

# CORNERSTONE

 ACCREDITED GEMOLOGISTS ASSOCIATION



**COLOR GRADING COLORED DIAMONDS**  
**ICSL COLOURED STONE CERTIFICATION SYSTEM**  
**MONTANA SAPPHIRES**  
**MEMBERSHIP DIRECTORY**

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# COLOR GRADING COLORED DIAMONDS

*Transcript of lecture  
by Chuck Meyer*

I have had no time to collect my thoughts as I have just run over from the airport, but I have also had no time to get nervous, so I guess it works both ways.

Last time I was here, I spoke on pricing and promotion of natural fancy color diamonds. We talked primarily about how the four C's are evaluated in the pricing of natural fancy color diamonds, and on how they can be used in jewelry and how we can promote the use and knowledge of them.

Today we will focus exclusively on the color element of the four C's and some of the tools that we use in the cutting of the diamonds and the selling and pricing of the diamonds to evaluate the color. This will only be a small part of what I am here to say today. We will pass around some stones to give you some idea of color range. But now I would like to read to you an article that I just finished and which hopefully will be in a trade magazine which I cannot name right now as it will be in the next couple of months. It is a takeoff from the same kind of idea that we are working towards today in colored diamonds. To give you some background on the article, we specialize in cutting unusual, hard to price diamonds such as natural fancy colors and fancy shapes. We have discovered over the last many years, as certificates have been important in the industry, that certificates leave something to be desired, even the most thorough GIA certificates, when it comes to fancy colored and fancy shaped diamonds. What I attempted to do in the article was to look at how we as jewelers and appraisers look at diamonds and look at the elements of diamonds that do not show up on certificates, and how these elements help us in the appraisal of these diamonds. In many cases this information is not found on certificates when it comes to fancy colors and fancy shapes, and it can make a

difference of as much as 50% in the market value of the stones.

Lets go back to the definition of natural, fancy color diamonds. The grading of color in diamonds has always been quite subjective. What has been going on by myself and others is to make the criteria for describing and evaluating fancy color diamonds more objective. At best it is very subjective and even the GIA, which usually uses a very scientific and objective approach, defines a natural fancy color diamond as one that has a pleasing color to the eye in the face-up position. That is a quote, and that defines a natural fancy color diamond. Second to that in a similar definition from the summer of last year, the range of the yellows obviously must exhibit enough yellow to go beyond Z on the master scale, and the grays, greens, violets and blues, enough to show some of the color. This is why you will very often see fancy color pinks, blues and violets that are obviously certified faint, and they are indeed faint and we have to struggle to see the color once they are in mountings. One more aspect on the definition is to limit the expression "natural fancy color diamonds" in reverse and know we are talking about diamonds. They have color clearly, not light color, but something that has a strong pleasing color to the eye in a face up position, a color that is fancy and attractive, which is why we have brown diamonds which are clearly brown, but are not necessarily fancy, but are natural. They are not treated, they come from nature that way.

In rating natural fancy color, obviously of the four C's, the most important factor in the pricing and the appraisal of these stones is color. Cut has its place as does the clarity of the stone and as obviously does the weight. So the criteria by which we are looking at natural fancy color stones for appraising is color, and that is what we will be focusing on today.

There are small differences in color that yield wide differences in values. Two of the boxes that we are passing around today will be showing a range of natural fancy colors going from a fancy light yellow to two stones which are both fancy yellow, one slightly better than the other, and then a third which is fancy intense yellow (which is a one of a kind color). We will talk

about the value later, but you will see there is a wide range of value difference between two fancy yellows even though on the certificate they will both be certified as fancy yellows. And there is a wide range of value difference between two stones that are fancy intense even though the certificates say they are both fancy intense.

Lets look at the conditions for evaluating color in diamonds. Number one, the stone should be loose. If the stone is in the mounting you will run into the usual handicaps and hardships for us as graders of color. The stone should not be looked at only in a controlled light source in laboratory circumstances, the stone should be challenged under different lights. There are certain stones that under laboratory light look fairly good and you might grade as a very attractive fancy yellow, however, in other light circumstances, for example daylight, these stones may fade. If they fade, they may still get the same rating, and you may still evaluate them on paper the same as if they did not fade in daylight, but when you are recommending a stone to a client you will want to have a stone that does not fade, because in jewelry the customer will not be looking at the stone under laboratory conditions. So challenge the stone to different kinds of light and see if you can make it fade out. See how it holds against different types of light sources, use other stones if you can for comparison purposes as they are your best guide to value and color. Be careful when you compare, because the make of the stone does affect the brilliancy of the stone and therefore you have white light verses colored light coming back from the stone. As an example, we try to do very little with fancy colored diamonds that are round. We cut 90% of our fancy color rough in fancy shapes. The reason is that any elongated or off-round shape is going to throw off and return to the eye less white light, and that white light competes with the color of the stone. So unlike a white stone where you are trying to maximize the amount of white light returned to the eye, in the case of a fancy color, an oval, a marquise, a stretched stone tends to show more of the color than a round. There are times you can not avoid cutting a round, since you need



rounds for stock, but you will see the stones that we will be looking at show quite poorly in the round shape.

I am not a gemmologist or a qualified appraiser as you are here. I am a cutter. I know how to find rough and cut rough for maximum color yield, and occasionally I even know how to sell them. For the most part I am not a technician, and am not as familiar as you are with the alternate systems for evaluating color in diamonds and in colored stones. The adaptability of those systems to natural fancy colored diamonds is clear. When you evaluate color, do not look at the color and grade the color under magnification. Magnification distorts the color in some unpredictable ways. Occasionally magnification will improve the look of the stone, and the color will look a lot more intense, a lot richer under magnification. Other times, especially with fluorescent stones, magnification will hurt the color of the stone. We are interested in how the color looks to the naked eye. Just as you would evaluate the color of a white diamond, you would use a scale. You would use master stones, but you would not do it under magnification. Finally, unlike with a white diamond where you are trying to eliminate the brilliancy that comes from a well made stone, from the body color of the material, where you would therefore evaluate the color of the stone from the side, (and there are many people in the trade who evaluate the stone in the tray and will even fog the stone with their breath to eliminate as much reflective light as possible so they will really get a feel for the body color of the stone), in fancy color diamonds, technically you may want to explore the body color of the material from the side, from the back and from the top. In your appraisal though, the bottom line question is "is this stone pretty in a face-up position?" That is what really counts.

When you begin to peg the quality of the stone, establish a spectrum of colors, which is what I have done in the box I will pass around. The spectrum I have established in that box goes from a fancy light yellow to what I call a super intense stone (a fancy intense grade 2). Once you establish that spectrum and you know what the values are of the outside stones, then

you begin to play with the stones within that spectrum and see how far they are removed from one end to the other. You can do that with color charts also. To establish that spectrum, the colors in between, like with white stones, are clearly specifiable. In other words, if you have a range of white stones that goes from G to J, you have intermediate grades in there. If you are looking at a spectrum of stones that go no farther than from a weak fancy yellow to a good fancy yellow, you have no other descriptive labels that you can lay on those stones in between, other than fancy yellow. So establish a spectrum and comparing one stone to the other, price it accordingly.

Next, when you look at stones, if you have the luxury of having a number of master stones to compare, look for modifying colors in the stone. One of the other problems with certificate descriptions of natural fancy colors is that they will mention secondary colors only once they become fairly strong. So I can show you a range of stones that were all graded fancy yellow, and clearly there is green in one much more than there is in another. There is a degree of brown in the stones that just does not show up on the certificate because at whatever point the GIA draws its line, it is not enough brown to call a modifier. This is one thing to look for outside the certificate.

Secondly, when you have modifiers, your modifier says only that the modifying color is apparent less than the primary color. So a fancy orangey brown is a stone that is more brown than orange, but it does not tell you whether or not it is only slightly less orange than it is brown, or whether it only has a small amount of the color. Clearly in this example the more orange the stone has, the more valuable it is, but those grades are something you have to evaluate on your own, the certificate is not going to help you with it. So look for the modifiers that are not present on a certificate description and look for the degree of modification in those stones. Obviously when you are looking at colored stones you are looking at the spectrum of intensity.

Finally, two more factors in the spectrum analysis or color analysis of

diamonds. Number one, is the color uniform throughout the stone? One of the drawbacks that we face on a daily basis in making fancy shapes almost exclusively, is that you have to deal with the make of the stone and with the fact that a fancy shape diamonds, as an elongated stone, will tend to have the bow tie effect to some extent in the center of the stone. In its extreme case in a white stone, for instance in a marquise, it may be very white and brilliant at the end points and then blank out in the center. The same thing happens in color. You will have a marquise that could be intensely yellow at its points, with all the color at the point and an blanking out of the color at the center of the stone. That is color distribution as a function of make. There is also color distribution as a function of the color present in the stone. If you remember from last year, color is present in natural fancy color diamonds either through a particular crystal or a particular plate in the stone that has that color, and throws that color off to the rest of the stone. Or it is because there is an element present throughout the crystalline structure that gives the diamond color. Those two elements will affect whether or not the color, even in a well made stone that has little bow tie, is well distributed.

Finally, the element of fluorescence. Clearly, a stone that is highly fluorescent blue, is going to flatter a fancy blue diamond. That same fluorescence is going to compete with the yellow in a fancy yellow diamond. A fancy yellow diamond viewed from the side may look fancy yellow, but may look *great* from the face-up position if it happens to have strong yellow fluorescence. It is a hard one to determine, but usually you can get an inkling or a hint that it is worth testing for by seeing that the stone looks different in the face-up position than from the side. Clearly on certificates, if you have the opportunity of having a certificate to show the fluorescence, you can look for that. Then give the stone a plus if it has any fluorescence that complements and enforces the body color of the stone and knock it down if you can see with the naked eye that the fluorescence competes with the body color of the stone.



There are four boxes of diamonds that we are going to pass out. Two are very similar and the others are more for fun. At one end of the box there will be what I call a super-intense stone, a special stone. At the other end a fancy light, and in between a good fancy yellow, a better fancy yellow and a fancy intense. They will be easy to tell apart. I am not sure that the lighting conditions where we view them will be the best for picking out that spectrum. You should be aware of the difference in values in these stones. These are all stones that by GIA certification are fancy yellow colors. Assuming that our benchmark stone for evaluation purposes is a one carat stone, well made VS1, I don't care particularly what shape it is although I am thinking of an oval, I will give you the values of those stones if they were the colors that you see in the boxes I will pass around. The fancy light yellow might (and these are all wholesale prices) fetch \$2,000 per carat. The unexciting fancy yellow \$3,000 per carat, the nice fancy yellow \$6,000 per carat. The certificate description of fancy yellow is ranging from \$3,000 to \$6,000, the *same* certificate description! The fancy intense \$8,000 per carat, the one of a kind stone or the unusual stone as much as \$14,000 per carat.

In the other two boxes we will get a chance to look at, one contains a quickly put-together distribution or variety of fancy colors, tending to be, although not common, not the blues and the strong colors, but the ones that are commercially available that you see most often. In the yellow family there is a purplish stone in there, cognacs, orangey-brown, bright oranges, and use your imagination to label those stones.

In the fourth box is a natural color, fancy black diamond. Highly unattractive, why it will always be called fancy I don't know, but I have had many requests from people for black diamonds, to show a black diamond. The price on that stone would be somewhere around \$600 per carat.

Now I will read to you a little from the article I spoke about. The title of this article will be "Beyond Certificates, or What You Don't Know Can Hurt You."

I come to praise certificates, not to blame them, and to try to put them in perspective too. I recognize that I depend upon the extremely helpful role that certificates have come to play in the diamond industry, but I have also come to learn that relying on them exclusively for the purchase of gem quality diamonds can be surprisingly risky and extremely costly. I hope to point out in this article, some of the critical features of diamonds that dramatically affect their beauty and value, which do not appear on certificates. It is clear that diamond certificates do well by carefully describing 12 key features in a polished diamond. Certificates report to the knowledgeable reader with a relatively reliable preview of what the actual stone will look like and what it's approximate value might be. It provides the inexperienced consumer with documentation of qualities of the stone being purchased. Unfortunately, certificates also have the appearance of unquestionable authority and scientific accuracy, telling all there is to know about the particular stone. "It just ain't so."

My family has been cutting diamonds since 1914, specializing in natural fancy colors, trillions and other traditional fancy shapes for the past 20 years. Dealing in these specialties has forced us to cope with the increasing importance of certificates, while at the same time, stressing features of diamonds that just do not show up on certificates. If these features were insignificant or petty they could be ignored with little loss. They are though, so important, that with certain stones they can easily affect the certificate value by as much as 50%. There are many attributes of polished diamonds, particularly fancy shapes and fancy colors that even the best certificates fail to explore. If you deal in certified diamonds, you leave yourself vulnerable to hefty losses if you fail to consider the following factors in buying and selling fine stones. Knowing them, you can use certificates as aids to the actual analysis of the stones themselves, and then deal in true values, beyond certificates.

Probably the most important aspect of fancy shaped diamonds not being described by certificate information, is

the shape outline of the stone. The certificate will present measurements of length and width as well as an evaluation of symmetry. This information will not indicate whether the points on a marquise, pear, brilliant or heart shape are dangerously slender, or so stubby that they are barely recognizable as points. Or whether the shoulders on a pear or a heart extend so far that they look instead like points, or slope so precipitously that they lose the fine shape. Basically for fancy shapes, a certificate only partially answers the critical question, "Is this diamond a pretty shape?"

One of the features of a diamond not discernible from a certificate is that the brilliance of the stone is next most important in determining the value. For a regular diamond the information found on a certificate can be interpreted to determine fairly accurately how much brilliancy the stone will display, but not so for the fancy shapes. The most prominent factor affecting the brilliancy of any elongated fancy shape is the notorious bow tie, the dark, butterfly shaped area across the center of the stone where very little light reflects. The intensity of the bow tie and united surface area of the stone that it consumes, are the result of several interrelated aspects of the stone; it's length to width ratio, depth and table percentages, culet size and style, and the specific fashion of the brillianteering. Certificate information can barely hint at the extent to which the brilliancy of the diamond is wiped out by a small bow tie. Similarly, a fancy shaped diamond will exhibit a blankness at the extremities of its shoulders, belly and head. Squares and emerald cuts can even exhibit a two way bow tie, a blackish Maltese cross blanking out most of the face-up surface of the stone. A diamond needs to be seen to enter the question used in the trade, Is the whole stone working? For the most part a certificate can only begin to suggest the brilliancy of a fancy shaped diamond. When you value a diamond for its fire, you don't want smoke.

Color is one of the basic four "C's" of diamond evaluation. Nevertheless, the color grades that appear on certificates do not always indicate the



effective appeal of the actual stone. For example, certain buyers will pay more for near colorless diamonds on a brown scale, because they face up whiter than the same grade of diamonds on the yellow scale.

Fluorescence is another ingredient that affects the apparent color of the diamond. A stone with fluorescence can be quite unpredictable. In some cases blue fluorescence will show as a dark and oily petrol jelly effect on the color of the material, while in other cases it will produce a crisp and glowing overblue quality often calling for premium prices. For natural fancy color diamonds, certificate descriptions provide critically little information on which to predict the beauty of the stones. Only by viewing the actual stones can the following questions be answered accurately.

**One:** Is the stone graded, for example, fancy yellow because it is a fancy light yellow or because it is a fancy intense yellow? The market value of the better stone should be three times the poorer, both with the same certificate grade. It would be as if GIA colors G-J were grouped as one on certificates, requiring a careful subdivision of that group by sight.

The certificate may often understate the seriousness of an inclusion, such as the reflecting imperfection. A certificate may show for example only one small black pinpoint off to the side of the stone, but not the multiple reflections that might magnify the visual imperfection of it. In a fancy shape, a black inclusion seemingly hidden in the brilliancy of the angles of a short point can actually show up strongly reflected on the opposite side of the stone. A good example of that is trilliant. An imperfection on one of the points of a trilliant can be almost imperceptible. If it is off the table in a point, it might be covered by a deep prong in many cases, but will be reflected on the opposite side of the triangle. So we are very careful when we are cutting since we don't want those imperfections to reflect on the opposite side. Even a white feather, depending on its position, can bounce around the stone, detracting from the brilliancy and causing an unappealing and milky quality in the stone. There are few reasons more important for looking beyond the certificate than reflecting inclusions.

Despite all the preceding arguments for looking beyond the certificate information for true value of a diamond, I still have great appreciation for the thoroughness, reliability and utility of most major laboratories and certificates as far as they go. The thing to remember is that the true value of many diamonds cannot be assumed from the certificates alone. Consequently, it can also be misleading to compare stones based only on their certificates. If the actual stones cannot be seen, the issues raised above can be used as a checklist to question a knowledgeable person who has seen the stones.

Now, if complete certificate information only provides a very approximate idea of value, imagine working only with weight, color and clarity as we are forced to do in working with price lists.

I thought this article was worth reading here because as full or part-time appraisers, we are forced to deal with certificates and to generate value from certificates. It is important to know how much is missing from the certificate when you determine that value. Secondly, when writing out appraisals, it is tempting to use only the information which would usually appear on a full GIA certificate. In fact, you should push yourself and separate yourself as a professional by including the elements we are talking about here, which go beyond the certificate.

**Question:** What is the best way to cut a natural fancy diamond marquise?

**Answer:** A chubby marquise (and I don't mean that in a negative sense, just that some cutters like a fuller belly on the stone) will tend to minimize the bow-tie. The more elongated a stone, it will more likely have a bow-tie. Also a very long stone with a very short culet will also minimize the bow-tie. Finally the shallowness of a stone will tend to give a bow-tie also. The length-depth ratio is also very important to the bow-tie effect. A thicker stone, or a deeper cut brilliant stone will tend to have less of a bow-tie than a showy but thinner stone.

**Question:** How important is a flawless stone?

**Answer:** Clarity grades in fancy color diamonds are so much less important than color that I really group them only in two categories.

There are the opposites of flawless and imperfect gems, which I mark down, and in between I only have two categories. I call them easily visible imperfections under magnification, which would be your SI2's, SI1's and maybe VS2's. And then there are your more perfect stones, the VVS1's and VVS2's. How you price them really depends on the value of the stone. A fancy blue diamond with imperfections, and of a natural color, will not be marked down very much from a clean stone with similar color, but in an average fancy yellow, where the stone is not that expensive and chances are you can go out to market and find a cleaner stone for not much more than the first stone, you are going to get more technical here.

**Question:** What sort of pavilion depth are you trying for?

**Answer:** Every stone is different and one of the reasons the so called "New York" stone has obtained the reputation it has is that the cutting is done under the intense supervision of the owner of the stone, whenever possible. The stone is cut and then returned to the owner or designer for a finish. You can then shave and cut in the finishing to make it a little deeper for a better color.

**Question:** What makes a black fancy color diamond as opposed to other colors?

**Answer:** I don't know. It is really hard to determine. There are lots of theories about what causes different colors in the stone, boron, manganese and sulfur are prime contributors to fancy color diamonds. I don't believe that they are involved in the black stones.

## PEARLS

*Transcript of lecture given by Gene Lindsey for the October meeting of the Washington Chapter of AGA*

When Bill asked me to come and talk on pearls, my first inclination was yes. It wasn't until I got here this evening that I started to get some feeling for how much people know and really with that I ought to sit down because I think that there's a lot more knowledge here than I possess.

I have read the GIA chapters on pearls because, face it, when you are trying to find out about pearls the first thing you discover is that there isn't much written material around. And, what has been written, the people who are experts almost try to make a mystique out of it, try to keep the information to themselves. They make it a lot more difficult than I think it need be. I've also found a lot of jewelers I've dealt with don't understand pearls at all and make some pretty bum decisions. I had an appraisal done recently, in fact Bill reappraised the same strand, by a gent from Ohio and he didn't even have the courtesy to break out his micrometer to measure the pearls.

But pearls are not, or should not be that difficult. They are very, very subjective, in that what turns me on may not necessarily please you, and we want to try to simplify rather than make it more difficult.

Tonight I would like to deal only with the round cultured pearls from Japan. I know that some of you have cause to deal with the Oriental pearl, but there just aren't that many around and there are not that many dealers. And as I go, if there are any questions, please feel free to interrupt.

The first thing you must understand about cultured pearls is that while man will influence what that pearl is going to be, man does not have the majority vote and the only reason we can meet most of our needs as pearls are concerned is the sheer numbers. We overcame the low return by going after sheer bulk. You know how a donor oyster is selected and a piece of that mantle tissue is taken and sliced up and put in with each nucleus. The purpose of that is two-fold. One, to

start the sac growing, but most important to influence the color of that pearl by about 80%. So that means the 40 to 50 pearls that are being influenced by that one oyster should all come out about the same color. There are no two pearls that are exactly the same color.

On the mantle itself, an incision is made, and the bead and piece of mantle are placed inside. Now the natural way is that the mantle enfolds the irritant and it works its way in. Man speeds up this process by the incision and the induction of a piece of mantle tissue. This is like a mating process where the donor is the dominant gene in terms of color, 80% of the time. But there is no way to determine in advance what that color will be. The only way is to destroy the donor and see the results. Then you can say, Aha, the donor was a pink. Now you take the oyster that created the pearl and say maybe this one will create pinks. But there are two things working against you. It's the wrong time of the year and the mantle was the dominant, not the host oyster. They can influence the color but they can't determine it. It's still a grab bag.

Value, as you all know in what you deal in, is a function of scarcity and rarity—the laws of supply and demand. The value of cultured pearls is still continuing to rise because it continues to be a scarce commodity. The family I work with every year deals with between 500,000 and 750,000 oysters. And it's with that sheer number that they try to overcome the odds they must face.

When I came here this evening, I noticed this display. This is an Akoyo oyster and it's labeled three years old. There is another one here that is labeled two years old. That points out something the Japanese have been making significant progress in; developing an oyster that will grow faster and produce faster. The oyster industry is really one of trade-offs. Today the oysters that are implanted are between one and two years old, depending on what they are trying to achieve. The normal size of the bead they implant is 5.4 to 6.0mm, the most common range for the one to two year old oyster.

**Question:** Is the disparity in price between the 5.5-6.0mm, the 7.0-7.5mm and the 7.5-8mm pearl due to the high failure rate of the larger beads?

**Answer:** All of the above. Let me explain that. 7mm as you know is really the cut-off. After that the prices start going up and up. The largest that comes out of Japan as a finished product is generally a 10.0mm. The largest bead that will be put in as a rule will be a 7.2 to 7.4mm. Now, the pearl adds one millimeter per year as I've said, and this is the industry trade-off. We start with the basic. If I have a one year old oyster and I implant it, I'm going to have to deal with a smaller bead — I'm not going to get a product that will be as valuable. If I wait the second year, I can put in a larger bead or better yet two beads, which is more of what they are trying to do, and I have doubled my output. However, in waiting that second year, I have also doubled the chance of that oyster up and dying, which is a fairly high probability. And if I get greedy and put in the second bead when the oyster isn't ready, it might survive the one but it won't survive the second. Sort of like a forward pass — three things can happen and only one of them is good.

The mortality rate of the oysters, if the person doing the insertion is really good, will be 40%. When I was over there, it was closer to 50%. After the insertion, the oysters are placed in an intensive care ward, if you will, and held for two to three months. Then they are scrubbed to remove sea-growths and organisms that will prevent the oyster from opening. The oysters that survive this are placed in shallow racks made of wire mesh and cord. Now the 7.2 to 7.4mm beads are generally reserved for the three year old oyster. They are now developing an oyster that will supply an adequate coating within one years time.

**Question:** What is considered an adequate coating?

**Answer:** 1/2mm in radius or 1.0mm in diameter. So now they are being left in for one year generally. Three or four years ago they were left in for two years. Actually, the majority of growth will occur in the first six months, so it is a trade off whether leaving it in for the second year will give you anything or whether or not you will lose the oyster. It is absolutely amazing how iffy this whole thing is—it's like grabbing a cloud.

**Question:** About ten years ago there were a lot of articles on how the



pollution was destroying the pearl and fishing industry. Has the government been doing anything about it?

**Answer:** The government has been doing a lot for the last 7 or 8 years and has the problem pretty much under control.

**Question:** The electronic, automotive and television industries are bringing in more money than the pearls. Doesn't that tend to make them say "Let's bypass the pearl industry?"

**Answer:** No Sir!... I used to tell people when they went out there that you could insult the Emperor (well maybe not that far, but you could pinch a minister's wife), but you don't mess with the farmers and the fishermen. And we in fact helped create that. We wrote their constitution in such a way that the grass roots has far more power-one man, one vote-no way. The fisherman and the farmer have an inordinate amount of power, and the pearl grower is a fisherman. Most of the areas where you find a lot of heavy industry, there isn't a lot of conflict. There is none of that side by side thing, but they have cleaned the waters up because they see that it's not just the pearl industry that's in danger, it's their fishing industry and their seaweed industry and it goes on and on.

**Tony:** I've heard that a lot of pearl growers have decided to give up culturing pearls and go into the shrimp business because Americans love shrimp.

**Gene:** Well, the Japanese love them also, perhaps even more, and some growers that I know do both. They've got the land and the pearl just doesn't use that much water and land. It's a very concentrated kind of thing.

**Question:** How deep are the pens kept?

**Answer:** The pearls are kept at about 18 feet, at different times of the year they will change a little. The temperature varies from 13 to 27 degrees centigrade which comes out to be from the low 50's to about 75 degrees F during the summer months, and it's during the summer months that the oyster does the greatest amount of coating.

**Question:** What time of the year do they harvest?

**Answer:** They are just starting to harvest right now, during the first weeks of October, and they will start

the implanting in the early spring as the waters are starting to warm up.

**Question:** GIA teaches that it is the cooler temperatures that are responsible for the slower, more lustrous growth. Is that a fact?

**Answer:** Yes-well let's put it this way. You get more coating, but you don't seem to get the luster with the South Sea pearls, as you do with the pearls that come from the cooler waters of Japan.

**Question:** Is that a function of the animal?

**Answer:** Probably both, but mostly I think it is a function of temperature. Most of the coating of the Akoya is done literally in the first six months. You can get an ambitious oyster that will just keep growing, but most will just give a lick and a promise after the first six months, and once again it is a risk of the business. They can leave the pearl in for the second year and theoretically they should get a second years coating, but it usually doesn't work that way. Perhaps the animal says it doesn't feel so bad anymore and it just isn't worth the effort. No one really knows.

**Tony:** The old cultured pearls-when I say old I mean when they first came out-don't have the luster of the modern pearls, and I think it is due to their having an extra thick coating.

**Gene:** I think they left them in too long and the coating that occurred around the fifth year actually seemed to dull the luster. It did not enhance the value in any way. As I said, they are growing faster and larger now and dying sooner. Where the age used to be about 8 years for an oyster, it is now about five years.

**Question:** Is there a type of breeding research program to improve traits that are desirable and eliminate those that are less desirable?

**Answer:** Yes, and I think that this shows. They are working very hard so that if you get a batch of 100,000 from this one particular area that seems to be influenced by something, and from that batch you get a higher survival rate or a faster growth rate or something like that, then you go back and try it again. Only you have to deal in massive numbers and you have to be very patient. It takes a while and you really don't know what you're going to get. It's a lot like basic research.

You asked a question about the different sizes and the cost

comparisons. I said the mortality rate is 40% for the smaller beads being implanted. You go to the larger beads, the 7.2 to 7.4mm beads being put into an oyster, a single implant granted, and the mortality rate is going to go over 60% and you also decrease the number of pearls you're getting because you're no longer getting two from each oyster. Those numbers alone are going to dictate a decreased output, but then, the larger ones they leave in for a longer period of time and now you have a greater chance of the oyster dying and messing up the product.

What it all boils down to is that in the 7.5mm range you have about one quarter the chance of getting a pearl that you do in the 6.5mm range. And the market cost reflects that.

**Question:** How hardy are the oysters per se? If for instance you started with the little spats and didn't implant, and let them take their course over a period of three years, what's the mortality rate, do they know?

**Answer:** You have about 10% that never make it to the implantation stage. If it makes it to the first year, then the chances of survival without doing anything to it are very good. It's very well protected from its predators which is the function of the cages. But then that's an awful lot of labor for something that isn't worth anything except for its shell to the Koreans.

**Bill:** The real point of the question is that there seems to be a real shortage of anything over 8.0mm at this time, and it seems that the one to two year old oyster is too small to put the larger bead into.

**Gene:** The larger bead is going into a three year old, but the hardiness takes a decided drop when you put that bead (softball) into them, and 60% check out because the trauma is just too great. We're talking about trying for an 8.0mm pearl, so I'm going to make an incision and implant a 7.5mm bead and 60% of them are going to die. Then I'm going to leave that bead in for two years and during that two years there will be a certain percentage that won't make it. Now I've got a five year cycle, and at the end of that cycle there will be some pearls that look just like the culls in this sack, and one out of a hundred will be of high enough quality to put on a strand. 40% of the pearls I get will be usable and only one out of a hundred will be stringable.



**Question:** When you say usable, do you mean for 3/4 or 1/2?

**Answer:** Yes. For 3/4 or 1/2 or some form of jewelry where a clasp or gold work will cover up the blemish. 40% are usable and that's if you are good. I don't know for a fact, but I would almost bet you that Mikimoto does not enjoy that high an output, and the reason I say that is that they have gone into heavy mechanization. For example, when they do their scrubbing phase, they have one man in a boat who pulls the oysters up and feeds them into a scrubbing machine like an automatic dishwasher, and then he puts them back.

**Question:** What do they do with the 60% that aren't usable?

**Answer:** Throw them away — they're that bad! I mean of absolutely no value at all, and as you know the hardness of the shell is such that it can't be used for much.

**Question:** What then is the source of the low quality pearls that are coming from Hong Kong and elsewhere? You know, the ones that are invading the market here.

**Answer:** About 95% of those pearls are coming from Japan. The other 5% are coming from Hong Kong waters, from China, Sri Lanka, Panama and Australia. The low quality ones from Japan I'm told, are due to someone dipping into that 60% that are thrown away. People are saying — Aha! There's money to be made here, let's see if we can hustle them. I've gone into stores looking for pearls and I've seen them. The amazing thing is not that they're offering them up for sale, but that people are buying them!

**Question:** Do they polish the beads before inserting them?

**Answer:** No sir, they are smoothed but not polished. They wouldn't take a high polish anyway because of the mother of pearl surface. I think that once you go beyond a half a millimeter of buildup the light has penetrated as far as it is going to go. You can take an endoscope or something like it and have a high intensity light coming out through the pearl that way. I know that a natural pearl has a finer luster in some of its layers than in others. In fact, the practice was to skin the pearl that has a poor luster to get to the good layer. That was what was alluded to in that period of time, that an

oyster will secrete the nacre, and it does not do it evenly, but depending on the temperature of the water and it does not do it consistently from year to year. We don't know why it works like this or why it quits or what it would take to stimulate them after that first six months burst. All we know is that for six months they go like crazy.

**Question:** In terms of Japanese society, what is done with the shells afterwards? Are they ground up and used for fertilizer?

**Answer:** No. The shells are packed up and sent off to Korea where the Koreans for the last couple of thousand years have made a fine art of Mother of Pearl inlay.

**Question:** After they harvest the pearls, what do they do to enhance the pearls at that point, such as polishing or peeling?

**Answer:** They are cleaned but they are not polished. There are some who try dying to enhance the colors. The pearl people themselves do not believe that the dying actually enhances the pearl. If you find a pearl that has been dyed, it probably had a bad color to begin with and anyone with a discerning eye wouldn't touch it. Actually, you have to begin with a pretty good pearl as far as blemish is concerned, because surface defects will be more strongly pronounced after dying.

**Question:** When you say cobalt treatment, do you mean cobalt radiation or dying in cobalt salts?

**Answer:** Radiation.

**Question:** Is there some way of testing to see if it's radiation, or is it just that iridescent color?

**Answer:** It's that color.

The talk ended and members examined the pearls Gene had brought, ranging in quality from culls to AA.

## INSURANCE REPLACEMENTS

*Transcript of the talk  
by Neil Cohen*

I will be speaking about insurance replacements. I am going to try to take you through the entire process of what happens with an insurance policy, where it goes, and what the insurance companies are basically trying to do today. The general pulse, as I see it, is those who are not involved in any selling of gems, but are strictly doing appraisals. I am sure you will benefit on what their thoughts are on the appraisals they are getting. Those of you who are looking for a way to increase your business with insurance companies, I hope that I can be of some help.

Insurance companies today, by and large, are functioning under what is called replacement value policies. The replacement value policies that jewelry companies write on jewelry floaters are quite different from what we are familiar with in full replacement value policies. In replacement value policies of homes, when something happens to the home, it guarantees to pay the price at whatever it is at that time, in order to replace the home. With jewelry floater policies, that is not the case. The bulk of replacement value policies state that the company has the right to replace the article with like kind and value, up to the limit of the policy the article is insured for. So, if someone is under-insured, obviously they will just get paid the face value of the policy they are holding, and if the appraisal is adequately done and of the current time, then the company will try to go to market to replace the article. There is a policy (and it really does not have anything to do with us because if this policy is in force then we would not get involved at all), that is a cash for cash replacement policy that people can pay a much larger premium for, and then the company is obligated to pay them whatever it would cost to replace the article. But they still have the option to go to market to replace it at a savings, restricting the people from just taking the money and going on their own. Then there is a policy which they can buy with another

additional and quite large premium that will pay them with no questions asked, the value of the policy they are covered with. As I see it, the predominant policy existing right now with the major companies is the replacement value policy. This is the one that we will discuss here.

Just looking at the chain of events in an insurance policy (I just want to go through these because I think they will help you in getting a feel for the way to approach going after some of this business), a person decides that they are going to put a floater policy on a particular article of jewelry, so the consumer goes to his agent and the agent submits the request to the underwriting department of the company he wishes to write the policy through. At this point is where a lot of very poor quality appraisals are being accepted, at the underwriting level, because the underwriters are being influenced by various reasons. One is the size of the agency that is looking to write the policy through them. If they happen to be very strong, they may assert enough influence to get the underwriter to just put the policy through with a very flimsy appraisal (which I'm sure we are all accustomed to seeing), with very little explanation of the article other than a value. The underwriting departments are being pressured because of the competition in the marketplace. They are now having meetings after meetings to decide as to the stand that they take on requiring a much more detailed appraisal to be submitted on policies above a certain value. They have to take the stand that those will not only be submitted in the proper nomenclature, but they are going to request that they be signed by competent individuals with the credentials that they are now beginning to look at. The pendulum is beginning to swing the way of the credible, detailed type of appraisal because the companies are beginning to realize that this causes less trouble when they assert the replacement clause of the policy. They are still moving rather slowly because they are still making a profit on this area of the business. The profit gap though, is beginning to close very rapidly. I have been told that every year it has been getting less and less, but that over the past few years, it was an enormously profitable area of

the insurance business, writing these floater policies. It is still profitable, but getting less and less so, so they are beginning to take a very active position in this area.

Now we have the loss of the article or damage to the article and a claim taking place. This claim goes directly to the department of the major insurance company, the underwriting department has nothing to do with it and knows nothing about it and is no longer involved in any way, shape or form other than getting a request for some backup information they may have in their files to help the claims department analyze the claim.

The claims department's attitude in the major companies right now is this; they feel that if the replacement takes place (that is the actual physical replacement of the article), the claim is more legitimate. This is why their attitude is unanimously to force replacement. They do not want to cash out on a policy even though they may save cash by cashing out. They would rather see you take the article, for the legitimacy of the claim and of course that the article is going to continue to be insured and the premium is going to be maintained. There is one company (and I will not mention the name), for whom I was attending a seminar at which they actually made the statement that they are going to make everything, not only jewelry but every last bit of replacement that they do, mandatory that the people will take product and they will not take money. It doesn't matter if they want money or not. If they want the money the people can just go out and sell the product. But that is the attitude that they are talking about! That is a pretty strong statement to make.

What is taking place in the claims department is that, based on the appraisal that is on record with the description of the article, they are trying to make a replacement by asserting their influence in the marketplace, looking for a below retail level replacement of the article. On average, they are looking at a minimum of 20% replacement or less, than the retail price of the article. What are they generally doing? Most of the companies in your area generally start shopping around, usually by phone, to get the best prices of what they could replace it for, at their cost,

and this is what offer they will make to the claimant. This procedure can get the companies into a lot of trouble, because if the client refuses to accept the offer of the insurance company and the insurance company decides to hold the line, the next step in procedure is that the arbitration clause in the policy comes into effect. What this means is that the insurance company has made an offer which the policy holder has refused. The insurance company then selects a person to be their appraiser and the insured selects their appraiser. The two appraisers meet and if they cannot get to a meeting of the minds, they then select a third appraiser whom they agree upon and the finding of that third appraiser is not actually binding but does go down on record, meaning that if the third appraiser decides that the insurance company is in the right, then the next position for the insured is to go to court. But at that point there are very few lawyers who will pursue the case when it has been lost in arbitration. The claimant though, may always make this last effort in the legal chambers.

The area that the companies can get into a lot of trouble in is this; when they shop around for price via phone, they tend to get a lot of quotes that people give over the phone that they may not be able to produce. If the claims rep goes off with this particular quote and then cannot produce, they are in a very embarrassing situation. This has happened in my area time after time with one of the big companies. Luckily for me, a couple of years ago they came to me and I put together a program for them where we would analyze each and every appraisal, or claim that is accompanied by an appraisal. We would analyze all these claims and then would submit to them a written quotation that we would deliver the article at the price that we quoted. What we would do is to go to market and make sure the article can be secured. We would then quote the exact article by description of what we were going to produce. We came about this by analyzing the appraisal, which all you people have been trained to do. Even with the flimsiest descriptions you have to hang your hat out to some extent. The insurance companies are willing to hang their hat onto this. If someone

puts down a price, that price is considered to be the retail replacement value of that article, at the date that the appraisal went down. So if someone put down a 1981 and they had a price of a diamond and it says one 1 carat diamond for \$4,000 and with no further description than that, you say well how the heck can I make a quotation based on that flimsy description? Well, you certainly can. The way you can do it is to go back to 1981 price sheets (we have them available), and you can start checking by first knowing what the average markup in your area is. Having figured the retail price, see the various combinations that you have to offer by looking through the sheets in that particular price range. Now obviously everyone knows that if you are quoting off a 1981 appraisal, the people are going to be able to get a lot better article today than they could in '81 because the prices have reversed themselves. We back up this quotation with an explanation of the way we analyzed what we have done. We go through each of the four C's as to how we interpreted our decision to come up with the grade that we picked for the stone, and finally the quotation of the article which is going to be at a particular retail value. The approach we have taken with this major company is this; on every single replacement, where possible, we look to give the claimant more than they had, because the company can still make a substantial savings and give the claimant something better than they went in with. The quotation that we use is a typical quotation that we took from any stationary store. It has on it the quotation number, the date, the terms you are putting down, FOB the delivery of the item and that is all you need. As long as you describe it with the price and sign it, you have made a firm quotation. The company at that point presents the quotation and it is in a stronger position than going with just a verbal phone quotation. They now have a firm quote and the insurance company can say they can replace it at this price.

What the companies are trying to do in replacing the merchandise is, before the quotation really comes out to be thrust in the face of the claimant, the claims department is trying to use their own sales approach by giving the

claimant a quote without revealing their own cost for the article. The only time the insurance company will reveal their cost is when their backs are to the wall and the people say "I am not going to your source to buy, I want to go to my source". The company cannot stop them from going to their source but they have the absolute legal right to say to the claimant, "that is fine, we will give you a check based on what it costs us to replace it, and we have a written quote guaranteeing we can produce the article at this price".

Now, getting insurance replacement business. As I just mentioned, one of the most important things is the training of the claims representatives. They are extremely eager for knowledge, as they are usually people with absolutely no knowledge of the jewelry business. They are involved in making claim refunds for jewelry, stereos, etc. You name it and they are involved with it. So they could not possibly know everything about everything they are doing. Most of them are young and the turnover in claims departments is very, very rapid. It is one of the more pressure-packed areas of the business. Those who are there are eager for knowledge, because they realize that by making a savings they will be up for promotion, so they are very eager to learn and do their job better.

What we have done is to make a training manual, nothing elaborate, but the manual explains to them some common terminology in diamonds, colored stones and mounting work, so that they have a little familiarity with what they are being talked to about. You must remember that these young people are usually anywhere from 20 to 30 years old, that is about it. They are being badgered by jewelers who know everything. Since they know nothing, the jeweler is snowballing them with everything. Giving them a little bit of assistance so that a light goes off in their head when they are being given a snow job is very important to them. You are not trying to make them a gemmologist, but just giving them enough to grab the phone and call you.

The other thing you want to put in this manual which is very important, is to include a list of questions to ask the claimant about the item. Also include some photos with explanations so they can see what we are talking about.

This list will assist us in analyzing the generally flimsy report. 95% of all the claims are listed on very, very poor description. We have been beginning to see some very good reports which is very surprising, and they are beautiful. We love them because we can make some good solid quotes in a hurry. With this information, the claim representative can certainly handle the claimant much better. They have to be a little like a retail salesperson to build confidence between the claimant and what is happening, because they are massaging them to go somewhere they may not want to go. So everything you are giving them in this manual is going to be a great help to them.

Another thing we did I wish I could say was my idea, but it was an idea of one of the top men in the claims department of one of the insurance companies. He did not think it would draw many people, but what he did was to call me up and ask if I would participate in a claims seminar that he was running on replacement. He was inviting people from various fields, the jewelry field, stereos, and etc. There are firms around that specialize in selling those items to insurance companies. He brought in someone that does automobile work and so on. He had all the categories covered and he sent an invitation to all the agents to come listen to these talks. I don't know if all of you are familiar with this or not, but the large companies have instituted profit sharing plans with their agents where they put a pool of the savings gained through the agent's work on claims. I am sure they are not getting back dollar for dollar, but the people are getting pretty good bonus checks for doing good work, so there is an incentive there for the agents. When he sent this out he got 250 responses to this seminar, where he had rented a room for 25 people. So he broke it up into two parts in our state and ran it twice. So I took this and said, "this is one heck of an idea", and I went to another company that I was working hard to get into and I talked to their claims representatives and presented them with this idea (which of course I just thought up!). He thought it was valuable and could he have it for his company? And of course he could and he put on a much better show than the first guy since (with my help) he did



not have to learn from mistakes. He did get a very good turn out and believe it or not, there were some of the same agents from the other seminar. You know they can represent more than one company. It has been a very successful thing. Let me tell you something, to have the claims representative trained to work with you is excellent, but if you have the agent on your side, you have got about the best partner you have going, because remember, the insured has gone to that agent to buy his insurance and there is a camaraderie that goes between you and your agent for some reason, until of course he doesn't produce and then you want to get rid of him. If the agent is in your corner, you have no problems at all.

I would like to tell a story to prove this example. I had a claim that came to me and I looked at it and it was beautiful. It was a carat and a half diamond and it was appraised by someone who uses very high multiples in our area. I took a look at this and the savings was astronomical for the company. At this point I was able to make a larger profit than I would usually work on in this situation and still save the agent money. I gave him my quote and the people went berserk over it and they would have nothing to do with me. The insurance company had their lawyers and everything within minutes! At that point, the claims representative that I was talking with said that the agent, Gary Barkus, who was one of their largest agents, was up in arms. I said Gee whiz, did you tell him that I was involved? I happened to know his agency and have done a lot of work for them and I get along well with him. She said, Gee, I didn't. So she called him up to make him aware that I had been involved and in 15 minutes I had a call back from the lady who now was as proud as could be, and came in two days later, made the replacement and everything was fine. I am sure this doesn't happen all the time, but it is just a good example of getting the agent on your side. It can be done.

The next item I want to talk about is damaged goods; chipped diamonds and all kinds of damaged stones. We started a couple years ago with some major damaged stones that came in to us for review. We discovered that with

eight different stones that came in, on each one of them the estimate made by a jeweler was just astronomically wrong. Whatever their motivation was, we will give some of them credit on not knowing how to handle it. The companies now realize that when it comes to the average stone, and this is in their contract, they have a legal right with no questions asked to get their approval before you (the policy holder) can get it repaired. You cannot take the stone without this approval. You do not have to allow them to repair it, but they must have the right to examine it. If you do repair the stone prior to getting their approval, you can run into having your contract held and you could lose out.

One of the big companies that I do work for has sent out a notice that on every single damage claim that goes down, they want a call in. They will not take a jeweler's report any longer as to what the claim is, because they feel they are being misused in the marketplace. This is an area where people such as you can serve a purpose to the company on these damaged stones. If you can quote a lower cost to them, since many of these items can be re-cut with a very minimal weight loss, not the weight loss that is generally being claimed to them by the jewelers, you will get your foot in the door. There is no question that this is a good move because this is an area where they will listen to you.

The next thing that I want to suggest in getting insurance replacement business is that you go to the companies and you invite them to your office. Since they will be sending their client to your office, they would like to see it, and to see you and your credentials etc. They will also like to see the physical plan that you will give to their people. You must sell them on these things and show them how you will handle the people comfortably. Remember, they do not want their people abused. They do want to save money, but believe me they want their people treated correctly.

The other thing that you have to offer them is your willingness to travel from your office to the claimant, where the claim is large enough to warrant it, meaning that if a claimant is unwilling to transport himself to your office, rather than getting in a big

argument and causing the insurance company more aggravation to fight with the people to come in to see you, you should offer to go out to them. The first time we did this was a year ago, and I said right away, I know what is going to happen. This woman is going to look at these stones and say, "Well I have seen them and I don't like them". Then she will call the company up and say "I have seen the stones, I don't like them, this jerk came here, send me a check". That was not the case. In fact the woman was quite nice and thanked me very much for coming. I found out she was very busy and just did not want to travel to the office. I showed her the stones. She had lost the stone from her mounting and fortunately the appraisal did have length and width on it so that we went there with stones that were in that size. I put it in her old mounting and she was very happy. I took it back, reset it and mailed it back to her. It worked very well and since that time we have gone out on several more and find that it is working out quite well. The people that we see generally are usually quite receptive and very nice.

Are there any questions?

**Question:** Are you saying that the insurance companies are trying to buy 20% under retail, or 20% over wholesale?

**Answer:** On the average there should be a 20% savings for them from the retail price.

**Question:** Are you saying that it is the insured price?

**Answer:** Right. The replacement value price that you are putting down, for instance on a \$3,000 item, they want to average at least a \$600 savings on it. That is on a nationwide average. They are making bigger savings in there too.

**Question:** You are replacing these items for the insurance companies. What type of margin are you making?

**Answer:** It is generally pretty good, except when I order a stone from Tenhagen I have to change everything around. When we are working with our major companies we are not consistent, we would like to make at least 20% over the wholesale, but we will go down as low as 5% just to make the deal rather than walk away with nothing. Lower than 5% we take a walk.



**Question:** Do you appraise the items that you replace?

**Answer:** On Everything that we replace, we give the people our appraisal with it and they have the right to go out and get it appraised somewhere else. On every single diamond, from VS clarity and J color, if possible we try to get a GIA certified stone. We try to go with a certified stone in every replacement and it makes life beautiful. It brings in an independent party and it is a very good way to go. We try to get a certified stone every time we possibly can. Any high grade stone is GIA without a doubt.

**Question:** How would you handle a situation where, lets say three years ago you appraised a ring, the client lost it, and now the diamond market is very high, for an example. The diamond is currently more expensive to replace than the limit of the policy covering that stone. What will the insurance company do?

**Answer:** Give them a check for what they have down on the policy. That is it. There is no full replacement value in that case.

**Question:** What is the claimants right on a damaged stone?

**Answer:** The claimants right on a damaged stone as I interpret it is this; If the stone does not change dramatically enough in size to have a visual size change, you have to accept the repair of the stone plus payment for the loss in value by the weight. The company also pays for the cost of the repair. But if the damage is severe enough that the people say the stone is becoming much smaller, I had a half carat and now I will have a 30 pointer, that is too much. At that point the company has to pull the stone, give them back the size of the original and sell the smaller stone, which they don't want to do. On salvage they get killed.

**Question:** I have been doing some updates now, and I have sent in very detailed appraisals to the company, and when the company sends back their renewal notice, what they have typed on that insurance policy has no relationship to what I wrote. Do they keep the original copy we send in their files?

**Answer:** Yes. What many companies do is try to shorten up on the schedule what they are writing. If your appraisal was submitted and was detailed with color and the whole bit, there is no

question that they have it on file. They may not be as detailed as your appraisal was, but the agent should be submitting that appraisal and the underwriting department should have it. Many times the appraisal will be referred to on the policy by the number on your appraisal.

**Question:** Do you enter into an agreement with the insurance company to have them pay for the quotation whether they actually purchase the item from you or not?

**Answer:** Yes. This of course is the arrangement that I have set up for the companies that we now serve. We do charge for the quotation. We have one company that insisted they would pay for the quotation regardless of whether the claim went down or not. They seemed to feel they should do business at arms length. The other companies, if the replacement went down, they did not pay for the quotation, which is reasonable with us.

**Question:** Is there any real driving motivation for the underwriters to start pushing for more qualified appraisers and more detailed accurate appraisals?

**Answer:** The only motivation is that the claims department is on their back, trying to get them to get more detailed appraisals. When I go back, I will be giving a seminar where they will have the claims and underwriting departments together, just so each knows what is going on. This is the only thing they can do. Underwriting has to make a policy decision as to how they handle it. They are already at the point of checking with their legal departments as to what will happen if they specify certain designations. I have already talked with Aetna as a matter of fact, and given them our MGA designation with the AGA and I have explained the AGS and all of the various people that are trying to designate appraisers in the marketplace to analyze what is going on.

**Comment:** Some years ago, I was told by an insurance agent that my appraisals had too much detail on them. I immediately called the insurance company that he represented. They agreed with me, but this man didn't want to accept them because they didn't read: One diamond \$600. That is all he wanted on the appraisal.

**Question:** What do you do in a situation where the customer asks for you to do an appraisal at wholesale?

**Answer:** Let me tell you something. They get killed, because the insurance company can take that and say, that is retail. That is your problem. I have that happen at least once a week where someone calls up and says, that appraisal was done at wholesale, not at retail. The company's policy has been to make the decision that the quote is at a retail figure. You cannot put down less.

**Comment:** They do have an arrangement where if you are willing to sign a waiver and be a co-insurer they will go with a lower or a wholesale value. This must be actually put in writing.

**Question:** How can they get into trouble if they go for replacement as retail?

**Answer:** If they go for replacement and they establish that as being retail, and then they start working down to wholesale price, the people are certainly going to get less of an item. For example, if the item was described as a VVS1 and the descriptions are all there and someone put it down at wholesale, there would be a problem. They probably would have to make a decision that either someone put the wrong rates down or whatever, but they are establishing that figure as being full retail price. So if someone turns around and if you are talking about a \$2,000 retail item and it is a keystone item, then they decide to put it in at \$1,000 and the insurance company says OK, that means to us it is worth \$500. Everything is going backwards so that means the people won't get the same thing. If the description is there, then that is a debate between the people and the company. The company says that it should be at retail price.

**Question:** Doesn't the insurance company have the option to replace in kind not in cash?

**Answer:** Well I think that we are missing the boat here. If you have a problem with retail appraisals, find out. Check with the insurance companies, they will tell you. It may be different in certain areas. I can't cover the country but I know that we do a lot of work for Aetna, and they are all around the country.

I am going to leave you with one thing. I ran something off of our computer. We were tracking for a period of time, with one company that

we do this work for, which totaled a price of \$488,575 in claims to the company, that we quoted \$317,048, for a savings of \$171,527 to the company. Of the 163 claims, 48 replacements went down. This is the percentage of quotes versus the amount of business you will do. It is 30%. When I presented this to the company, which is a nation wide company, that is when I started to get some national averages. I thought I was a genius to track this, I did not know that they were actually tracking it too. They track on a nationwide basis. The feather in our cap was the 30% replacement which was much higher than the average. Nationwide, they were running about 19%. The fact that we were showing 30% was very good for their claims department. They were doing the job well.

Thank you all.

*On April 29th, AGA member Ian C. C. Campbell sent the following coloured stone grading and certification system for our review and benefit. It follows here!*

## **AN IN-DEPTH EXPLANATION OF THE COLOURED STONES CERTIFICATION SYSTEM**

**USED BY THE INDEPENDENT  
COLOURED STONES  
LABORATORY (ICSL) RANDBURG,  
JOHANNESBURG AUGUST, 1983**

### **INTRODUCTION**

Certification of coloured stones (cut and polished gemstones other than diamonds) is a relatively new service in the world today. There is no single internationally acceptable certificate/system on the market to date. The acceptance of coloured stone certificates is, generally speaking, on a regionalized basis—that is to say, having terms of references and/or parameters generally more acceptable to a particular marketing requirement in a specific gem trading area, whether this be country or region. Optimum

acceptance parameters could, and in fact do, vary between not only different ethnic groups, but also cultures in different lands.

### **LIMITATIONS AND THE USE OF NUMBERS IN A SYSTEM**

The principle parameters contributing to the spectrum of qualities of cut and polished gems are not at this stage considered entirely in absolute terms. Although the system used by ICSL gives a reasonably fair and realistic quality report, it should also be realized that it is partly subjective and partly objective. It will likely be some time before any particular system is entirely objective and undeniably reproducible, simply because there is limited adequate means at this point that will ensure this—is quite apart from the varied tastes of a particular market in terms of acceptability which “ebbs and flows” with the passing of time, customs and tastes.

All certification systems have their limitations. A certificate should be looked upon as an additional unbiased and carefully considered opinion of quality which reasonably supports the views of other equally experienced and/or qualified dealers/evaluators whether written or verbally given.

In the case of written reports/certificates it could be argued that these are in fact better than ad lib verbal assessments simply because they ARE written and hence not so easily shrugged off as are verbal assessments. In any case, it should be remembered that a client purchases the gem and not the certificate per se—the latter is meant to give the client a better understanding of what he or she is obtaining; this being accomplished through the terms of reference which accompany the certificate. It has been said that numerical references don't mean much to clients. This would indeed be correct if an accompanying interpretation or terms of reference were *not* included. However, in the case of the ICSL certificate, they are indeed given, in addition to a reasonably good and uncluttered explanation to the layman of the various phenomena governing the quality of gems. On a parallel with this principle is the GIA's terms of reference for the colours of diamonds, i.e. D through Z which is increasingly

internationally accepted. (A number could just as easily be a letter for this purpose.)

### **THE ICSL COLOURED STONE CERTIFICATE**

This is constituted of four parts:

1. The outer protective polythene plastic pouch to hold the paperwork.
2. The heavier gauge outer paper cover which protects the certificate itself and other printed matter.
3. The actual certificate including a schedule of numerical grade interpretations.
4. Explanatory notes incorporating terms of reference which puts the certificate in the right perspective from an overall point of view.
5. All this folds up neatly to fit into a standard envelope if required to be posted.
6. The usual colour is off-white with the format being in blue and black.

### **SUPPORTIVE EXPERIENCE BACKING THE ICSL CERTIFICATE**

The system will be explained in detail hereunder, in spite of the explanatory notes already given with the certificate. The object is not to over-emphasize the details, but to necessarily give as much data as reasonably possible so that the system is more fully understood and the limitations of it also known. It is again emphasized that there are no absolutes in the true sense of the word; partial objectivity and partial subjectivity are used, the latter based on virtually 18 years (as of 1983) of experience encompassing the following practical experience: gem cutting, dealing in collectors' minerals and gems, previous retailing of gems, minerals and jewelry, gemmological work relating to identifications, quality control, valuations, evaluations and as a practicing consultant. The Director of ICSL was responsible for the introduction of the first true coloured stone certificate to be used by South Africa's largest gem exchange in Johannesburg, and thereafter an improved format was introduced and equally accepted under the ICSL label—namely the certificate described herein. This is further backed by the following qualifications; contribution of articles to gemmological journals, and membership of professional bodies of international repute:



1. A variety of published articles of a scientific or allied nature relating to gems and minerals in the following journals: The (British) Journal of Gemmology, The (American) Lapidary Journal, The Appraisers' Information Exchange (International Society of Appraisers), The Diamond News and S.A. Jeweller.
2. Professional qualifications: Fellow of the Gemmological Association of Great Britain (F.G.A.), Diamond Grading and Evaluation Certificate (Gemmological Institute of America or G.I.A.).
3. Fellow of the Gemmological Association of South Africa.
4. Other professional bodies membership: The Accredited Gemmologists Association (USA), The International Society of Appraisers (One of two members in South Africa to date).
5. Member of the International Gemstone Grading Committee.

## AN IN-DEPTH EXPLANATION OF THE GRADING PARAMETERS

*This is taken in order of presentation on the certificate*

### 1. IDENTIFICATION

This laboratory's gemmological expertise is backed by 18 years of practical experience and a well equipped laboratory. Also access to sophisticated equipment if essentially required. Photomicrographic work done for research or purposes of record. In the case of doubtful and very difficult identifications, several other authoritative opinions are sought on a reciprocal basis. Due to the extreme sophistication of some synthetics, a team effort is sometimes required to evaluate scientific test results to arrive at a conclusion.

### 2. COLOUR DESCRIPTION

Abbreviated to avoid excess words on the certificate. The terms of reference of these abbreviations are given on the back of the certificate itself. A ruby may be described in words as "slightly violet red with a very slight orangy overtone" which on the certificate would read "SL.V.R. + VS.Oy.OT". These colour descriptions are subjective and are interpreted by

the assessor when the stone is observed, table-up in normal indirect daylight. It should be remembered that the same colour can appear different to varying degrees in other forms of illumination. Looking at a ruby in ordinary office lighting (fluorescent or tungsten, or both together) can often enhance the colour appearance over that in normal daylight illumination.

The description of colour is in terms of the recognized spectral colours as much as possible. Descriptions such as wine-red, sea-blue, etc., are avoided unless on occasion to give an *added* comment in particular cases, e.g., The colour of Aquamarines could relate to a "sky blue" which would be stated under "Additional Comments".

### 3. WEIGHT

The standard unit of weight which is internationally used is the metric carat (usually ct. or cts. for short). This is further broken down as follows:

100 points = 1 carat

5 carats = 1 gram

**EXAMPLE:** A stone which weighs 1 carat and 75 points is written as 1.75 cts.

This laboratory gives the weight to the second decimal place of a carat. *It is upgraded by one point if the third decimal place is a 9.*

For example, anywhere between 3.779 and 3.788 will read on the certificate as 3.78. However, 3.789 to 3.798 will read as 3.79 and so on.

The terms of reference here are important because some laboratories upgrade weight by 1 point if the third decimal place is 5 or more. The GIA tends to favour the lower unit, while some continental laboratories favour the higher one. The client should understand this. ICSL has a standing contract for the balance(s) to be checked at least twice annually. An assized weight is also used almost daily as an added precaution to retain constant accuracy.

### 4. SHAPE

The stone is described as simply as possible in relation to its basic shape when viewed from the top. Standard shapes are: round, pear, oval, rectangular, square, rectangular or square cushion, and marquise. There are other shapes which are slight variations of these, or triangular with or without modifications, heart shaped, or free-form which is a

combination of any number of shapes—in these cases the stones have been cut very closely to the shapes of the original rough pieces of material, generally to save as much weight as possible. Freeform and triangular shapes are less desirable than others, but are used to good advantage in custom made jewelry from time to time. It can be a rather personal requirement and under these conditions completely acceptable for a given situation.

### 5. CUT

The facets on cut stones can vary in geometrical shape as well as the style in which they are placed. These differences are significant in coloured stones and variations from a standard cut are generally referred to as "mixed". On the other hand, comparatively slight variations from a standard cut can be termed "modified". For example, an oval shaped gem can be cut as follows (to name some common variations):

- (i) standard oval cut
- (ii) a true mixed cut (a brilliant cut crown/stepped pavilion)
- (iii) stepped cut (a stepped cut crown/stepped pavilion)
- (iv) also a mixed cut, or a modified standard cut (a brilliant cut crown/modification of a standard oval cut pavilion)

The standard cuts are usually: brilliant, emerald, baguette, oval and pear. However, a *standard* oval or pear is somewhat rare in commerce because of the loss of weight which occurs due to the design of these cuts. They are usually either stepped or mixed, which not only retains more weight but most often enhances the final appearance. There are numerous names for other fancy cuts which, if not really well known, can rather be referred to generally as "mixed".

### 6. DIMENSIONS

Dimensions are given in millimeters (mm) to the second decimal place. Vernier slide calipers are used with a tolerance of 0.02 mm. Measurements relate to length, width and total depth; or diameter and total depth, depending on shape. However, what is not shown on the certificate, but is nevertheless entered on the laboratory's worksheet are the crown height and table width or diameter dimensions. These additional two are required together

Abbreviated Colour descriptions		Overall Interpretation of Grade Scales	
Black	10	Dark	10
Brown	9	Dark	9
Dark Green	8	Dark	8
Green	7	Dark	7
Light Green	6	Dark	6
Yellow	5	Dark	5
Orange	4	Dark	4
Red	3	Dark	3
Light Red	2	Dark	2
White	1	Dark	1
Colorless	0	Dark	0
Colorless	0	Light	0
Colorless	0	Light	1
Colorless	0	Light	2
Colorless	0	Light	3
Colorless	0	Light	4
Colorless	0	Light	5
Colorless	0	Light	6
Colorless	0	Light	7
Colorless	0	Light	8
Colorless	0	Light	9
Colorless	0	Light	10

INDEPENDENT COLOURED STONES LABORATORY

COLOURED STONE CERTIFICATE

P.O. Box 1394  
Randburg 2125  
Johannesburg, Republic of South Africa  
Telephone No. 0111 787 8826

INDEPENDENT COLOURED STONES LABORATORY

COLOURED STONE CERTIFICATE No. 0000

IDENTIFICATION: Natural Ruby

Reputability of colour appearance is performed by the GIA Colormaster, No. 217

COLOUR DESCRIPTION: SL, Vn, R.

Colour read-out: ED, 5t/26/52

WEIGHT (carat): 1.45

Daylight equivalent in Tintones light:

SHAPE: Rectangular cushion

CUT: Mixed

DIMENSIONS (mm): 7.28 x 5.31 x 5.42

Additional comments:

MATRIX	GRADE										
	10	9	8	7	6	5	4	3	2	1	0
FINAL											
Clarity											
Color											
Shape											
Transparency											
Balance											
Proportion											
Symmetry											
Finish											

- (i) This type.
- (ii) No indication seen of chemical diffusion treatment.
- (iii) Colour description per normal daylight.

Secure explanatory notes and interpretation of this report are on page 2 of certificate.

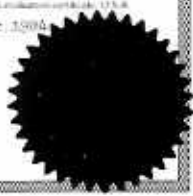
This certificate is issued without objection.

IAN C CAMPBELL, Certified Gemologist  
Fellow of the Gemmological Association of Britain (G.A.B.)  
Member of the Gemological Institute of America (G.I.A.)  
G.I.A. Treatment approval & evaluation certificate 175-B

Date: 17. October 1994

Colour and related phenomena are graded in daylight conditions or its equivalent except where otherwise stated.

This is a carefully considered opinion of quality. It does not dictate a monetary value. This laboratory and its personnel are therefore not responsible for resultant prices. Transactions are the prerogative of the commercial sector.



EXPLANATORY NOTES

**IDENTIFICATION**  
Performed by a fully qualified and experienced gemologist.

**COLOUR DESCRIPTIONS**  
These are abbreviated for easy reference. See back of certificate. Example: slightly violet red with very slight orange overtones (SLVR + VS, Op, OT).

**WEIGHT**  
The metric carat is internationally used (1 = 1 gram). This is to the second decimal place and is corrected upward if the third place is 5.

**SHAPE**  
Broad description of the outline of the stone in its table-up position (i.e. looking from the top).

**CUT**  
The basic style of cut (brilliant, emerald cut, oval, etc.).

**DIMENSIONS**  
Refers to the length, width and depth, or diameter and depth, except where otherwise stated — to the second decimal place of a millimetre.

**THE MATRIX**  
A simple term for describing relative qualities of the various parameters. The final, or overall grade is the consideration of all the other grades together. Overall interpretations are shown on the last page of the certificate.

**OVERALL COLOUR APPEARANCE**  
Hue, tone and saturation (colour saturation) combine to make up a colour's appearance. This sensation is duplicated by the GIA Colormaster which is an electronic instrument designed for this purpose. The read-out enables reproducibility of the colour appearance.

**HUE** refers to any colour in the spectrum.

**TONE** relates to how dark the stone appears on a scale of colourless (or white) to black.

**TRANSPARENCY**  
This relates to the apparent degree of transparency in a faceted stone (100 = full).

**Other degrees of transparency (10 - 90)** are generally characteristic of the species, hence are not necessarily descriptive.

**BRILLIANCY**  
Brilliance is the reflected light from the pavilion (or bottom) of a faceted gem. This relates to the amount

ICSL COLOURED STONES CERTIFICATE

area of brilliance observed in the table-up position, i.e. when viewed from the top.

**CLARITY**  
This is the degree to which a gem is internally included and/or flawed. An additional grade is given in a similar context which relates to external imperfections. The terms of reference are as follows:

The first three grades are eye-clean. They are further sub-divided under 10x magnification.

**100.** Free of imperfections under 10x magnification.

**90.** Very slight imperfections under 10x magnification.

**80.** Slight imperfections under 10x magnification.

The following grades show imperfections increasingly visible to the unaided eye:

**70.** Imperfections seen with difficulty.

**60.** Imperfections not easily detected.

**50.** Minor imperfections detectable, but do not detract from overall appearance.

**40.** Imperfections more obvious and slightly affect appearance.

**30.** Imperfections readily seen and detract from appearance.

**20.** Imperfections obviously affect appearance.

**10.** Imperfections seriously affect appearance and/or cleavages which present a hazard to the stone.

**0.** Unacceptably included in respect of faceted gems.

**PROPORTION**  
Overall proportion relates specifically to brilliancy in gems of good transparency. However, other factors can inhibit brilliancy in spite of good proportion.

**SYMMETRY**  
The congruency of facets on coloured stones seldom approach that of diamonds. More attention is paid to the balanced appearance of the profile of the stone in the table-up position, and any possible off-centred nature of the culet or band (the lowest portion on the stone). This is examined without magnification.

**FINISH**  
Quality of overall polish and girdle finish are examined under 10x magnification and relatively equated. (Necks in the girdle are assessed under the clarity grade). Greater attention is paid to the overall polish than the girdle finish.

INDEPENDENT COLOURED STONES LABORATORY

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JOHANNESBURG, REPUBLIC OF SOUTH AFRICA

Certificate Number: 0000  
Species: Synth. Corundum  
Sealed stone example  
Weight (cts.): 1,67



with the others to compute proportion percentages/ratios to arrive at a proportion rating. The table measurements have tolerances of approximately 0.05mm, and the crown height is the average of measurements taken with approximately the same tolerance as the table.

Note: Crown height measurements; taken from table plane to average center line of girdle—simply because girdles on coloured stones vary so much in thickness in reality.

#### 7. THE MATRIX (5% gradations)

This is a simple format showing at a quick glance the comparative quality gradings of the various parameters. It is related to a 100-0 scale with relevant interpretations for each parameter shown on the back of the certificate itself. **IT IS IMPORTANT TO KNOW THESE TERMS OF REFERENCE IN RELATION TO THE MATRIX.**

The terms of reference and limitations of each parameter is given as follows, and in the order as shown on the certificate:

#### 8. FINAL GRADE

Basically, this is the result of the combination of the other 10 listed parameters—some directly, some indirectly (reasons given below).

COLOUR is of primary importance, followed closely by brilliance. The latter mentioned is the product of (to variable degrees) tone, transparency, clarity, proportion, symmetry and finish. Of great importance are the angles to which the facets are cut, although this is not directly assessed on the certificate. It nevertheless has a great influence on brilliancy. Coloured stone cutting angles are extremely difficult to measure in terms of a standard base. This is simply because of the large variations of styles used and modifications of cuts. Suffice it to say that this quality is partly evident in the resultant overall brilliance of a gem.

The clarity grade itself, when significantly low, will cause a penalization in the final grade—to what extent, will depend on the species of gem being assessed. For example, clarity is of greater importance in, say, aquamarine than in an emerald, hence treated differently.

Other aspects that are taken into account when setting the final grade are phenomena such as dichroism (an

optical effect which can introduce undesirable colour effects due to incorrect orientation of a stone or through careless cutting), knife edge girdles which are potential hazards and could easily break, significant fish-eye effects due to excessively shallow cut stones (i.e. a see-through window effect) which is also undesirable, oiling of emeralds—in this case the stone is carefully examined under certain conditions. These are equated to what the unaided eye sees. Subsequently an estimated degree of effectiveness is ascertained, which downgrades the stone to what is considered to be a more realistic grade compatible to what the emerald may well have been, had it *not* been oiled. It should be borne in mind that effectively, oiled stones *should* be downgraded. (See attached appendix.)

It sometimes happens that each of these factors taken independently will not warrant a final downgrade, however, in combination the resultant effect may indeed warrant it. This is called a “final adjusting factor” and could warrant a downgrading by 5% to a maximum of 10% under unusual conditions. This final adjustment may still be made even if the final grade has already been adjusted downwards for other legitimate reasons in terms of this system’s procedures.

#### 9. COLOUR

This is primarily subjectively assessed in terms of practical experience with gems, and thereafter reasonably objectively repeated with similar coloured stones.

Three phenomena are taken into account in this system. They are; the *hue* relative to a specific species or variety of gem, the *vidviness* (or saturation purity) and the tone. **HUE:** Is any colour seen by the human eye in the visible light spectrum: e.g., red, orange, yellow, green, blue, violet and variations thereof. These blend with one another to create many altered hues. The overall effect can be one of enhancement or adulteration. The COLOUR grade is influenced by this for a given species of gem and also depends on the vidviness factor and tone. The purer and brighter the colour, the more acceptable it is, resulting in a higher colour grade.

It does not necessarily follow that lower degrees of vidviness cannot relate

to relatively higher colour grades—the highest vidviness rating for a particular gem may itself be only “moderately high” (about 65 on this scale) which may well be the best quality that can be obtained *for that gem species* say in the case of aquamarine. The colour grade here would be about 85-90, whereas for blue sapphire the grade would be much lower.

#### 10. VIVIDNESS

This relates to the saturation purity of the colour, and depends much on the tone (see below) which also has a significant effect on the colour. As can be seen in the overall interpretation of the grade scales, the vidviness rating downgrades from 100 at best (very high) to 0 at worst which would relate to a stone which is almost devoid of any meaningful degree of colour (virtually a colourless or black stone). In reality, the top reference figure of 100 is not used in this system, 95 being the maximum. This is comparative, not objectively scientific.

#### 11. TONE

Tone has a decided effect on the vidviness of colour. This relates to how dark a stone appears on a scale of colourless or white (zero in this system) to black (100 in this system). If a stone has a very light tone it would be close to being colourless (5-10) in this system. On the other hand, a very dark stone would *appear* to be almost black (90-95) in this system. Obviously, in both cases the vidviness (or saturation purity) of colour would be very low (yielding a colour grade of 5-15).

On the other hand, the highest vidviness of colour is found in the medium to medium-dark tonal range (the medium-dark extreme of which are 60-80 in this system but centering more precisely on 65-75). Medium tones range from 45-55 inclusive. Thus, one can expect to see the best rubies, sapphires and emeralds with tones within only about a 20 “corridor” in this whole range (medium-dark). Stones at either end of the scale tend to be too dark or too light and thus of lower colour quality (all other things being equal). It is interesting to note that, taking into account the degree of red in ruby, corundum that is pink usually has a maximum tone of 60, to perhaps 65 at best, and is traded as pink sapphire, not ruby. Stones with a 90 plus tone are nearly lifeless and are

very little in demand because of their blackish appearance.

## 12. TRANSPARENCY

The ICSL scale is a split one, 100-60 inclusive indicates *apparent* degrees of transparency in an essentially transparent stone, from excellent (100 i.e. colourless stones) through very good (90), good (80), fair (70) and poor (60). Poor transparency could be for a number of reasons, some of which may be heavily included stones or dark toned ones. The rest of the scale is not necessarily derogative, because it could very well be a characteristic of the species (i.e. Jadeite could be graded as 30 which is "translucent", and this would be expected). This part of the scale equates to semi-transparent (50), between semi-transparent and translucent (40), translucent (30), translucent to semi-translucent (20), semi-translucent (10) and opaque (0).

## 13. BRILLIANCY

A gem must be well proportioned *together with optimum facet angles* to yield maximum brilliancy. This is considered only second to colour in importance, but in respect of coloured stones it is meaningless WITHOUT an acceptably good colour accompanying it. As already stated, brilliancy depends on many other factors and is a product of them. This system does not measure the brilliancy per se (i.e. it does not give a "strength" figure) but gives a considered estimate of the spread of light returning from the pavilion of the stone to the observer's eye. Comparison stones also help to gauge this effect. The stone is examined in the same situation at all times and the MAXIMUM percentage is given to the advantage of the stone. (It is generally the maximum that makes the impression on the eyes). To put this in perspective, a simple example is given as follows. A square baguette tourmaline is examined. It measures 11x11mm. It only shows brilliancy under the crown facets and not under the table because of a shallow cut. The table measures 6x6mm. The brilliancy observed is based on the largest cross-sectional area of the stone (i.e. the area enclosed by the girdle): e.g. estimated brilliancy in this example =  $(11 \times 11) - (6 \times 6) = 121 - 36$  square millimeters. This as a percentage of the whole =  $85/121 \times 100 = 70.2$  (say 70%). If this

figure is referred to the interpretation of the grade scales it will be seen to represent the top end of the good category. (The stone would also be fish-eyed. There the final grade would be adjusted downwards). A 70% brilliancy would realistically be just there. This example is relatively simple-not all stones have uniformly distributed brilliancies, results requiring modification.

The effect of brilliancy on the final grade depends on how high up the scale the colour grade is. Obviously the brilliancy of a poorly coloured stone will make little difference to an already poor situation, but it will however have an effect on a good colour grade. In spite of all this, a note of realism must be taken into account. In other words, a RANGE of brilliancies will not effect a final grade until it reaches a lower point when another *range* may reduce the final grade by 5 and so on.

Examples of this are as follows (notwithstanding other adjusting factors):

- A. A 90-60 brilliancy grade with an 80 colour grade = 80 final grade
- A 50 brilliancy grade with an 80 colour grade = 75 final grade
- A 40 brilliancy grade with an 80 colour grade = 70 final grade
- A 30 brilliancy grade with an 80 colour grade = 65 final grade
- A 20 brilliancy grade with an 80 colour grade = 60 final grade
- A 10 brilliancy grade with an 80 colour grade = 50 final grade
- An 80 final grade represents a very good grade, 60 a moderately good grade, 50 medium.
- B. A 90-40 brilliancy grade with a 50 colour grade = 50 final grade
- A 30 brilliancy grade with a 50 colour grade = 45 final grade
- A 20-10 brilliancy grade with a 50 colour grade = 40
- A 50 final grade represents medium grade, 45 and 40 a fair to medium (moderate) grade.

See also page 13, 4th paragraph.

## 14. CLARITY

This system is related to two situations-internal, which is the more important of the two because it is unchangeable, other than possibly by a substantial re-cut which would then significantly reduce weight and probably also result in numerous other

changes as well; and external, which relates to scratches, rub marks, nicks, external fractures and other external blemishes other than polishing marks. This is generally the less important of the two, unless the difference is substantial and well below that of the internal grade. This grade, under normal conditions, can be readily improved by a simple re-polish which would normally have a reasonably minimal effect on loss of weight.

A glance at both clarity grades can, at times, be of an advantage, because an externally damaged stone which has a good internal clarity may well be worth procuring, with the intention of a potential re-cut in mind in order to produce a grade worth having.

A more precise term of reference is given in the explanatory notes issued as an appendix to the certificate. The terms are self explanatory and easy for the layman to understand.

## 15. PROPORTION

Overall proportion relates significantly to brilliancy *provided other parameters are optimum as well* (which are already mentioned under brilliancy).

The proportion grade is based on measurements (reduced to percentages) which relate to diameter or width, total depth, table diameter or width and crown height.

The girdle is the perimeter around all stones, and has practical thickness in spite of its thin appearance, but sometimes it is cut like a knife edge. The crown of a stone is that part between the girdle and the table of the stone. However, because of the fact that so many coloured stones are cut with girdles that vary so much (thick in places, thin in others, wavy or undulating) the average center-line of the girdle is selected as one point of the measurement and the side view of the table top as the other. This measurement is repeated on opposite sides of a stone and the average of the two measurements taken.

The subsequently computed percentages, and ratio (crown height/total depth), are then referred to a master table which in-turn gives a proportion grade on a reproducible basis. This table is based on the measurements and analysis of a large number and range of coloured stones and is realistically reasonable.

with the others to compute proportion percentages/ratios to arrive at a proportion rating. The table measurements have tolerances of approximately 0.05mm, and the crown height is the average of measurements taken with approximately the same tolerance as the table.

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The clarity grade itself, when significantly low, will cause a penalization in the final grade—to what extent, will depend on the species of gem being assessed. For example, clarity is of greater importance in, say, aquamarine than in an emerald, hence treated differently.

Other aspects that are taken into account when setting the final grade are phenomena such as dichroism (an

optical effect which can introduce undesirable colour effects due to incorrect orientation of a stone or through careless cutting), knife edge girdles which are potential hazards and could easily break, significant fish-eye effects due to excessively shallow cut stones (i.e. a see-through window effect) which is also undesirable, oiling of emeralds—in this case the stone is carefully examined under certain conditions. These are equated to what the unaided eye sees. Subsequently an estimated degree of effectiveness is ascertained, which downgrades the stone to what is considered to be a more realistic grade compatible to what the emerald may well have been, had it *not* been oiled. It should be borne in mind that effectively, oiled stones *should* be downgraded. (See attached appendix.)

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to relatively higher colour grades—the highest vididness rating for a particular gem may itself be only "moderately high" (about 65 on this scale) which may well be the best quality that can be obtained *for that gem species* say in the case of aquamarine. The colour grade here would be about 85-90, whereas for blue sapphire the grade would be much lower.

#### 10. VIVIDNESS

This relates to the saturation purity of the colour, and depends much on the tone (see below) which also has a significant effect on the colour. As can be seen in the overall interpretation of the grade scales, the vididness rating downgrades from 100 at best (very high) to 0 at worst which would relate to a stone which is almost devoid of any meaningful degree of colour (virtually a colourless or black stone). In reality, the top reference figure of 100 is not used in this system, 95 being the maximum. This is comparative, not objectively scientific.

#### 11. TONE

Tone has a decided effect on the vididness of colour. This relates to how dark a stone appears on a scale of colourless or white (zero in this system) to black (100 in this system). If a stone has a very light tone it would be close to being colourless (5-10) in this system. On the other hand, a very dark stone would *appear* to be almost black (90-95) in this system. Obviously, in both cases the vididness (or saturation purity) of colour would be very low (yielding a colour grade of 5-15).

On the other hand, the highest vididness of colour is found in the medium to medium-dark tonal range (the medium-dark extreme of which are 60-80 in this system but centering more precisely on 65-75). Medium tones range from 45-55 inclusive. Thus, one can expect to see the best rubies, sapphires and emeralds with tones within only about a 20 "corridor" in this whole range (medium-dark). Stones at either end of the scale tend to be too dark or too light and thus of lower colour quality (all other things being equal). It is interesting to note that, taking into account the degree of red in ruby, corundum that is pink usually has a maximum tone of 60, to perhaps 65 at best, and is traded as pink sapphire, not ruby. Stones with a 90 plus tone are nearly lifeless and are



very little in demand because of their blackish appearance.

## 12. TRANSPARENCY

The ICSL scale is a split one. 100-60 inclusive indicates *apparent* degrees of transparency in an essentially transparent stone, from excellent (100 i.e. colourless stones) through very good (90), good (80), fair (70) and poor (60). Poor transparency could be for a number of reasons, some of which may be heavily included stones or dark toned ones. The rest of the scale is not necessarily derogative, because it could very well be a characteristic of the species (i.e. Jadeite could be graded as 30 which is "translucent", and this would be expected). This part of the scale equates to semi-transparent (50), between semi-transparent and translucent (40), translucent (30), translucent to semi-translucent (20), semi-translucent (10) and opaque (0).

## 13. BRILLIANCY

A gem must be well proportioned *together with optimum facet angles* to yield maximum brilliancy. This is considered only second to colour in importance, but in respect of coloured stones it is meaningless **WITHOUT** an acceptably good colour accompanying it. As already stated, brilliancy depends on many other factors and is a product of them. This system does not measure the brilliance per se (i.e. it does not give a "strength" figure) but gives a considered estimate of the spread of light returning from the pavilion of the stone to the observer's eye.

Comparison stones also help to gauge this effect. The stone is examined in the same situation at all times and the **MAXIMUM** percentage is given to the advantage of the stone. (It is generally the maximum that makes the impression on the eyes). To put this in perspective, a simple example is given as follows. A square baguette tourmaline is examined. It measures 11x11mm. It only shows brilliancy under the crown facets and not under the table because of a shallow cut. The table measures 6x6mm. The brilliancy observed is based on the largest cross-sectional area of the stone (i.e. the area enclosed by the girdle): e.g. estimated brilliancy in this example =  $(11 \times 11) - (6 \times 6) = 121 - 36$  square millimeters. This as a percentage of the whole =  $85/121 \times 100 = 70.2$  (say 70%). If this

figure is referred to the interpretation of the grade scales it will be seen to represent the top end of the good category. (The stone would also be fish-eyed. There the final grade would be adjusted downwards). A 70% brilliancy would realistically be just there. This example is relatively simple - not all stones have uniformly distributed brilliancies, results requiring modification.

The effect of brilliancy on the final grade depends on how high up the scale the colour grade is. Obviously the brilliance of a poorly coloured stone will make little difference to an already poor situation, but it will however have an effect on a good colour grade. In spite of all this, a note of realism must be taken into account. In other words, a **RANGE** of brilliancies will not effect a final grade until it reaches a lower point when another *range* may reduce the final grade by 5 and so on.

Examples of this are as follows (notwithstanding other adjusting factors):

- A. A 90-60 brilliancy grade with an 80 colour grade = 80 final grade  
A 50 brilliancy grade with an 80 colour grade = 75 final grade  
A 40 brilliancy grade with an 80 colour grade = 70 final grade  
A 30 brilliancy grade with an 80 colour grade = 65 final grade  
A 20 brilliancy grade with an 80 colour grade = 60 final grade  
A 10 brilliancy grade with an 80 colour grade = 50 final grade  
An 80 final grade represents a very good grade, 60 a moderately good grade, 50 medium.
- B. A 90-40 brilliancy grade with a 50 colour grade = 50 final grade  
A 30 brilliancy grade with a 50 colour grade = 45 final grade  
A 20-10 brilliancy grade with a 50 colour grade = 40  
A 50 final grade represents medium grade, 45 and 40 a fair to medium (moderate) grade.

See also page 13, 4th paragraph.

## 14. CLARITY

This system is related to two situations-internal, which is the more important of the two because it is unchangeable, other than possibly by a substantial re-cut which would then significantly reduce weight and probably also result in numerous other

changes as well; and external, which relates to scratches, rub marks, nicks, external fractures and other external blemishes other than polishing marks. This is generally the less important of the two, unless the difference is substantial and well below that of the internal grade. This grade, under normal conditions, can be readily improved by a simple re-polish which would normally have a reasonably minimal effect on loss of weight.

A glance at both clarity grades can, at times, be of an advantage, because an externally damaged stone which has a good internal clarity may well be worth procuring, with the intention of a potential re-cut in mind in order to produce a grade worth having.

A more precise term of reference is given in the explanatory notes issued as an appendix to the certificate. The terms are self explanatory and easy for the layman to understand.

## 15. PROPORTION

Overall proportion relates significantly to brilliancy *provided other parameters are optimum as well* (which are already mentioned under brilliancy).

The proportion grade is based on measurements (reduced to percentages) which relate to diameter or width, total depth, table diameter or width and crown height.

The girdle is the perimeter around all stones, and has practical thickness in spite of its thin appearance, but sometimes it is cut like a knife edge. The crown of a stone is that part between the girdle and the table of the stone. However, because of the fact that so many coloured stones are cut with girdles that vary so much (thick in places, thin in others, wavy or undulating) the average center-line of the girdle is selected as one point of the measurement and the side view of the table top as the other. This measurement is repeated on opposite sides of a stone and the average of the two measurements taken.

The subsequently computed percentages, and ratio (crown height/total depth), are then referred to a master table which in-turn gives a proportion grade on a reproducible basis. This table is based on the measurements and analysis of a large number and range of coloured stones and is realistically reasonable.

It is emphasized that a very good proportion does not necessarily mean that the brilliancy should be good. Often it is the case that the facet angles are incorrect, which in turn seriously effects brilliance in spite of good proportion.

However, often what it DOES mean is that a good proportion indicates that the stone may still be able to be re-cut using better angles which will yield a more lively result in terms of brilliancy, without an excessive loss of weight.

Scintillation (the "twinkling" effect seen in cut gems) is NOT brilliance per se, although it is the result of the numerous reflections of light from the facets. The two phenomena are of course related. For example, a well-cut oval aquamarine can be more scintillating than an emerald cut one, but not necessarily more brilliant. The latter, because of its style of cut can at times offer a more uniform and complete brilliance if cut to optimum proportions and angles.

#### 16. SYMMETRY

What is mainly looked for here is the overall balanced appearance of the cut gem in terms of the profile from top, side and end views. Also the degree of off-center (if any) of the table, the position of the culet, point or keel (or wedge), whether or not the crown noticeably slopes from one side to the other, and to a lesser degree how well the facets point up (i.e. meet at a common point), but this last requirement is not as important as in diamonds-although it is a sure sign of good cutting which can only benefit the stone.

A well balanced symmetry adds appeal to the finished gem and shows that greater care has been taken in fashioning it.

#### 17. FINISH

The quality of the polished surfaces are examined under a 10x loupe and *realistically* equated. (Nicks in the girdle are assessed under the clarity grade).

Although greater attention is paid to overall polish than the girdle finish, if the girdle is a knife-edge, the finish grade will seldom be above 60 and the final grade will be penalized. The girdle is the most vulnerable part of any stone to damage, and it should be cut to a reasonable width because of this.

### COLOUR GRADING PROCESS

The GIA Colormaster is used as a basis for colour grading. This is partly subjective, in that practical experience over 18 years in dealing with all facets of gems is called on for a subjective assessment of the quality of colour relating to specific species. This is tempered to a reasonable degree by the market acceptably of such. Tone (vividness, or colour saturation is effected by tone) is assessed with the use of comparison stones. The Colormaster notation is noted after a colour match has been achieved of the stone being graded. A detailed and cross-referenced analysis is kept of all species being dealt with (constituting approximately 2300 stones to date as of May 1985) which cross-links colour grade, tone and estimated colour vividness in each species. This enables a reasonable degree of objectivity to be introduced from a reproducibility point of view and assists significantly to maintain a degree of consistence in colour grading. It is not a scientifically analyzed statement of colour, but it does bear a realistic comparison to the market in terms of trade acceptably, in addition to a reasonably reliable quality report as an added insurance to the consumer.

#### REACTION

There has been only limited resistance from some dealers, presumably on the basis that certain of their stones have not been graded up to the expectations envisaged! However, the more realistic of them have been open minded enough to accept an invitation to the laboratory where they have been shown the results of the comparable grades which they THOUGHT they had-and have subsequently agreed that the given grading has been fair.

These dealers have been progressive enough to continue having their gems graded at ICSL and the certificate is becoming more widely used.

#### NOTIFICATION OF OILING OF EMERALDS

Included as an Appendix to these explanatory notes is a notification given to a client when it is found that an emerald has been oil treated. It should be noted that the final grade will have been downgraded to the extent of the estimated effectiveness of the oiling as against the enhanced

appearance of the stone. It should also be noted that, irrespective of the ethics of oiling, this practise is maintained by most major dealers in the world today and in fact this has been done for literally centuries (this is stated fact, but does not support the ethics of the subject). The notification is self explanatory.

#### PROGRESS

From time to time a rationalization of the system, particularly colour grading, is undertaken in order to either improve techniques, or make adjustments, and so on. This is an on-going process and is to the ultimate advantage of both the trade and the consumer.

Finally, there is sufficient data on hand (on each worksheet) together with a clarity grading chart to enable a re-identification to be made of the gem unless the stone has been re-cut out of all recognition.

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# MONTANA SAPPHIRES

*Transcript of talk by Steve  
Drouillard and Delmer Brown*

I am really pleased to be here today. I also have some help. I brought today, Delmer Brown who is our geologist and has been in geology for some 30 years as a specialist in gem mines all over the world and has worked in developing many of them. He is here to help me with some of the technical information. I will give the opening part of this presentation and then he will take over and get right down to the nitty gritty for you.

In sitting here for the last half hour and listening to the growth of the organization and how it is developing, it reminded me that the whole gem industry in general is suffering quite a bit of future shock. All the new kinds of technologies that are available in the industry, all of the burgeoning amount of information that must be known to do a competent job in the jewelry industry. The kind of reactionary block that you find out there among the old mind jewelers who wish this would all just go away, (but it is not going to), and people like yourself who are trying to come to grips with it to make it a functioning reality (the business of buying and selling jewels).

There are a lot of benefits to being in a situation where improvement is needed. A lot of benefits, although it is sometimes a very well disguised blessing. That reminds me of one of my favorite stories about Samuel Clemmens. He was at home one day and he had a terrible chest cold that had been dragging on for weeks, and he had been coughing and hacking. He finally went to the doctor to ask the doctor to help him. The doctor said "Well Sam, how many of those cigars are you smoking every day?" Sam said, "Gee, no more than 5 or 6." "And how often do you hit that bourbon bottle?" "Oh, half a bottle a day, no more than that." "Listen, lay off the cigars, lay off the bourbon, and you are going to be fine." So he went back home and sure enough in three days, he was as healthy as can be. About that time, a neighbor next

door, an old woman, was having the same kind of congestion and problem. He went to visit her and she was telling him about her aches and pains and all. He said "Well, I know what to do, just quit smoking cigars and drinking bourbon!" She told him "I don't smoke cigars and I don't drink." And he turned white as a sheet, went straight home, lit up a big stogie and poured a glass of bourbon, because he was horrified with the idea of someday being deathly ill and not having anything to do about it. So there is quite a blessing in still having work to be done.

Let me start out with our mine. It is up in the Judith Basin of Montana. It is almost right dead center in the middle of Montana, right where the great plains first begin to sweep up and create the foothills to the Rocky Mountains. These are the Little Belt Mountains. The dike itself runs for about 3½ miles. We found it on the surface, and it dips down on either end and goes deeper underground. We think that the actual running distance of the dike is approximately 5 miles, all told. We core drilled down to a depth of 500 feet, you know we have dike material there. Delmer Brown has found pre-cambrian material in this dike rock which came up from a level of about 7700 feet and we have recently found some evidence that it may extend up to a depth of as much as 60 miles. This is a huge deposit. It is a very similar deposit to your kimberlite pipes in South Africa. The difference is the shape of the deposit. This is an igneous upthrust that filled an earthquake fault when the Little Belt Mountains were being built about 25 million years ago. You had an earthquake crack that sent a deep crack down through the Madison limestone which is your basic material here. It was filled by this igneous upthrust that brought up your aluminum oxide crystals. The material was found about a hundred years ago. Back in the late 1800's, there were several little gold mines being mined in that area, and Jake Hoover was one of these gold rushers, and he was mining in Yogo Creek. He was actually panning in Yogo creek and finding just a little bit of gold as he got there late. Most of the gold claims had been a little further upstream about four or

five miles where they were getting more gold out, but he found enough to keep him working. While he was panning this material in the stream, he found a lot of these little blue chips. He didn't know what they were, but he saved them for a period of years. After a time, he had a cigar box full, and friends told him that he ought to find out what they were. He sent it to New York, and it made its way to Tiffany and Company. Mr. Kunz was the gemmologist there. He was a great man on American materials. He identified them as sapphires of rare quality. Tiffany and Company sent Jake back a check for \$12,000 for that box of sapphires, asking if he could mine any more. So the sapphire rush was on.

I found in a museum in Baltimore, one of the early pieces Tiffany and Company made with the American Sapphires. It is an iris. The piece actually stands about eleven inches high. It has some 220 of our sapphires in it, it is a very beautiful piece.

I have some historical photos I was able to dig up in Montana that are of the actual mining operation. The mine itself was first used, but shortly thereafter they found there was a sapphire dike that was in place that ran across the creek, and ran for several miles on either side and it began to produce quite a bit of sapphire. There was a British company in London at this time, that had a dream of building a sapphire syndicate in the same style as DeBeers was building their diamond syndicate. Their name was The New Line Sapphire Syndicate. They owned deposits in both Burma and Ceylon and they noticed that the world price of sapphires began to dip because of the huge influx of sapphire material coming from America. So they sent out Charles Gadson to investigate the deposit. He went up to Montana, found that it was indeed an enormous deposit, and they began to buy it up. About 1900 they secured all rights to the properties and they went into production. They mined this property and followed down the dike. They just started with tunnels from the top and took it straight down. It was very primitive, basically, hold the steel rod and hit it with a sledge hammer to break the ore up small enough to put it in a bucket and bring it to the top. The



tunnels went down as far as 250 feet. Charles Gadson, from the period of 1900 to 1929 took out more than 16 million carats of sapphire. There was an enormous quantity of sapphire on the world market at that time. A great deal of it went straight to London. The rough was then cut and sold as oriental sapphire with all the Ceylon sapphires, so there was never a lot on the market identified as American Sapphire. And you still find quite a bit of it in London, in your antique jewelry.

Charles Gadson brought piles of ore to the surface. The ore is a substance which is a very close cousin to a Kimberlite, and acts the same way. It is hard rock when you take it out. You bring it up above ground, and let it sit in weathering stacks for a period of six months and the material will get soft enough to crumble in your hand. At that point, they begin to shovel it into a ditch and it will run down to the sluicing operations. So you are able just to turn it all into mud and sluice it like you would gold. The yield is low on this ore. You only get about 2 grams of sapphire rough for every ton of material that you process. It is an intensive process of moving tens of thousands of tons of earth to get a high production.

Charles Gadson had the setup for huge wooden weathering floors, to put wood floors on the ground and stack ore on top of it so that they wouldn't lose any crystals going into the earth. After the material was weathered, it was all cleaned up, brought down and processed so they would find all the sapphires. They found that all the material would not break down in one year so they stacked it up again. They washed it again and they had four piles where they would take it from one pile one year, and the next pile, then the next pile and a dam at each level to run the water, and they found that they got almost a tie yield out of the yard each year and it would run for four years.

Back at this time in the Western United States, Charles Gadson sold part of the dike to an American firm who set up an operation in Yogo Gulch. They sunk a tunnel that went straight down and then back and they took out some excellent material. They ran that operation for about seven years and were successful enough in

their production that again sapphire prices started to drop. So Charles Gadson spent a lot of time there and saw that they were not doing a very good job in getting all the sapphires out of the ore. So he made a suggestion to the British company to buy back the operation. They did buy it back, and Charles Gadson in reprocessing the tailings from this mine, made almost double what it cost him to buy the American mine.

In 1923 they had a terrible cloudburst up at the mine. It was a deluge or a flood. It washed away all of their operations above ground, flooded some of their tunnels, literally a disaster. It pretty much ruined his entire mining operation. From that point on, they had to call to get more money from London to redevelop the mine and they were just getting it back into substantial operation when the crash of 29 came and the bottom fell out of the world gem market and there really wasn't money anywhere for anyone to do anything. At that point the mine literally closed up. Charles Gadson lived on the property until the early fifties. He died a few years later when he moved into town, and nothing was really done on the property all through that time. He raised minks and had a big wine making operation in his basement. That is really all the property was used for from 1929 on. There were a lot of small ventures that came and dug some ore from the early sixties into the seventies, but the mine never really got into production. Because the ore weathered when it was exposed to air, all of Charles Gadson's tunnels got soft and began to crumble and fell in. So when we got to working on the mine seriously in 1980, there was really nothing salvageable in the British operation, and we started fresh.

There is still a substantial amount of material available from the surface. As big as this property is, we found a section of the dike one and one half miles long that was available from the surface that had never been mined before. There was much mining of sapphire before, but the dike is so big that there is still literally tens of thousands of tons of ore available just on the surface. We have approximately one to two more years of mining available on the surface and then we will need to go underground.

Mining is a lot more expensive in the United States than it is in Asia. You have a score of government agencies that regulate us. Environmental protection agencies do impact studies even to exhaust on the equipment out there, even though we have the only equipment in probably one hundred miles. They regulate us for air pollution on the little machinery we have. We have to open a pit one foot wide for every foot down we go. The dike itself is only six feet wide, but when we are digging at eighty feet we have opened up a canyon that is eighty feet wide, and we have to haul all that dirt and move it away to be able to get at that six foot dike. Because of that we have a very expensive mining proposition. Our cost on the material runs at an average of \$55 to \$60 per carat, just in raw mining costs. We have a pretty hard floor on our material, that others don't have. We really don't have any such material that comes at \$10 per carat, because there is just none to be had at that price. This is one situation in the gem business where because we operate the mine and sell the jewelry, most of the cost is based on the actual cost of taking it out of the ground.

The ore is mined with the same gravity sorting that you would use on gold or any other heavy metal. We find a layer of sapphire that gravitates to the bottom of the jigs, and the lighter material is on top. There is a lot of hand sorting to be done.

The sapphire itself tends to be tabular, a bit flat. We find that as we go down, it tends to be less flat. Because we have a hydraulic upthrust, you have gravity and fluid mechanics working. There are some theories that the flatter smaller material is at the top of the dike because it was the most buoyant in the solution, and that the larger, rounder material tends to be lower in the strata.

The British took out the largest sapphire on record from this mine, they were mining at the greatest depth. They took out one that was about 20 carats. The largest material that we are getting out of this deposit now cuts between 3 and 5 carats. The bigger material we cut in Denver so that we can get a technically good cut. The other material we cut in Bangkok, all the melee. We have worked hard to set



up a good cutting operation there. We are probably the only ones in Bangkok that are cutting colored stone melee like a sapphire with a 58 facet brilliant style that is commonly used for diamond melee, so we get a nice, bright, brilliant product.

When it comes back from Bangkok to our Denver office, we have tried to do a lot to help the colored stone business in our area become a little more regular in the way the diamond industry is. Standardization is one point that the diamonds kill all the colored stone business. So what we do when we get the materials back is weigh and measure it all, clarity grade all of it, so in individual packets we will have 2.7mm rounds of a specific quality so that we can produce a fairly standard product. This allows us to produce a reliable product in jewelry, and it is one step forward in trying to make good cuts with our colored stones that can give us the commercial advantage that diamonds have now.

We put our stones in a line of jewelry and promote it as American Sapphire. We wanted to build a trade name for this material because it is different and special. We wanted to give it an individual identity, so we have created a program of sales for it. We have smaller stones in general. Less than a tenth of a percent of our production cuts over a carat. We have a lot of small stones to sell. That happens to be good at this time in the market because the mass market in jewelry is \$500 retail and below. So we are a good match for the market right at this time. We also, to get the larger sizes for the fashion clients, try to find stones and combine them with interesting combinations to give some size, as well as having some of the other smaller material. We have made a big point about the fact that we guarantee our material not to be heat treated. So when we put it together with material that very often is treated, we make it a point to disclose that too. That has been a big part of our message to the rest of the members of the AGA, that you as appraisers are having to make a lot of qualifications between synthetic and non-synthetic and we think it is equally important to make distinctions between the variety of treatments that are available also. Disclosure is really the bottom line. It

is not like some are good and some are bad, it is just that everybody should know what they are doing.

One last thing that we have worked on is the material end of Black Hills Gold product which has been a real popular item, and certainly has helped me sell a lot of my melee. It has a strong American selling point because it is with Black Hills Gold and Montana Sapphire.

The material itself, once you get to know it, you really won't mistake it for another stone, except at a distance, having just a glance at it, you might mistake it for Tanzanite. It really is quite a distinctive looking sapphire.

Now I am going to ask Delmer Brown to speak to you and give you all of the information that you will need to know on a microscopic level for making a distinction of our sapphire from the others.

Delmer Brown: One of the pleasures of working with the Yogo Sapphire deposit in the field, has been the opportunity to study corundum deposits in place since as most of you probably know, most ruby and sapphire occurrences in the world are in alluvial deposit occurrences and it is very difficult to learn much about the genesis, how the corundum actually formed in the gem varieties. Yogo is one of the very few mines in the world where the sapphires or corundum or gemstones are found in the original host rock.

Before I talk about the gemmological properties and how to distinguish a Yogo Sapphire, let me make a couple of comments on Steve's talk. He told you how we were mining and having to mine out 80 feet to go down 80 feet. This does not mean we will go on forever, in fact, we are closing out a phase of operations. Obviously since we found the stones near the surface, it was less expensive to start mining there. Now, starting next summer, we will be going down to an underground operation. We will be using some novel underground techniques, such as underground hydraulics, where we are using high-pressure water to break up the dike just within the zone itself and recovering the sapphires. This will greatly reduce the cost of deeper mining and also result in less breakage of the gemstones. We keep records at

each interval of depth and each lateral interval in the field, not only of the quality but of the size distribution by half mm ranges and the cutability, very detailed records, so we can keep a handle of what is going on. We think this will be useful in the future for other gemstone deposits around the world.

Yogo Sapphires occur in basically two colors. More than 98% of the sapphires are a very tight color range in the blue variety. Depending on which portion of the dike or which portion of the pocket you are mining, you get about 2% which are the violet colors. Internally, the inclusions in both are identical, it is just the color that is different. The only other major difference that you will see is in the fluorescence. Due to the short wave ultraviolet light, the blue sapphires do not fluoresce at all. The violets have a dull brick red fluorescence.

Yogo Sapphires are quite different from most other sapphires around the world in that they are remarkably free of inclusions. We do get a few inclusions, perhaps three to five percent of the total output of the mine does have inclusions, but the rest of it is just generally devoid of inclusions. The absence of inclusions is certainly a hallmark compared to other sapphires. Sapphires from Sri Lanka, Australia and elsewhere as you all know, have an abundance of silk. There is absolutely no silk in any Yogo Sapphires. Never any. We do find some rutile, in fact rutile is one of the major inclusions in a Yogo Sapphire. This may sound a little strange when I say that we have no silk and yet we do have rutile. Rutile is always these very large distinct crystals. In looking at them through a gemmological microscope, they are very large and you can see the semi-translucency of the material. You can see striations on the face. It is similar to when you see a pyrite crystal in other gemstones. When we do find these crystals, they are large and never in the form of silk.

Another characteristic of a Yogo Sapphire is that it has the ability to have almost identical color under natural and artificial light. Many sapphires under artificial light become very dark, but a Yogo maintains almost the same color under any light conditions.



Let me talk a little bit more about some of the inclusions which we find in the Yogos. Calcite crystals are very common in looking at Yogo. Occasionally we find a spinel crystal or a pyrite. We sometimes find some various pyroxene, you can recognize these by their pseudo-hexagonal shape, opaque crystals within the gemstone itself. But as I say, these inclusions are in a very small percentage of the stones themselves.

Perhaps the best telltale sign of a Yogo sapphire is its dichroism. It has a very distinct dichroism. It is hard to explain, you must see it. By re-orienting the crystal by eye, you will see that one crystal has a deep royal blue color, and in the opposite direction you will find a very distinct turquoise blue color. It is more distinct in these sapphires than any other deposit in the world.

Yogo also has some two-phase inclusions. You don't see these except at extremely high magnification, such as several hundred power. These are not scattered indiscriminately around the stone, but in certain fractures, certain color patterns that, subjected to high magnification, you can see them. So normally you would not see these two-phase inclusions. They are of interest though, because of their extremely high pressure, such as 70 atmospheres or 100 pounds per square inch. But what you do see under low power magnification, is an opaque pyrite crystal in a flat liquid puddle. This puddle is almost always perpendicular to the seed crystal's optic axis. Now this would be a flat puddle surrounding the solid crystal, very reminiscent of what you see in Thai rubies. You never get any different orientation. This is quite unique when you recognize these parallel tubes. Yogos have some things they are characterized by not having. I mentioned one in the lack of silk. Another very important characteristic that they have is complete lack of color zonation. Never, never will you see any zonation in this sapphire. Part of this is probably due to the fact that Yogos have crystallized, undoubtedly, at a very deep depth within the earth and you probably have more homogenous cooling crystallization conditions, and zoning is somewhat a condition of rapid or different changes and uneven

pressure. Yogos are totally uniform throughout.

The other thing that Steve has mentioned is that in contrasting with a few other deposits, Yogos have a very tight range of color. In Ceylon or Thai sapphires or most other deposits, you find a wide variance of blues or violets. As you noticed, there are not too many sapphire deposits around the world. The main three of course, excluding Yogo are those in Sri Lanka, in Thailand and in Australia. The Ceylon stones of course are very, very light without the heat treating. The Thai and Australian stones can be quite dark to extremely dark with a lot of green components in them and in the case of Thailand deposits, they are being rapidly exhausted. The future doesn't look very bright for finding new deposits there. The end is certainly in sight, although I don't mean tomorrow. To a somewhat lesser degree, the same is true in Australia. Cambodia has in the past been a producer of some fine sapphires, generally quite small. The town closest to the mine is headquarters of a rebel camp at this time. The production there is virtually zip. There have been some fine sapphires and still available from Burma, but the amount of sapphires coming through from Burma today are really just a trickle compared to what they formerly were. At some time, Burmese Sapphires could conceivably be prevalent again, but a change in the socialist government there must come, because they have been discouraging this gem production.

The deposits in Cashmere are essentially mined out. The government of India has this year awarded a contract to an Indian firm to go back in and attempt to open the mines, but most of this is going to be exploration. I do not expect the deposits at Cashmere to yield much. They are very high in the mountains with an elevation around 16,000 feet, you can only get to them about three months of the year, and they are largely mined out. That leaves you with, besides Yogo, just miscellaneous deposits around the world. There are some other deposits in Montana around Rock Creek and around Missouri River. These are the pastel grade green sapphires, some putty colored, but never any deep blues. Another is in

Nigeria, of a dark blue, occasionally a fine stone, but usually heavily included. A few recent finds in Brazil, but again with major inclusions. So that brings us back to Yogo. The Yogo deposit is one of the major deposits, certainly it is the largest deposit or source of sapphires in the world. It is also in a fairly stable political environment. When I mention these other countries, Ceylon, Thailand, Cambodia, you never know what the production is going to be. So Yogos are going to be on the market for a long time.

Let us open to any questions either to myself or to Steve.

**Question:** Would you please go over two-phase inclusions again?

**Answer:** Yes. We find in Yogo sapphires, under extremely high power, when we get these little puddles we often find one-or two-phase inclusions. These will be gaseous material which is carbon dioxide. But you only see this under extremely high magnification, which you normally would not use in gemmological examination. But you certainly see the puddles under ten power.

**Question:** You mentioned that twinning was very common in this material. Is it to the extent that it affects the yield of the finished product?

**Answer:** No. I include twinning as an inclusion, but we have so few internal imperfections within the crystals that the twinning only makes up about 3% of the stones.

**Question:** Do you find many color change specimens?

**Answer:** We do find a few. In grading the cut stones, we might find about 1% of the violets that show some form of color change.

**Question:** Do you have a spectroscopic analysis on the sapphire?

**Answer:** No, we do not have any specific lines that you can use with an absorption spectroscope that would identify a Yogo from another sapphire. Certainly the iron lines are present, they are not as strong as you might find from material taken from Australia or Thailand. No we do not have any characteristic spectrum line.

**Question:** In the last issue of the GIA "IN FOCUS" magazine, it said that you are guaranteeing naturalness, and lack of treatment in Burmese

rubies. I wondered how you could do this when you do not have the control from the mine to the point of sale?

**Answer:** You are right, we do not have the Burmese rubies under control from the time of mining because no foreigners are allowed in the Moguk area of Burma. To guarantee the non-heat-treatment, all the Burma rubies which we use are carefully examined in the laboratory for the telltale characteristics of heat treating of which there are many. As in most forms of gem treatment, there is no one sign that shows positive proof of heat treatment or lack of it, but put together, the group of characteristics of heat treating and knowing the origin you can be virtually assured that with this combination of factors, you can see that the treatment is not there. Where there is heat treatment, they are very conspicuous. We are working on some instrumental techniques now, where every stone is carefully scrutinized under a microscope. We are doing a lot of research now on more sophisticated instrumental techniques to discover heat treatment. One of them is working with magnetic susceptibility.

**Question:** I understand that some of the Montana sapphires are being heat treated, from some of the other mines there. Is this true?

**Answer:** Yes. In fact I just saw yesterday, the exhibit in what used to be the Marriot, (forgive me I cannot remember the new name of the hotel) they had some of those from the Rock Creek deposits which were heat treated to enhance the blue color because most of those from deposits in Montana are a light pastel green, extremely heavy silk, pastel green to a greyish color, and they can improve the color to a much deeper blue. Certainly nothing of this shade of blue, but they are improving them. I do know they are doing that routinely to get a more saleable stone.

**Question:** Do you think that heat treating might affect the durability of the stone?

**Answer:** As a matter of fact, I had dinner with a friend of mine last evening. He brought some that he had collected that had been heat treated and by looking at them with a hand lens you might be right because it causes other problems, because we see

some induced feathers which could be equally bad. I don't mean this is a negative system. I don't want to imply that every time you heat treat you will induce problems. Certainly you will improve the color but there may be some other trade-offs.

**Question:** Those who have known Yogo over the years, have always maintained an identification in familiarity just from the particular blue or steely blue appearance that seems to be unique. Does that remain consistent through the dikes?

**Answer:** That has maintained consistent throughout. I am glad you mentioned that because I should have. Your words, steely blue is a very apt term. People refer to it as steely or light blue and this is characteristic of Yogo, one and all. In fact, it is amazing the very tight color range, there is only very slight variance in the color of blue. More of the color range is in the intensity of the cutting or for the size of the stone, than the sapphire itself. When you speak of Ceylon or Thai sapphire, you have a very large range in the blue spectrum.

**Question:** You mentioned that you have your own cutting plant in Denver. Do you do custom cutting?

**Answer:** No, there is no custom cutting. In fact, Intergem is fully devoted to its own jewelry, its own merchandise and nothing else is done on a custom basis.

**Question:** Are stones available directly through you or from manufacturers?

**Answer:** (Steve) I will tell you what we are concerned about and then you will understand how we work. We don't want to sell large lots of loose stones to other manufacturers, because we are concerned that loose stones are not mixed in with all generic sapphires and we compete with ourselves in that way. On the other hand for people who are working with us and selling some of our jewelry and need a stone for a custom order, we would be perfectly glad to help people in the industry.

**Question:** What are the basic price ranges for your stones?

**Answer:** The melee runs from about \$100 per carat. When we get to quarter carat sizes to one third, we go to about \$200 per carat. I will give you some benchmarks. What I am quoting here

are top quality stones. At half carat we are around \$500 per carat, and the carat stones are \$1,200 to \$1,400. I would like to bring up one point. Many have been asking the question of how we can say our Burmese rubies are untreated. One advantage is that we are not a laboratory and we do not have to make an accurate call on every piece of material brought to us. We have the advantage of being a business where we go into the field and look for untreated material. We look for material that provides us a lot of evidence. We do not but the material that does not provide us a lot of evidence. So most labs would tell you that they can make pretty accurate calls in many cases, they just cannot in all cases, and the position that we take is that it is really not necessary to make those distinctions in difficult cases. We simply do not deal with that material, and we work with material that we are confident of.

**Question:** Do you think there are any chances of ever finding any ruby in the Yogo deposits?

**Answer:** (Delmer) I think I have found two rubies already, but two carats doesn't really make it a ruby deposit. These were small. Yes this could happen, but I would doubt it. When I say the color range is blues to violet, in going through a million carats, I have found three green stones, two colorless stones and one yellow stone.

**Question:** Any plans to cut down on your monetary expenses?

**Answer:** When we go underground our expenses will dramatically decrease. Because as we pointed out to you, now we are mining a dike that averages six feet wide and we have a pit which is 80 feet wide. The bulk of our cost is excavation. As we go underground with hydraulics, we are going to be confining the mining to a relatively narrow dike. That is after the initial underground costs of setting up the development, the cost is going to drop dramatically.

**Question:** Your cost right now is basically governmental regulations?

**Answer:** Probably the greatest single cost is the fact that we have to remove so much along with this dike. We have a one to one ratio just to comply with law. I don't want to give the government a bad rap because this is necessary just for safety.

**Question:** What are the laws as far as underground? Are they going to come in and say, no you can't do this and you are going to have to do this?

**Answer:** No. This is not going to be a problem, in fact we have been working on underground design now for three years. We have been doing this both in conjunction with the Federal Mine Inspectors and with the State of Montana Department of Natural Resources. So we have everyone's input on designing the system, trying to head off these problems before we get into it. In fact, we have had major encouragement from the State of Montana for example on working underground because we will be moving our processing operation underground as well, and the only thing that will be coming up to the surface is just a minimal amount of material. This will mean far less surface disturbance, and a lot more controlled atmosphere.

**Steve:** I would like to extend an invitation. We run tours of the mine during the summertime, starting in late June and running through August. It is a beautiful part of the country. If you have ever wanted to go up and visit Yellowstone and Glacier National Parks, we are right in the middle between those two. We do have a good tour set up. You can see the deposit and go through some of the ore yourself, see if you can find a sapphire. You are welcome to come and do that.

If you have not seen the stones, once you have looked at enough of the material, it will become something that is visually recognizable. If you bring your loop and start to go through it, you will see that it is very different from other sapphire material. The only mistakes we generally have with people is that they may identify synthetics as Yogo Sapphires or vice versa. Even that will not happen once you become acquainted with the characteristic colors. Then they really do not look alike.

## VALUATION SCIENCE

*Transcript from the talk by Dexter MacBride (ASA)*

First my compliments to all of you. Perhaps the most direct way to express this is to state my deep impression that this is a very efficiently run, educational experience. My compliments to Joseph Tenhagen, who is responsible for the program. Also to the conference coordinators, B.J. Caldwell and Mary Lou Davis. I would like to say to them publicly, I appreciate the courtesy, the efficiency, the hospitality which made this a very pleasant experience.

I noticed that many of you were reading the paper this morning as I was, and there is an editorial in the Arizona Daily Star entitled policing lawyers, a subject about which I am very sensitive. I am a member of the Bar Association. I hasten to add that I have repented of my sins at a very early age. I no longer practice law! Under the editorial heading it states, "Lawyers deserve credit for trying to enforce ethics." This raises a kind of ambivalence as you sense a public plea of desperation. Indeed, the comment is made, A new system instituted by the State Bar Disciplinary Commission will go far to help lawyers, by improving the image of what has become one of the least trusted professions. Then they comment upon the steps being taken, and the last sentence is "that is something that a lot of people have waited a long time to hear." In essence I am going to talk to you about education and the educational system. But like all of life, it is complex and inter-related. You cannot talk about one without talking about a myriad of subjects. When I complement Joseph for a job well done, you know that I am complementing the ladies behind the desk when it comes to efficiency. You know that behind this was months of planning. Everything is complex, everything is important. The only condition that plays, as Emerson said is "It has to be relatively important." One has to know the theory of relativism.

I would like to talk about a lot of

things and tie them together. I make assumptions when I work with you. You made an assumption when you came in this morning, that the excellent speaker who preceded me would speak in English. You did not think about it but it was an assumption. Assumptions predicate all the actions of our lives. For example, when you came in this room, as a silent assumption you assumed that you would all be facing in this direction. No one said anything, but it is built in, isn't it? You are oriented to the assumption that you will all fit on that size of a chair. It was an assumption that you were going to be spoken to, because here is the podium that lets a man hide defensively behind. That is why desks were built for bureaucrats, it is a wooden bullhorn against the world. Remember the cartoon with the little fellow sitting in the box who says, "Come and get me?" There is an assumption that the world is pretty grim.

So I make certain assumptions that I hope we share in common. For example, when I talk about appraising, I hope you somehow know without being told that the word appraising comes from the Latin "ad" plus "pretium" which means "to the value". All appraising means is to the value, that's all. I assume that you know when we talk about appraisal, that the key ingredient (putting aside such elemental factors as integrity, experience, education and practice) is objectivity, is it not? You know this, I do not have to tell you, you assume. Objectivity is the keystone in the appraisal function. This implies that one assumes an arms length attitude.

Now let me show just how complex this is. When you appraise, to the extent that you buy and sell the same product that you are involved in appraising, you are no longer objective and you become, in part, a person with a vested interest. To the extent that you have a vested interest, you do not serve the appraisal function well. You all know this, I do not have to tell you. This is the reason why in the code of ethics there are various interdictions accepting fees on commission or percent of the value. Because indeed, if you hire me to appraise a ring that, well, might be worth a million and I am getting a 10% commission, I might

be tempted to appraise it for two million for reasons that are obvious. So there are implications and assumptions, that is, as you have a vested interest and lose your objectivity, you do less and less good in the public service of appraising. I understand that you know this, but I wanted to stress the assumption. Just as you assumed we would all sit in this direction, I assume that you all know the appraisal function requires objectivity.

Most real estate appraisers are involved in buying and selling real estate in the same community. To the extent that they do, they lose the public's confidence by assumption in their objectivity. Surely the average real estate man is interested in seeing that his client receives as high a price as possible, because his commission is related to it. The only reason real estate people are permitted commissions and lawyers are permitted commissions is because it is assumed by clients that you want someone to be prejudiced in your favor. You pay for the favoritism. The appraisal function is something completely different.

With those comments, let me dig in, if I may.

About five months ago, I had the dubious pleasure of being employed as an expert witness in a case, in the District Court in Houston. It was an important case of fair housing concepts. It had to do with something much more than real property, it had to do with real people. When you evaluate a property, it is one thing, when the evaluation that you place on a property affects the life of a person, you are now involved, which, by assumption could become an advocacy position. I had the rare privilege of being involved in this suit, and having a judge who is acknowledged of being an autocrat of immense and primal proportions. He runs his courtroom with a rigor and ferocity that would give credit to a concentration camp. He is feared beyond belief. He is no advocate, he is impartial, he is ice! He is arms length, and he is able. It is terrifying to be in that kind of environment. We all like environments in which a vested interest helps us out a little bit. The most excruciating experience was cross-examination. This is a process not to be undertaken lightly, your career could be ruined.

Five sentences can destroy you for a lifetime, there is no taking it back. It is etched, immovable on paper. So I had the trepidations that anyone faces in court. You all know how court proceedings are run. It has very little to do with what you are going to testify about. It is the opposition saying, if we can destroy this fellow, we don't care what the content is, if we can rip him apart, no one would believe him even if he had the right content. This is the process. This is the adversary process which is so glorious.

I knew this was a case brought by little property owners against the Veterans Administration which is quite large. They are being defended by the Department of Justice which has equally Napoleonic dimensions. And here is the little property owners association trying to get some justice on a real estate transaction. I assume that you know when I say "fair housing" that the issues involve Blacks and Mexicans.

So I sat and thought, this is really going to be something to go through this cross-examination. My credentials will be turned inside out. I will be keel hauled in the most savage style which an English sailor in the 1700's would not have dreamed of. I will have barnacle scrapes forever.

Then, a fascinating thing occurred (which is why I want to talk to you about certain kinds of education). My biographical sketch was on file. I did not know that there had been conversation about it. The judge had a conversation with his court clerk (the judges have to talk to someone!), and through some gratuity or providence of God, it just happened that the court clerk was very attractive, therefore it was easy for me to have a vested interest in being polite. I was out in the hall and we had an interesting conversation about education. I was explaining to her that I had created a degree for appraisers. I didn't realize what would happen as a result. The result was marvelous to behold. When I was to be cross-examined by the Department of Justice with their various attorneys, they started in on my sketch and the federal judge (remember that this man is a real autocrat) leaned over to counsel and asked "What are you doing?" The counsel came over and said, "Well your honor, we are cross-examining,

attacking the credibility of the witness". The judge said, "This man has impeccable credentials, don't try to attack his competence. My goodness, you are in trouble. Go to the facts of the case!"

There was not a single thing the Department of Justice could do about it. I was left sitting on the island of happiness, being defended by the "iceberg". Not a single question about my competence. He had ruled that I had impeccable credentials! Little did I know that he had that conversation with his clerk. He saw the Valuation Sciences degree that I had from a university, he made up his mind. He never heard of a real estate appraiser having a degree in appraising. Rightfully so. I am the first one in the U.S. to have gotten it, and there are only ten who have it now.

Now let me leave the courtroom. I do this to show you that it would pay if you are ever involved in court procedure, to have a vested interest in some kind of education that would permit an iceberg to say, "He has impeccable credentials." That is worth a lot, is it not? I see some of the real estate appraisers know exactly what I mean.

You have a vested interest in how you operate before various elements of the public. I think it is fair to say that there are approximately 150,000 men and women in the U.S. collecting fees for making appraisals. This was true seven years ago when I was getting my masters in Valuation Sciences. I was investigating the appraisal industry. Of the 150,000, 30,000 of these belong to one of the 5 or 6 major nationwide testing certifying appraisal societies. Of the 30,000 who belong, there are those who are associated by having a code of ethics and paying dues. Of this, approximately 15,000 have been tested and certified by these respective societies. Now, 15,000 is an awful lot of people. You can have a revolution in nearly any country with 15,000 people. I was the chief appraiser of the State of California for years. One of the reasons the engineers selected me was the Peter Principle. I was rising to my level of ineptitude and I was being rewarded! One of the reasons they selected me was that I cannot add or subtract. I make one of the best appraisers you have ever seen. I have no mathematical inclinations



whatsoever. 15,000 is about 10% of 150,000 (I do have some mathematical ability). Let me turn it around and say it so it will offend some of you. In this country only 10% of the people who are making appraisals are competent by definition of the appraisal societies. I would like to say to you that I believe only 5% to 8% are competent, of all the people practicing.

How does one determine the competence? In most states, anyone can put up a big billboard on the highway and say "I appraise diamonds, come to me." Or, "I appraise real estate." The competence is now what you say you are. The appraisal societies have tried to erect signatures of competency. We have ASA after your name, or AMI after your name, and so on. Those are little flags of competency. What I want to tell you about is the assumption that only certain things lend competency ratings.

In March of 1976, in California, the Attorney General issued an opinion that had to do with the State Certified Tax Appraisers. He issued an opinion because the appraisers wanted to be called professionals and they wanted a one or two step pay raise. The Attorney General held that appraisers in that state were not entitled to this kind of advance because they were not professionals. Saying that, in effect, an appraiser is not one of those persons who can demonstrate expertise by way of academic recognition. In other words, they do not have a degree in the area in which they are practicing. One week later, in a very famous case (Rosenbloom Case with the State Supreme Court of New York) this decision was reinforced. That is, if you do not have a degree in the area of expertise in which you are practicing, you are not a professional, you are a tradesman by legal definition in this country. Now, understand that. When I walk into a courtroom and defend a client, I am a professional. I have a degree. When I walked in that same courtroom and issued opinions about diamonds, I would have been a tradesman because I did not then have a degree in my area of expertise, which was appraising.

I have made hundreds of little audiences absolutely furious, because I enjoyed for a while going around the

country saying to people in the audiences that I am a professional in appraising, the rest of you are hacks, you are tradesmen! Then I would say, now, I am a professional because I have a degree in appraising, by legal definition. I got that because I am bright, talented, I worked hard, and it may be that you all are not bright and talented. I know you don't work hard because you don't have one! I made friends all over the country! But how else do you get people to hear you? The appraisal profession does not hear and does not understand that it is a trade. It is an industry. Yet everywhere I go they talk about the professional education program they have. They are investing so much time and energy in short courses all over. If you want to be at the apex of your profession, you must have a degree in your area of expertise. It is as simple as that.

Professionalism comes from two Latin words. I like to do these things semantically. Let's be honest, if you look at a Webster's Unabridged Dictionary, or the Oxford Unabridged, you see the semantic derivations of the words. This is one of the things I teach in Successful Strategies for Business People, which is a series of seminars. I can double a person's productivity, I can cut their work time in half and I can triple their quality with this secret series of strategies. One of the strategies is (for the other nine you must come to the seminar) you have all the wisdom that the world has known in its cultured sense. Just get a big old Webster's Unabridged Dictionary and if you want to find out what something really means, don't listen to some college professor who has just written a book on it. He has written a big book on it and you shouldn't spend that much time reading it generally. Profession. If you are a professional, pro means forward. It means out in public. Fessory means to take an oath. If you are a professional, you have taken an oath to step out in public and assume that responsibility. That is the real meaning of professionalism. I have used the word communicate several times this morning. Co is together, plus munis, which means gift or service. Communications means sharing in common. Once you have said that then you can go and write your textbook if you want.

Because of the two opinions issued by the two jurisdictions, California and New York, I became sensitive to the fact that there are only two solutions to the appraisal problem; one is to shoot all the lawyers, or two, to create a recognized valuation science degree.

So we started to implement the Valuation Sciences Degree program. We worked with 100 or so colleges and universities. We spent so many man hours talking with academics that you cannot believe it. a large forum of universities; Oakland University, Atlanta University, Southern University of New Orleans, Salem University and Texas Southern University, Roosevelt University, Hampton Institute, University of Notre Dame, USC, University of Miami, State University of New York, College of Pacific, University of the Pacific, and so on. I ran through all of that just to let you know that we knocked on a lot of doors. We didn't do much good, the problem is so unique. Pretend you are the college president of USC, you would probably react the way he did. We had a long conversation with all the deans. The appraisal profession needs academic assistance. It needs it for several reasons. We are legally categorized as tradesmen and we want to be known as professionals. They are nodding their heads in agreement. Secondly we are getting an inferior educational product out of our societies. Why? People like me are teaching the classes! Let's be honest, I got my economics at William and Mary about 1937. Economics have changed since 1937! So we need a degree.

Do I have to tell you what the academics said? Sure! We will take you into the business administration. I told them the BA degree exists, it won't do us any good. We must have a degree in appraising. They said it will take 25 years to create a new degree. I told them by then I will be retired and enjoying the Caribbean and I won't need you by then. We parted without a great communication or in other words, the sharing was not great. Most Universities cannot contemplate anyone wanting to create a new degree. To do it because you have a vested interest and want to become a professional is perplexing to them. The president said, we will give you an excellent short



course in appraising. How about a semester and we will give you a certificate at the end of it. I refused. He asked what was the matter with a certificate? I told him that our societies have been giving those certificates for years. We want academic, professional recognition. We were not getting too far. I said, look, I know that this is the best university in the States because you have the best football team! Do you know that he was incensed! I thought since I wasn't getting anywhere I might as well have some fun!

To be fair, several colleges did respond, excellent outstanding universities. Skidmore of New York, Lindonwood Colleges in Missouri, Southwest Texas University, there are eight or nine who were willing to create something new.

Where am I now? I pushed for this, it was my creation. The ASA gave me complete and full support. They spent money on this. They were willing to go up as high as \$500,000 to get a program instituted in some good college university. We nearly spent it, even though it is the obligation for the academic institution to furnish educational opportunity to the people who need them, because they pay for it.

As a result of our efforts, the stunning and horrifying thing was that a bachelors degree in music or any other field is recognized as a degree. We don't have to have one in gemmology. So someone with a degree in music and seven years experience in appraising decides he wants a masters in appraising. A bell goes off and he realizes that he is the one who knows about appraising. A university does not know about it. They know about statistics, communications, economics, computers, you name it. They even have business courses on ethics. They know nothing about appraising. So of course this man is not going to an institution and take lessons on discipline from people who don't know anything about the subject that he has studied. That is why appraisers are not going to get this degree.

There is a flaw. The University of Minnesota started this program with us and the program was completely wiped out because there was not a professor on the University campus who claimed

that he had any appraisal expertise or was willing to take the responsibility to learn enough about it to be responsible for the courses. I thought that was a crime. I know who the uneducated are. The colleges have the degree but no knowledge of the subject. The appraiser has the knowledge but no paper. This is kind of a tragedy. It is the great American tragedy. We can either sit on the wings and cry or do something about it.

As a result, within the last year, I have finally managed to come to what I think is the solution to the problem. The International College in L.A. has agreed. I am going to leave with you the things I have been talking about. I am going to leave with you the guidelines for a degree in Valuation Sciences, written by a committee composed of appraisers and academics, because I found out that what we wrote as appraisers couldn't be read by educators as they did not understand our language. So we hired a skilled academic to lead us. With the help of thirteen colleges and the Department of Transportation, and the Department of Agriculture, and the Department of Justice, together with the American Counsel on Education, we met in a series of meetings of about 20 of us at a time. We finally hammered out words in academics, so the academics could read the guidelines and issue a degree. So I am going to give you those guidelines. I will leave with you the solution as I now see it.

International Colleges said, if what you say is true, the appraisers won't come because they are not going to come to an academic institution that does not know beans about appraising. We have a solution. They believe in the old-fashioned English tutorial system. One on one, you select a tutor. This tutor abides by the regimen of the institution. The tutor is a master in the thing that you have come to learn. We have selected twelve persons that we think would serve as masters. If you are interested in a degree in this, you would get the list of the masters and would see the one nearest to you and talk this man or woman into being your guiding light for approximately a two year period. You could do this by visits once in a while or living in that area.

For a degree in engineering they

selected Buckminster Fuller. He may not have had a degree in anything, but he knew more about creative engineering than anyone who ever came down the pipe. That is the man I would want to go to if I desired exposure to that subject. This is what we are doing now with the Valuation Science Degree.

I believe this program has the right answer. You are a practitioner and what you now need, for whatever reason, is an education. You have the guidelines in your hand and know what he is going to follow, but this person has had at least twenty years in the appraisal field. This person might know instinctively that you have the knowledge already and just run you through various exercises of his own and at the end of a given period you will be recommended for a degree and you will have A) paid for it, B) earned it, and C) deserve it. This is much more deserving than sitting in a class of 100 canned sardines, watching the TV tell you how to appraise something.

It is my recommendation that those of you who want to know about appraising, who would like to be cultured ladies and gentlemen in the field of appraising or valuation sciences, that this is the basic library for it. Opportunities In Appraising — Valuation Sciences. You can get these from ASA. Another volume that was published by ASA is Commentary On Personal Property Appraisal. Since this is the only book published in America on personal property appraising, it is so simple, so direct and so well illustrated that I can recommend it to you. If you want to understand, you should have these books. The oldest book about appraising was done by a gentleman who is still alive in his 90's, called Valuation of Property. I recommend only Volume One because Volume Two has to do with things we would not be involved with concerning real estate. Volume one is the theory and philosophy of appraising. The only philosophic treatise available in the country that I know of is The Theory of Valuation by John Dewey. This is the only book that I could take to an academeic, and have him admit that it has any validity at all. Dewey is a magic name. He is one of them. Absolutely outstanding book. Only one

person in a hundred would have the diligence to go through it but it is worth it. The textbook on all facets of appraising is *Appraisal Principles and Procedure* by Henry A. Babcock. You can get it from the ASA. It is a giant break through. It is the only fundamental text in the US that treats appraising as a profession, rather than as a trade, and admits all of the disciplines. This book admits, indeed insists upon, the great scope of the appraisal field. It does not confine itself to real estate appraising. The appraisal of real estate is shown to be a branch of valuation in general, not a separate discipline. It recognizes and meets the needs of the multi-disciplines of appraising, including real properties, personal properties, intangibles, utilities, machine equipment, etc. This book assumes that appraisal practice and procedure should be taught in all universities and colleges. This book was written for use in schools of business administration and commerce. It emphasizes that appraising as a learned profession is in its infancy.

This book is the most widely ignored text by appraisers in this country. It is so good! It is multi-disciplinary and turns its back on the thesis that you are not an appraiser if you do not appraise real estate. That is the gospel! The majority of appraisers in the US are real estate oriented, real estate dominated and they do not admit that there are any other types of appraising. ASA has devoted its institutional life to remedying that thesis and this book is the backbone for it.

Since real estate appraisers do not think there is anything besides real estate that has enough value to be appraised, I have included the following quote from the Ontario Canada Lands and Forest Department: "It is best to wait until the porcupine is in the open. Then, watching for his slacking tail, rush in quickly and pop a large washtub over him. Thus you have something to sit on while you plan your next move!"

So I recommend this library for you to have empathy and knowledge. You would be at the head of the class and you would be in the appraisal profession almost by definition. Now, I know there are some of you who say, Oh come on! You can not have a profession founded by such a small context as this. This is not enough of a

library to get going. For those of you who are members of the Christian faith, the Bible is your library. Everything is there, or it isn't. I do have a bigger library, but the juice is in the books I have showed you.

I would like to compound this into a simple illustration. I am recommending to you that those of you who are interested in appraising and do not have a degree in appraising, but would like one or would like to learn enough to become an appraiser with a professional standing, I am saying to you that the little short courses are important, but you need the academic regime and the academic credentials if you really want to be there. You can sum it up with the wisdom of the ages by going back to our Websters Unabridged Dictionary and taking a look at what 5,000 years of culture tell you. If you are thinking of the little short courses, that is fine. What you are doing is getting instruction, which comes from two Latin words, *In-together* and *struction-to bind*. Instruction is a binding, ever

diminishing, cyclical process. It tightens up on specifics. That is what good instruction is. That is why a two week course is great. It is efficient. It is directed and will help you earn that buck that you want. It will not get you that degree. Just try swapping that certificate you received for a degree at any college. You need another environment. You solve the problem by going outside the parameters of the given problem. You all know that.

What I am arguing is that you have all the instruction you need coming out of your ears if you want to be an appraiser. What you need is education in the semantic sense. Education leads you out of the environment as you presently have it. Do you really see the almost parable-like quality? Instruction brings you tighter and tighter and confines your horizons and narrows your perspective in order to get the job done. If you want to be a citizen of the world, cultured, flexible, understanding, and recognized for that professional stature, you want to be led out of your present condition into a wider environment and a wider horizon. Then the peripherals do not constrict you to ordinary, routine, robot like responses. You become a person who can participate in the larger complexities of the environment

in which you are involved.

The appraisal environment is very important. 150,000 people and only 15,000 of them have any society even say they are competent. Be sure to get these books I have spoken about. Remember, the only doctorate in the world in Valuation Sciences will come out of International College, at least for now. If many of you do this, then immediately, academia will call me and say they want to get in on this too. I have found out, I am sorry to say, what academia wants is a given number of students. Get hold a copy of the guidelines to a Valuation Sciences Degree. If I can give you any further help of any kind, it would be my pleasure.

Thank you.

## MEMBER INTEREST

**AGA member Edward Drucker, GG** announces the revised and expanded format of the *Gemworld Pricing Guide*.

The new edition comes in a black three ring binder and consists of 12 indexed sections which include; how to use the guide, suggested mark-ups by geographical area and a quarterly report highlighting current market trends.

The "colored stones" section discusses color, clarity and cut grading colored stones using the GIA format which is detailed near the back, and includes GIA's Hue, Tone and Saturation charts, and how these grades relate to the Guides' four category pricing structure of Commercial, Good, Fine and Extra Fine. It then lists the individual stones page by page with a pricing grid for each. There are separate sections for opal, jadeite and pearls as well as colored stone bead necklaces.

There are handy weight estimation tables for calibrated stones of all varieties and weight estimation formulas for both faceted and cabachon cut stones.

The Guide may also be used with Howard Rubin's Gem Dialogue color grading system which is outlined in a separate section in the back. An easy reference index and note section completes the Guide which includes listings for 77 faceted and cabachon cut gemstones, opals, jadeite, pearls



(including south Sea pearls, Mabe pearls, Biwas and natural pearls along with strands and individual cultured pearls) and 20 types of colored stone beads. For more information contact:  
Edward Druker  
Gemworld International, Inc.  
5 North Wabash  
Chicago, Ill. 60602  
(312) 263-3342

**AGA member James S. Seaman, GG, MGA**

has designed and is marketing a new system for grading and pricing cultured pearls. The system is designed for use by jewelers, gemmologists and appraisers, and is effective for comparison shopping for inventory as well as appraising.

The system consists of seven individual 2 to 2 1/2 inch strands of cultured pearls of various qualities (of which two identify body color), all measuring from 5 1/2 to 6 1/2mm in diameter. Each set is assembled according to a uniform master set for insured consistency. Each quality grade will have descriptive nomenclature. The strands are used for comparison grading in the same manner as master diamonds.

The set sells for US\$375.00, and for the first year includes a subscription to the price listing which is available thereafter for US\$60.00 per year.

The price listing gives averaged dealer to jeweler costs according to grade and millimeter sizes, and has been compiled with the help of a group of US based pearl importers, covering strands from 4.0 to 9.5mm in size. The price list will be published quarterly.

Also included in the system is a step by step guide to grading by comparing luster, body color, overtone, shape, spotting and size to the master set. This information is then used to assign a grade to the strand (or single pearl) and then a price per inch (or single pearl price) can be found on the price list.

For more information contact:

James S. Seaman  
Midwest Gem Lab  
1335 S. Moorland Road  
Executive Center Building  
Brookfield, WI 53005  
(414)784-9017

**Luiz Angelo** — Vice President of the Jewelry Association of Rio de Janeiro and is a member of the Council Brazilian Syndicate of Precious Gems

**Alice M. Barlow** — graduated with distinction FGA 1984

**Howard N. Biffer** — recently received his C.S.G. certificate

**Thomas A. Constantine** — earned his Colored Stone Grading certificate 12/84

**Gary Grelick** — is the author of a book titled "Diamond, Ruby, Sapphire, Emerald Facts"

**Jeffrey Hurwitz** — recently completed GIA Colored Stone Grading course.

**Jeffrey S. Johnson** — took a first (1st) place in the AGTA Spectrum Design Awards this year at Tucson

**John Lauri** — has been involved in writing and establishing jewelry appraisal standards for AAA (insurance) of Michigan

**William R. Mann** — completed ISA courses #101,102, and 103

and is an ISA designated member  
**J. Paul Ouellet** — is now a member of the "National Panel of Consumer Arbitrations" and is serving as the Phoenix B.B.B. arbitrator

**Robert Rosenblatt** — received his FGA degree in June of 1984,

and is the only US citizen to complete the Canadian Gemmological course FCGMA

**W. Taylor** — has just received the world's total known supply of gem quality Clinohumite

**Consuelo M. White** — received the AWG "Diamond in the Rough" award at the meeting in Tucson 1985

**Frank A. Wright** — received his FGA in June of 1984.

**COMMITTEE CHAIRMEN  
COMMENTS**

**DAVID ATLAS**, Chairman Member Benefits

I have an agent working to get a group Errors and Omissions insurance policy, which I'm finding is a very difficult market and very expensive. I have also contacted car rental agencies to check on group rates for frequent travelers, and have called Kassooy trying to work out discounts on their products and equipment. Will keep you posted!

**JACK KELSEY**, Chairman Chapter Formation

We formed a South Florida Chapter last year and began work on a North Florida Chapter two months ago. This chapter should be activated by fall.

I plan to send to all regional governors soon, a copy of everything I've done in organizing a chapter, for their use as it applies. I hope also to get out some helpful thoughts on organizing oneself to do the job; these are not in black and white yet, but I shall keep you informed.  
More from Jack in the upcoming E-Com letter.

**ROBERT ROSENBLATT**, Chairman Admissions and Membership

As the new Chairman of the Admissions and Membership committee, I have taken on the project of revising the package or "kit" we send out to enlist applications. I expect a final version to go to press soon and would be happy to send any of you copies to have on hand once they are printed. I have received many requests for copies of application forms by members. We are printing a copy of the most recent application form in this issue which will allow you to photo-copy rather than having to wait for one to arrive by mail.

Remember, we are relatively small compared to other "appraisal" organizations, and we exist only on membership dues and seminar fees, and the tireless efforts of our volunteers. NO ONE, including any officer or executive of the AGA is paid for their work in the organization. As we start the year with a relatively new team, we must also double our efforts to attract new people to our organization. I have already processed many applications and look to all of you to help. If you know anyone who qualifies and would enjoy the advantages of AGA membership, please send me their name and address, and I will see that they receive a membership kit.

Any questions, problems, suggestions or criticism, please feel free to call or write to the address and number below.

Robert L. Rosenblatt, MGA  
1703 Laird Avenue  
Salt Lake City, Utah  
84108  
(801)582-8277



**B.J. CALDWELL**, Chair(wo)man,  
Public Relations

I have sent 6 press releases to date to the trade press. I am also in the process of writing a story on the GIA Colored Stone Grading class just given to AGA members in Santa Monica. I have requested from Marilyn Thomas a story on Cap Beesley's class, if you went to that class, I would appreciate any input that you can offer.

An article on jewelry appraising is in the process of being sent to consumer magazines, illustrating the need for a complete appraisal by a qualified appraiser. The trade press has been very negligent to my releases. However, I keep on trying. Hopefully the consumer press will like us. This is my work up till now, I will keep you posted on the future happenings.

Don't forget to send me any information suitable for press release.

**TED THEMELIS**, Chairman,  
Research and Development  
Upcoming:

Colored Stone Grading Manual  
Based on scientific definitions and interpretations on color theory, the manual examines empirical and practical approaches for colored stone communication among gemmologists. The following topics will be discussed: **COLOR**: Fundamentals on color theory; Color Systems: illumination problems and solutions; color difference; spectral distribution; physiochemical and perceived factors in color communication; color excitation; etc..

Please note: There will be absolutely no discussion on the existing colored stone grading communication systems.

**CLARITY**: Definitions and delimiters; plotting, symbols, etc.

**CUT**: Proportions and finish (detailed factors and acceptable ranges).

Manual will be available late August 1985 (written by Ted Themelis)

Colored Stone Qualitative Analysis Report

Detailed qualitative analysis report on colored stone grading. Will be mailed to all AGA members this summer (drafted by Ted Themelis, based on the Color Stone Grading Manual)

Seminars on color stone grading  
Based on color stone grading and colored stone qualitative analysis

report, complete presentation will take about 7 hours. (Ted Themelis, coordinator)

**NOTE**: Existing colored stone communication systems will NOT be discussed.

Formation of nomenclature Committee on AGA standards  
It is strongly suggested that a committee must be formed immediately to set standards on definitions and practices, with emphasis in color communication. The committee will make recommendations for final approval by the Board of Directors in Tucson 86. We must form the committee now!!

Unfortunately, we do not speak the same color language. (Suggested and initiated by Ted Themelis)

How to recut a diamond (AGS/GIA amusing story)

Self-explanatory article — Please read it very carefully

From MONEY magazine, Feb. 1985  
(Reprinted without permission)

Money Helps column

Q. I want to sell a 70-year-old, 2 1/4 carat diamond engagement ring. The stone is a European cut. How can I get the best price?

A. The short answer is that you'll need to have the gem recut. Although the European cut was a popular style for round diamonds earlier in the century, it produces less brilliant stones than buyers want today. Diamonds are now cut in ways that give them more of what jewelers call fire; in layman's language that means sparkle. Any value your stone might lose by having a lighter weight should be more than offset by the price boost it'll get from being recut. *\*The work, which will cost \$100 to \$200 a carat should be done by a gemmologist certified by the American Gem Society.* You can get a list of qualified gemmologists by writing to the society at 5901 W. Third St., Los Angeles, Calif. 90036. After the stone is recut, have the gemmologist send it to the gemmological Institute of America's Gem Trade Laboratory (580 Fifth Ave., New York, N.Y. 10036) for grading. That will cost \$177 for a two-carat stone. The lab will return the diamond along with a certificate that precisely describes its characteristics—a valuable tool in getting price quotes from jewelers.

A two-carat stone could be worth \$1,000 to \$25,000 retail, depending on its color, clarity and cut. But the most you'll get is 50% to 75% of the retail value; the jeweler's markup eats up the rest.

\*Underlining added by Ted Themelis!

**NEIL COHEN**, President, AGA  
Dear Fellow Member:

Tucson is now behind us and our new committee structure has been put in place. AGA is an organization completely run by volunteers without any paid staff. I have tried to decentralize the work load and spread it out among a strong committee set up. I want to thank all the committee chairpersons who have pitched in to make this new set up successful.

I would like to urge all interested members to volunteer to work on a committee to help make our organization strong. Please contact the committee chairperson directly or give me a call at headquarters phone (203)278-1800.

I am sure that all of you are seeing the results of this committee work. Reports have been sent to you from the Research and Development Committee. Our Public Relations Committee will be making a very strong concerted effort in public relations and press releases to the consumer press. The new Cornerstone and other information that you have received from our Publication Committee shows our new professional image.

The Membership and Admissions Committee is actively recruiting new members and our admissions processing has been streamlined. Membership cards and wall certificates will be sent out much quicker than in the past. Our Membership and Admissions Committee is challenging all members to bring in just one new member in order to double our present membership.

The Standards and Disclosure Committee is working on a statement for the disclosure of gemstone treatment.

I would like to address one question about the MGA program which came up on a number of questionnaires. The MGA program is completely self maintained. The MGA program collects money from MGAs for program participation, policing and



promotion. These funds are kept in a separate account and not intermixed with general membership funds. At no time from its inception has the MGA program ever used one dollar from the general dues.

Please feel free to write me or give me a call with any suggestions that you may have on improving our organization.

Very truly yours,

Neil H. Cohen, MGA  
President

**DANA RICHARDSON,**  
Chair(wo)man Publications  
Dear AGA member,

Here it is, finally! When I took this "job" I had no idea what I was actually getting into, which is my excuse for all of the delays. I hope that you find this issue interesting and useful.

Briefly I would like to let you know a little background on the articles contained here. The majority are from transcripts taken from verbal tapes of the talks from the Tucson conference. They were more or less edited by the transcriber and then again by me, so I hope little or nothing was lost in the translation! One article is a transcript from the local Washington chapter meeting. The article on the color grading system I felt was important for you all to read, as it represents much work and effort by one of our members. We are very fortunate that he was willing to share this with us. We wanted to formally introduce you to our new director of Research and Development, Ted Themelis. You have already received two reports from Ted which were extremely interesting. For those of you who let me know that you wanted to see more meaty gemmological information, this department is for you! These reports should be coming out on a more or less regular basis. I have included a brief resume on Ted so that you will have a better idea of his background. New sections which will be debuting in this issue are the Member Interest column which spotlights any new products being produced by AGA members, any information about awards and achievements or any other interesting things that members are doing. The only way I find these things out is if YOU let me know, so don't be

shy. I am very open to ANY information you are willing to share with the other members.

When the surveys came back to me, many members mentioned that they would like to see a better information exchange with each other. Any suggestions for additional columns would be greatly appreciated, but the key ingredient in any successful newsletter is your participation! Without this I have nothing to print. This organization is for your growth and enjoyment, so if everyone would share *something* with the rest of us, we'd all be further ahead.

Something else new this issue is the Honorary Member, Retired status, with the first two members highlighted this month. When the surveys were returned from these members, I got together with Robert Rosenblatt and we came up with this idea. It seemed a crime to lose these members as they retired after so many years in the business and so much knowledge to share.

I hope everything meets with your satisfaction. Please feel free to give me your comments and advice. Upcoming publications from this office will include E-Com letters monthly, and another Cornerstone coming out around December, highlighting the upcoming Tucson conference. Thank you for your continuing patience.  
Dana....

## TUCSON OBSERVATIONS

*The following observations were made by members who attended the Tucson show 1985*

Lower prices, more realistic prices on colored stones, more finished jewelry than before, freeform cutting of colored stones, rainbow pieces and suites were very popular, prices were down and stable, more interest in large semi-precious, blue sapphire up in price, lots of emeralds, down in price, in spite of the poor state of the gem and jewelry industry, Tucson is becoming more important annually, more emphasis on better material, colored stone prices pretty steady for the past year, lower prices on everything, fewer good spinels and emeralds compared to last visit two years ago-more tsavorites, more manufactured jewelry available, greater range of prices for similar items, slow gem market for dealers, more unusual and lesser known gemstones being faceted, lots of tsavorite and tanzanite, pink sapphire almost impossible to find, general weakening of prices at wholesale, no major price changes, excellent deals to be made, large competition, most of the buying and selling was over before the show began, rice pearl collapse, pricey chrome tourmaline, a variety of material being cut into fancy high dome cabs, those very expensive lazer(?) cut faceted freeform gems cut from relatively inexpensive rough, lots of (so-called) natural color lapis, extremely low grade almost non-existent nacre cultured pearls for sale, un-natural looking pink color to most of the cultured pearls observed....

At one of the smaller hotel shows I found a company selling crystal growing kits which make absolutely beautiful crystal clusters of non-gemstone materials. Thinking this would be fun, I picked up a package (it did say it was made for ages 12 and over!) to try. If you are interested in this German made product, contact: Kristall Growing, P.O. Box 44287 Tucson Arizona, 85733 USA. They will be happy to send you their literature! The kits are very inexpensive.

## A NOTE OF INTEREST

As a result of two earlier trips to East and South Africa, Jack Kelsey and his wife Betty are tour guides for a 25 person Safari to Southern Africa in October. This "Gem Safari" will include mine visits and operations, game parks, the famous Blue Train, many other points of interest and the opportunity for the tourists to buy gemstones in Africa. When the tourists head home, Jack and Betty will spend 5 to 6 weeks visiting in the Republic of South Africa and Zimbabwe. If you are interested in this tour, please contact Jack Kelsey at: 960 Georgia Avenue Winter Park, Florida 32789 (305) 628-8230

## LETTER TO THE EDITOR

April 28, 1985

Dear Dana Richardson,

Thank you for your April letter. It indicates a positive effort for AGA and is appreciated.

I do not have the time, talent or inclination to act as an officer in the organization, and therefore have little right to criticize, but since you asked I will include a few thoughts.

We have attempted to support the AGA, by regularly traveling 90 miles to the San Diego Chapter meetings and 50 miles to those of the Los Angeles chapter.

It is my feeling, that the local chapters have lost drive, initiative and spirit with the advent of national centralization. Many of the younger people in our field have a difficult time earning a living and while it is not a problem for us, I assume the AGA must be discouraging a high percentage of new blood with its rather high recent dues and other costs. In our case, it entitles us to some rather expensive seminars at Tucson, most of which are available at GIA, and very little else, since the interaction with other members is more or less restricted, due to deterioration at the local level.

While I realize that any organization has to make reasonable accommodations to change as it grows and expands, I feel that too many games are being played. The AGA is not the same

organization it was when I joined, and the rules continue to be changed at will, at an ever increasing pace. Case in point: In addition to the MGA degree, Laboratory Accreditation has been available. Feeling such Accreditation would be well worthwhile for our gem lab., I purchased the only other piece of equipment required (a conductivity meter) and requested an application. No reply for some weeks and another request, and at the 1985 Tucson event I was told that it is now necessary to apply for both the MGA and Lab. Accreditation at the same time. — Rather strange, since the Accreditation is a prerequisite for MGA. Which comes first, chicken or egg?

In any case we have five GG's (two of which are FGA's) at our store and we have not, due to liability and IRS considerations decided whether or not to appraise. We do identifications however and other functions which would ethically benefit from Accredited Laboratory designation.

Peer interaction is invaluable, but due to the ever decreasing attendance at chapter functions, we are trying to determine whether continued AGA membership is properly in the future for us.

Sincerely,  
Frank A. Wright

The Editor welcomes any letters or comments (and even compliments!) about any aspect of the organization.

## NEW MEMBER DESIGNATION: RETIRED MEMBER STATUS

From: Robert Rosenblatt

As chairman of the Membership Committee, I have initiated and cleared with the President, the creation of a new membership status: "Retired Member". This status is specifically for members who were actively involved in the gem or jewelry business, members in good standing of the AGA, and of retirement age who are in fact retiring. AGA will place, upon notification, these individuals on retired membership status whereby they will continue to receive all AGA publications, bulletins, etc., and be eligible to participate in AGA

functions at regular member tuition, without having to pay dues. The restriction is that a non-dues paying retired member is not eligible to vote in any AGA propositions or elections for officers.

The following two members are the first to receive this status. Their histories in the business are as follows.

### GEORGE A. SAVOLAINEN

I held a management position in sales or marketing, where extensive experience in all phases of the jewelry business, together with proven abilities as manager, administrator, professional jeweler, appraiser, gemmologist, and diamond expert make profitable contributions.

I am retired as of April 3, 1984 due to medical disability.

The level of my experience is illustrated by accomplishments, some of which have been:

- 1953-1964 Successfully operated jewelry business, Savolainen Jewelers, Virginia, MN '54-'64
- Feb. 1957 Advanced Gemmology Lab. at German Gem Institute Idar Oberstein, West Germany
- 1964 Diamond-Precious Jewelry Sales and Assistant Manager, Zale F.J.G. Wiss Jewelers, Short Hills New Jersey
- 1965-1967 Zale F.J.G. Stowell Jewelers, Boston, Mass.
- 1967-1968 Zale F.J.G. Hess-Culbertson Jewelers, St. Louis, Missouri
- 1967-1978 Diamond Department Assistant Manager, Sales appraisals and buying Zales F.J.G. S. Jacobs Company Jewelers, Minneapolis, Minnesota
- 1978-Retirement Diamond Department Manager, Staff Gemmologist and Senior Appraiser, Jacobs Jewelers, Rosedale Center, St. Paul, MN Donaldsons Fine Jewelry, Minneapolis, MN Member American Gem Society since 1947 Graduate Gemmologist GIA, since 1952 Member Accredited Gemmologists Assoc.

I am married and in good health. My educational background includes an MBA (equivalent) through studies at the University of Denver Graduate School, B.S. from Georgetown University, Diplomas from Virginia Junior College and from the Gemmological Institute of America. I speak, read and write German and Finnish fluently.

Sincerely,  
George A. Savolainen

#### **JOHN M. FRIEDLANDER**

I started in the retail jewelry business in 1930. Our business was started in Seattle in 1904 by my grandfather. I was the president of our company from 1955-1970, when my brother became president and I was C.E.O.

I became a Graduate Gemmologist over 30 years ago. I was in Dick Liddicoat's first class in Los Angeles at the Institute.

I was President of the Seattle Jewelers Association, the Washington State Jewelers Assoc. and also served on the Board of the American National Retail Jewelers Assoc. for four years. I was also President of the Jewelry Industry Council for two terms.

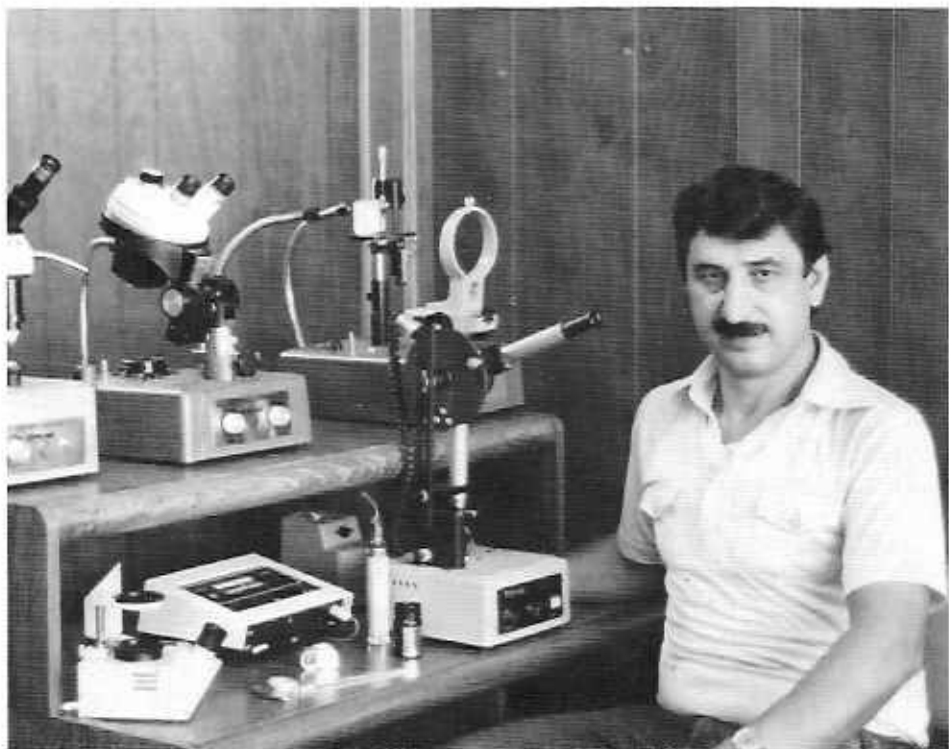
I have always loved the jewelry business, especially diamonds and colored stones.

At seventy-five I decided it was time to retire. I am proud to be a Retired Member of the Accredited Gemmologists Association.

Thanks,  
John M. (Jack) Friedlander

A salute to these two members and all of their years of experience and dedication to this industry.

## **INTRODUCING TED THEMELIS, DIRECTOR RESEARCH AND DEVELOPEMENT**



**Education:** City University of New York (CUNY) A.A.S. and B.S. in computer sciences (1972,1974)

**Work Experience:** From 1/1/74 to 4/23/75: J.C. Penney Inc. Systems Analyst:

Executive analyst in statistical and mathematical computerized systems in forecasted sales analysis.

From 6/1/75 to 12/31/80: Diaz & Co. President:  
Diamonds and colored stones merchandising, with emphasis in rare, unusual and collectors gems for Museums and advanced gem collectors.

From 1/1/81 to Present: Gemlab, Inc. President:  
Manufacturer of full line professional innovative gem instruments included: concept, analysis, implementation, castings, optical mechanical and electronic parts systems design,

fabrication, quality control, assembly, testing, and finally merchandising. Over twenty types of unique major gem instruments and special accessories were manufactured. There are over 1,100 Gemlab equipment in the market today.

**Gemmological Training:** City University of New York:  
Accredited courses in Descriptive Gemmology and Gem Identification (grade:A) Columbia School of Gemmology: Certificate (PG)

**Gemmological Associations:**  
Gemmological Association of Great Britain-Member

AGA-Research and Development Director Personal

Age 39, married, one child.

Thanks to Ted for the wonderful work so far, and for what we will be receiving in the future.

# STATEMENT OF REVENUES AND EXPENSES

The following is an internally generated statement for enhanced understanding!

For the year ended December 31, 1984

Revenues:	
Membership dues	\$ 23,173.97
Tucson Conference	
Fees	8,950.00
AGL Seminar Fees	2,105.00
D.C. Mini Conference	1,395.00
Other	100.00
<b>Total Revenues</b>	<b>\$ 35,723.97</b>

Expenses:	
Tucson Conference	\$ 9,172.46
D.C. Mini Conference	2,456.05
AGL Seminar	1,100.00
Office Expenses	8,910.85
Stationary and printing	\$2,446.00
Office supplies	427.85
Secretarial work	1,319.00
Cornerstone and Directory	4,718.00
Postage	1,088.66
Miami, Fla. Account	
Schedule A attached	4,100.00
Promotion	452.16
Telephone	5,000.00
Membership Solicitation	\$1,500.00
Administrative phone and conference calls	3,500.00
Professional fees	738.62
Chapter	
Reimbursement	1,770.00
Travel	1,398.87
Nominating committee	190.75
	<b>\$ 36,378.42</b>

Excess of Expenses over Revenue \$ (654.45)

## Schedule A

Receipts transferred from AGA, Inc.	\$ 4,100.00
Receipts transferred from MGAA	300.00
<b>Total Receipts</b>	<b>\$ 4,400.00</b>

Expenditures	
Postage	\$ 1,123.70
Taxes-Licenses, other	3.00
Telephone (Teltek)	1,469.15
Printing	1,772.10
Refund	25.00
Travel	298.00
Service charge	27.00
	<u>4,717.95</u>
Adjustment	(89.46)
<b>Total Disbursements</b>	<b>\$ 4,628.00</b>
<b>Excess of Disbursements over Receipts</b>	<b>\$ (228.49)</b>

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If you have never received a membership certificate or card, or if your number on your certificate no longer matches your card, please contact Robert Rosenblatt. Send in old cert or a letter stating what's missing and we will fix!

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## AT LONG LAST

The transcripts from the Tucson conference are ready to print. Anyone wishing copies of the complete set should send a check for \$35.00 to Dana Richardson. These are for the most part unedited but totally readable and packed full of valuable information. The set comes bound and titled. Please allow 6 weeks for delivery. Any of the sessions can be ordered singly at \$5.00 per paper.

## AGA MEMBER IS DEBEERS NATIONAL CHAMPION

The Diamond Masters Tournament play off at the New York show had all the excitement of a big time Hollywood game show. The grand prize winner of a trip for two to London went to one of our own AGA members, Craig Lynch of Glenn Peter Jewelers in Latham New York. Craig is a fairly new member of AGA (1984) and moved to Schenectady New York to work for Glenn Peter Jewelers shortly after receiving his GG. He is the manager of their Latham Mall store. Prior to New York, Craig was a jewelry manager of a Best showroom in Salt Lake City, Utah where he earned extra income in his spare time as a scuba diving instructor. Craig has been invited to bring a list of questions ("WHAT YOU ALWAYS WANTED TO KNOW") about DeBeers or their operations. He invites any of you with unanswered questions to forward them to him prior to his trip in January and he'll see what he can do. Congratulations to Craig. Keep up the good work.



*What does Donald really see in the screen?*



*Ron & B.J. wonder, "Where does the stone come out now?"*



## FOND FAREWELL

May 18, 19, and 20th, GIA offered a special three day condensed version of the Colored Stone Grading Class. As it turned out this was the last official class taught at GIA by Janice Mack (Talcott).

The class was offered at a special reduced rate and was a result of the new mandate from the Tucson governor's meeting where all MGA's must use either AGL color scan or GIA color stone Colormaster in all their colored stone appraisals by July '85.

The class was packed full of new and revolutionary information....like previews to separating pink sapphire from ruby and the limits of color for padparadschah. Janice was dynamic, as always and all who attended were definitely impressed with the "new" world of color and the GIA system.

Special thanks to Donald Palmieri for arranging the class, to GIA for the special break to AGA on price and especially to Janice for her fantastic help. We wish her all the best in her new endeavors.



*Janice Mack (Talcott) moving on after playing key role at GIA.*



*GIA colored stone grading class May '85 — participants in alphabetical order: Marshall Adams, Joseph Ambalu, David S. Atlas, Cortney G. Bulzan, John D. Barlow, Ronald L. Base, C.R. "Cap" Beesley, Peter F. Bradley, John Brambel, Brenda Joyce Caldwell, Esperanza Calvino, William C. Horvath, Richard C. Huntington, S.D. "Jack" Kelsey, Donald A. Palmieri, Robert E. Patterson, Larry D. Phillips, Robert L. Rosenblatt, Eric M. Shelton, Ravinberjit Sidhu, Richard N. Talcott, George K. Taylor, David G. Teufel and Charles A. Zawacki.*



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DATE(S) CONFERRED: \_\_\_\_\_

SPECIAL AREA(S) OF INTEREST: \_\_\_\_\_

GEMOLOGICAL AFFILIATIONS: \_\_\_\_\_

SPECIAL AWARDS OR HONORS BOOKS: MANUSCRIPTS: \_\_\_\_\_

DATE \_\_\_\_\_ SIGNATURE \_\_\_\_\_

**SUBMISSION REQUIREMENTS**

- Application form filled out completely, marked FULL MEMBERSHIP or ASSOCIATE MEMBERSHIP; preferred mailing marked RESIDENCE or BUSINESS.
- Professional conduct code, signed. (Retain one copy for your files.)
- Dues fee of \$125.00 domestic; \$135.00 (U.S. Currency) Overseas. This includes a one time application processing fee of \$25.00 and a full years' dues. Make checks payable to: ACCREDITED GEMOLOGISTS ASSOCIATION.
- Photocopy of your Gemologist, Graduate Gemologist, or F.G.A. Diploma. Associate member applicants — photocopy of student letter of acceptance.

**ROBERT ROSENBLATT**Chairman Admissions and Membership  
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THE ACCREDITED GEMOLOGISTS ASSOCIATION (A.G.A.) IS AN INTERNATIONAL NON-PROFIT ORGANIZATION DEDICATED TO PROFESSIONAL STANDARDS OF EDUCATION, RESEARCH, IDENTIFICATION AND EVALUATION OF GEM MATERIALS AND JEWELRY. ALL APPLICANTS FOR MEMBERSHIP ARE REQUIRED TO READ AND SIGNIFY THEIR ACCEPTANCE OF THE FOLLOWING CODE OF ETHICAL CONDUCT, AND INDICATE THEIR WILLINGNESS TO ADHERE TO THIS CODE.

## I. PROFESSIONAL CONDUCT

- A. It is incumbent on every member to refrain from giving any counsel or making any report on any gem or article with which he is not thoroughly familiar, unless (1) the client is aware of those limitations and/or (2) he consults with another who is competent to assess and evaluate the gem or article.
- B. A client should be counseled of the need for periodic reassessment of the value of his items, because of continued price fluctuations in the market.
- C. Every member agrees to make every possible effort to keep abreast of new developments in the field of jewelry and gemology.
- D. Consultations in performing gemological duties, including any reports, are confidential and any disclosures should only be made after obtaining written approval from the client.
- E. The gemologist is in a position of trust and, due to his professional knowledge and training, must accept the special nature of the relationship with his client.
- F. It is unprofessional practice to give off-handed opinions, which tend to belittle the importance of careful inspection, testing and analysis.
- G. It is unethical practice for a member to suppress any facts, data or opinions which he may be called upon to give in a court of law, or to overemphasize any facts, data or opinions so as to unfairly influence a decision or bias a case for either party.
- H. It is unethical practice to serve more than one party with respect to the same situation unless all parties previously agree to this.
- I. It is unethical to reduce a previously quoted fee in order to supplant another gemologist or appraiser after the other's quotation for professional services has been revealed.
- J. A member of A.G.A., aware of the questionable conduct of another member, has an obligation to report the matter to the Grievance Committee for appropriate action.
- K. Any conduct, practice, self-laudatory advertising, or other questionable gemological practice using misleading or inaccurate claims and promises detrimental to the establishment of public confidence in gemological work is considered unprofessional.
- L. The gemologist should have no interest or contemplated future interest in the purchase of items reported on, in order to avoid any suspicion of bias. The full revelation of pertinent facts is mandatory.

## II. GEM IDENTIFICATION AND APPRAISAL REPORTS:

- A. Should contain the results of a sufficient number of tests (e.g., R.L., S.G., U.V., examination with microscope, spectroscope) to establish the identity of the material in question, unambiguously.
- B. Should indicate (where feasible) special characteristics of the material examined, such as natural origin vs. synthetic or vice versa, or if material is dyed, assembled, reconstructed, irradiated, etc.
- C. Should utilize standardized grading criteria where available, and indicate the grading system used.
- D. Should avoid confusing terminology that tends to perpetuate incorrect gemstone names, or which can be misconstrued by layman as representing something other than that which is intended.
- E. Should be in writing only, with the gemologist retaining a copy of the report as a permanent record.
- F. Should indicate the purpose of the report (e.g., estate appraisal, replacement value, etc.).
- G. Should present a thorough qualitative and quantitative statement, including mention of special markings, hallmarks, age, historical significance, provenance, uniqueness, etc.
- H. Should present the truest possible value, along with a statement as to whether the stated value includes an increment for inflation and, if so, what that increment is.

## III. FEES

- A. It is recommended that fees are to be computed on the basis of a per hour rate or on the basis of a charge per item. It is consistent with professional practice to have a minimum fee, or that consistent with the experience of the appraiser or gemologist doing the work.

I HEREBY AFFIRM WITH MY SIGNATURE THAT I ACCEPT THE ACCREDITED GEMOLOGISTS ASSOCIATION CODE OF PROFESSIONAL CONDUCT TO BE VALID, AND I AGREE TO USE IT AS A GUIDELINE IN PERFORMING GEMOLOGICAL ACTIVITIES. I UNDERSTAND THAT THE A.G.A. MAY TERMINATE MEMBERSHIP OF ANY INDIVIDUAL WHO IS FOUND TO BE PERFORMING GEMOLOGICAL WORK INCONSISTENT WITH THE STANDARDS OF PROFESSIONAL CONDUCT SET FORTH ABOVE. I UNDERSTAND THAT MEMBERSHIP IS GRANTED ONLY TO ELIGIBLE INDIVIDUALS WHO ARE DULY ELECTED BY A.G.A., AND DOES NOT EXTEND TO BUSINESS ASSOCIATES UNLESS THEY ARE INDIVIDUALLY ELECTED TO MEMBERSHIP.

(Professional seal or stamp may be shown below)

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Date \_\_\_\_\_

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(NOTE: Keep one copy, sign and date the other and return to A.G.A. with any fees).

