni isn't at work, being challenged by the heat of mixing precious metals, he's resting up by engaging



Leoni with Dave Fell.

his mind in various books or watching professional sports. His favorite books are mystery novels but he will on occasion mix it up by reading one on investment or psychological theory. As for sports, he is a big Lakers fan. He doesn't ever go to the games because he feels he has perfect accommodations right from his living room. Unfortunately at the time this article was being written, the Lakers were knocked out of the playoffs.) "Always be a good worker" are the words his parents engraved into Leoni's mind. Therefore he would like any prospective customer, or current customer to know that they can put their trust in the fact that one of the most experienced teams in the business is working hard to get them the highest recovery possible from their refining lot.

Name: **Leoni Armendarez**

Started: **1983**

Title: **Melter**

Interests: **Reading fiction & nonfiction books, watching basketball and baseball**

## See DHF Co. at These Upcoming Trade Shows in 2006

JCK Las Vegas	June 2-7	Booth 61500
NPA Convention	July 18-20	Booth 421
West Coast Jewelry Show	August 20-21	Booth 153

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## Designer Spotlight: Pamela Froman, A Rising Star

**Question:** What do Whoopi Goldberg, Debra Messing, Molly Sims and JCK have in common?

**Answer:** They all know and love the handmade, colored gold jewelry that feature exquisite natural stones from Pamela Froman, a rising star at 2006 JCK Las Vegas.

**P**amela began making jewelry as gifts for friends and relatives while attending FIT in NYC as a Fashion Design major. The gifts were so well received that she made a small collection to sell at craft shows and street fairs. At one of these shows, a large costume jewelry company approached her to design for them; she took this as a sign, and decided to change her



major to Jewelry Design. On the advice of her professor and mentor, Madame Sandra Boucher, she moved to Paris, where she lived for 3 years, designing high fashion collections for Courreges, Cacharel, Carita, and Guy Larouche.

While she enjoyed the challenge of designing for established labels, she wasn't able to fully express her personal definition of exceptional jewelry.

In 2003, she began work on her signature line, the Pamela Froman Fine Jewelry Collection. Today, the Pamela Froman Fine Jewelry Collection is comprised mostly of one-of-a-kind and limited edition pieces, as well as unique handmade chains, created from Platinum, 22K, or a combination of carefully mixed colors of 18K Gold (Yellow, Pink, Green, and White).

Pamela loves to use multiple colors of 18K gold with colored stones because they create a contemporary look that can be worn with designer jeans on the weekend, or with a designer gown on the red carpet. Pamela said, "The color of the metal is very important to me; I searched a few different companies before I found David H. Fell & Company had the colors my jewelry needed. With DHF Co.'s selection, I obtained my specific colors of 18K Yellow, Pink, & Green gold to accomplish the look and feel for my collection."

To see the Pamela Froman Fine Jewelry Collection, visit booth 18153 in the Designer Center at the JCK Show in Las Vegas. You may also go to her website, [www.pamelafroman.com](http://www.pamelafroman.com).

