A BRIEF DESCRIPTION ON HOW DIAMOND DEALERS AND JEWELLERS WORK WITH DIAMOND PRICES

When the jeweller buys a diamond from the wholesaler he is told that the diamond will cost him so many dollars per carat. If it is a half carat diamond the jeweller may be told that a VS-1 clarity, H colour round brilliant cut diamond with a good cut is $4,060 CDN per carat. That means the jeweller must pay the diamond dealer $4,060.00 /ct X 0.50cts. = $2,030.00. In Canada the jeweller must also pay an additional 10% excise tax and a 7% Goods & Services Tax (GST). These two extra taxes are not applicable in the US. Ultimately, it would cost the jeweller $2,389.31 for the diamond and to that value there is a certain markup applied in order to reach the appraisal value. For an amount of $2,389.31 CDN the markup would be X 2.05 that is used to arrive at the appraisal value. So the appraisal value would be $2,389.31 X 2.05 = $4,897.45. If you add another 15% to this figure you arrive at the retail value which is $5,632.07. Generally, the higher the wholesale value the lower the markup factor is that you use to arrive at the appraisal value. If the wholesale value is between $2,500 and $5,000 for example the markup to arrive at the appraisal value would be X 2, and after you have the appraisal value you would then add an additional 15% to arrive at the retail value. Should the wholesale value be over $10,000 the markup is X 1.6 and over $20,000 the markup is X 1.5.

INSTRUCTIONS ON HOW TO USE THE ATTACHED WHOLESALE DIAMOND PRICE CHARTS

PLEASE NOTE THAT ALL PRICES IN THE ATTACHED CHART ARE IN U.S DOLLARS.

1. ***Determine the size of modern round brilliant cut diamond that you are interested in.***

2. **For fancy cut diamonds such as marquises, pears, Emeralds, princesses, ovals, radiants etc. just email your wholesale price quotation request to** igs@home.com**.**

3. **Working in the right group category match up the clarity with the color on the chart and you will then have the per carat price. For example, if you are interested in the price of a VS2 clarity H colour .57ct. round brilliant cut diamond you will then look at the half-carat chart. You will then notice that when you look down the VS2 column and across at the H row, the row and column intersect at $2130 U.S dollars per carat. You then take the $2130 U.S dollar figure and multiply that by .57cts. ($2130 X .57cts = $1214.00 That would represent the absolute wholesale value for a .57ct. that would have at least a good cut as well as a certificate such as GIA or AGS. ***
4. **Step 4 would only involve Canadians. You would then continue on and at this point convert to Canadian by multiplying by the current exchange rate. Let's say the rate is 1.52, then you would multiply $1214 X 1.52 = $1845.00. You then add an additional 10% Federal excise tax to this figure so that the wholesale value becomes $1845 X 1.10 = $2029.50. This would then be the Canadian wholesale value.**

5. ***If you are unsure about any aspect of the Price Report please email to*** igs@home.com ***or please call 1 800 252-1476.***

6. ***The price you arrive it is strictly the wholesale price that the jeweller or your diamond supplier would be expected to pay for that diamond. Don't forget that they are entitled to a fair profit margin on top of that price. Obviously, the closer that you can obtain the diamond to the wholesale price, the better you are doing.***

7. ***You are encouraged to email IGS Inc. at*** igs@home.com ***or call at 1800-252-1476 for any help or additional information using the attached price charts.***

PLEASE NOTE THAT THE CURRENT WHOLESALE PRICES WERE SENT ALONG WITH THE GUIDE IN AN ATTACHMENT.

PLEASE UNDERSTAND THAT IGS INC. IS NOT RESPONSIBLE OR LIABLE FOR THE CONSEQUENCES OF THE USE OF ANY INFORMATION IN THE ATTACHED PRICE GUIDE NOR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE OCCURRED.

VALUES OF FANCY CUT DIAMONDS

Pear-shaped diamonds

Pear-shaped diamonds are approximately 0 to 10% lower than rounds in price. For pear-shaped diamonds use the maximum figure of 10% and therefore deduct 10% from the wholesale value if you are calculating the price for a pear-shaped diamond.

Oval-shaped diamonds

Oval-shaped diamonds are generally 10 to 25% lower than rounds in price. I would deduct 15% for calculating the prices of oval-shaped diamonds.

Emerald cut diamonds

Emerald cut diamonds are generally 10 to 25% lower than round cut diamonds in price. I would deduct 15% for calculating the prices of emerald cut diamonds.

Princess cut diamonds

Princess cut diamonds less than one-third of a carat are generally priced the same as round cut diamonds and princess cut diamonds over one carat are approximately 25% lower than round cut diamonds. Princess cut diamonds from 0.33cts. to under 1 carat are approximately 25% less than the price form the same quality round cut diamond.

Marquis-shaped diamonds

Marquis-shaped diamonds under 1 ct. are approximately 10% over the prices of round cut diamonds and marquis-shaped diamonds over 1 ct. are also priced at approximately 10% over round cut diamonds.

All fancy shaped diamond prices are greatly dependent on make and availability. Prices may vary from the percentages quoted above. The above percentage figures are only general guidelines to help you in your price calculations.

Please remember that for up-to-date approximate quotes directly from the IGS Inc. lab you may e-mail IGS Inc. at <igs@home.com> and the wholesale as well as appraisal value will be e-mailed back to you as soon as possible. Please enter your 5-digit access code on your e-mail request. Thank you.

PLEASE UNDERSTAND THAT IGS INC. IS NOT RESPONSIBLE OR LIABLE FOR THE CONSEQUENCES OF THE USE OF ANY INFORMATION IN THE FOLLOWING PRICE GUIDE, NOR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE OCCURRED.

IGS MARKUP SHEET
TO CALCULATE THE APPRAISAL VALUE FROM THE WHOLESALE VALUE

COST $USorCDN WHOLESALE	*MARKUP*	*COST $USorCDN WHOLESALE*	*MARKUP*
500	*3*	*5000*	*2*
575	*2.95*	*5,312*	*1.96*
650	*2.90*	*5,625*	*1.93*
725	*2.85*	*5,950*	*1.89*
800	*2.80*	*6,250*	*1.85*
900	*2.75*	*6,575*	*1.82*
1,000	*2.70*	*6,875*	*1.78*
1,075	*2.68*	*7,200*	*1.74*
1,125	*2.65*	*7,500*	*1.70*
1,200	*2.62*	*7,812*	*1.687*
1,250	*2.60*	*8,125*	*1.675*
1,312	*2.55*	*8,437*	*1.662*
1,375	*2.50*	*8,750*	*1.650*
1,437	*2.45*	*9,062*	*1.637*
1,500	*2.40*	*9,375*	*1.625*

1,625	*2.35*	*10,000*	*1.600*
1,750	*2.30*	*11,250*	*1.587*
1,875	*2.25*	*12,500*	*1.575*
2,000	*2.20*	*13,750*	*1.563*
2,125	*2.15*	*15,000*	*1.550*
2,250	*2.10*	*16,250*	*1.537*
2,375	*2.05*	*17,500*	*1.525*
2,500	*2.00*	*18,750*	*1.512*
5,000	*2.00*	*20,000*	*1.500*

To arrive at the appraisal value multiply the wholesale value by the markup figure. Interpolate or estimate markups to fit wholesale value. If the wholesale value, for example is $2,400 then use a markup of approx. X 2.04.

Please understand that IGS INC. is not responsible or liable for the consequences of the use of any information in the above price guide, nor for any errors or omissions which may have occurred.

Section Twelve

WHY ARE DIAMONDS SO VALUABLE?

Diamonds and gems are definite investments in beauty, pleasure, enjoyment and pride of ownership. *Try to avoid ever having to sell a diamond as you will probably loose money.* Jewellery buyers of old gold and diamonds etc. etc. may offer you in the range of 15 to 25% of the appraisal value. From an auction you may end up with approx. 25% of the appraisal value. If you sell your diamond ring privately you will be lucky to get half the appraisal value. However, the value of diamonds consistently goes up every year or they maintain their current price. Very rarely do diamonds ever go down in value. The diamond market in a sense is controlled by DeBeers. DeBeers is a huge company that owns the majority of the diamond mines in South Africa. They are in fact such a large consortium that they control the diamond market throughout the world. Their biggest fear is that the Russians will flood the market with the huge reserve of diamonds that they have. DeBeers will hold back on rough diamonds and only supply certain privileged companies known as site holders. By only releasing a limited quantity of diamonds every year the price of diamonds is either maintained at its current level or the diamonds go up in value. In a sense this is to everyone's benefit since it protects everyone whose ever purchased a diamond in the past and it ensures that their diamond will not lose its value. Remember, though that it really is tough selling a diamond once you have no further use for it and you will usually end up with perhaps 15 to 45% of the appraisal value plus a lot of aggravation. Save the diamond for use at some future date, or perhaps convert it into another item of jewellery.

REASONS FOR HAVING YOUR JEWELLERY APPRAISED

The appraisals for your diamond ring and other jewellery items are required by the insurance company in order that they may specifically cover your items of jewellery against all risks and hazards. Insure each item separately with a separate policy for each

item that you will forward to your insurance agent. Be advised that having an item of jewellery insured on your regular household policy is not the same as having an item separately insured with a separate policy. Should your diamond fall out of its setting while away from home and you did not have separate policy insurance you would probably not be covered. Please consult with your insurance agent for more details on this important matter.

There is no point having a highly inflated retail appraisal since you will be paying more premiums than necessary. Your premiums are usually around 2% of the appraisal value. At IGS Inc. the appraisal value is usually set at around 15% below retail. Why pay the insurance company more than you have to?

If you lose a ring or it is stolen the insurance company very rarely offers you a cash settlement. The insurance company will shop around for their best price in order to replace the jewellery for you. Of course, you would only accept the jewellery upon your satisfaction on an independent appraisal from your independent gemmologist. It is important for the appraisal to be detailed and specific so that in fact you can get back exactly what was lost or stolen. The appraisal should also have a photo to ensure that you get back a ring that very closely resembles the one that was lost or stolen.
Other reasons for obtaining an appraisal

- ***The appraisal may be used as a general check on the quality and value of your diamond ring as represented by your jeweller.***
- ***The appraisal is valid for customs purposes when traveling from one country to another.***
- ***The appraisals are useful and necessary if attempting to sell an item.***

Appraisals are useful for helping to settle estates, inheritances, and wills etc.etc.

Section Thirteen

GENERAL INTRODUCTION TO DIAMONDS

Diamond is a form of carbon that crystallizes in the crystal system of highest symmetry known as the cubic system. It possesses a hardness far surpassing that of any other substance known in nature. The durability of a gem depends on both its hardness and toughness. Diamond, although highest on the scale of hardness, is not as tough as some gems because of its good cleavage. Cleavage is the tendency of a diamond to split in certain directions where the carbon atoms are furthest apart. Diamonds have a very high degree of transparency, refractivity and dispersion or 'fire' which gives rise in cut diamonds to a high degree of brilliancy and a display of prismatic colours. A diamond's fiery brilliance makes it cherished above all other gemstones by the majority of people. Diamonds occupy a position of incomparable demand.

THE FACTORS THAT DETERMINE VALUE IN DIAMONDS

The traditional '4 C's' determine the value of the diamond. The '4 C's' are clarity, colour, cut and carat weight. Cut will be subdivided into the 'finish' and 'proportions'. As far as carat weight is concerned diamonds logarithimcally increase in value. This means that a half-carat diamond will have a higher value than two one-quarter carat diamonds. Likewise, a 1 ct. diamond will have a significantly higher value than two one-half carat diamonds. The reason for this is due to the fact that the larger the diamond is the harder and more rarer it is to find the original crystal from which the diamond is cut.

How to properly view a diamond internally

When contemplating purchasing a diamond you should ask the jeweller for a 10X corrected eye loupe in order to properly examine the diamond. A stereoscopic binocular microscope with dark field illumination set at 10X is better still but not essential. Dark field illumination simply means that the diamond is held against a black background in the microscope and light enters the diamond from the sides and therefore all internal inclusions are easily visible. The circular well within the microscope is lit and the diamond is held at the top of the well. In this manner a great majority of the light enters the sides of the diamond and the clearest internal view of the diamond is obtained. Bring the eye loupe right up to your eye in one hand and hold the diamond ring or the loose diamond in a tweezer in the other hand. At this stage bring the diamond to a distance of approx. one inch away from the eye loupe and focus until the entire interior of the diamond is in clear view. Try to locate any surface blemishes or internal inclusions within the diamond. You may have difficulty at the beginning so ask your jeweller to help you spot any inclusions present. Be sure that the loupe is 10X since clarity standards and grades are determined under 10X power.

If you view the diamond from the side you will most likely notice a somewhat thick whitish line midway from the girdle to the point of the diamond. A lot of clients come to the IGS Inc. lab inquiring specifically about this whitish line that they see. The clients are very nervous about this line and think that it is a crack in the diamond which they did not notice when they were purchasing the diamond. THIS LINE IS SIMPLY THE REFLECTION OF THE GIRDLE IN THE PAVILION FACETS. THE PAVILION ACTS AS AN INTERNAL MIRROR AND IS SIMPLY REFLECTING THE GIRDLE. THIS IS A NORMAL TYPE OF REFLECTION AND THIS REFLECTION SHOULD BE THERE.

Do not touch a loose diamond with your hands as this will leave a film and grease layer over the diamond. To pick up a loose diamond with a tweezer, place the diamond table down on a flat surface and position the diamond between the two arms at the end of the tweezers and grasp the diamond with the tweezers from the girdle edge at each side.

Be sure that you have access to good lighting. The best lighting for viewing diamonds is a combination of white fluorescent light and incandescent light. Strong halogen quartz lights tend to give diamonds a slightly yellowish tinge.

After you have the diamond focused under the loupe look at the diamond from an angle instead of straight down in order that plenty of light is available. Look through the table or large flat surface on the top of the diamond in order to view the interior of the diamond. Observe the diamond from the sides in order to view the girdle. All inclusions should be visible from the table. Turning the diamond upside down and looking at the bottom or pavilion of the diamond usually results in viewing reflections off the pavilion surface.

Diamonds are carefully assigned a clarity grade by a trained observer or gemmologist under a 10X magnification. Clarity refers to the relative degree to which a diamond is free from inclusions and blemishes. The clarity grade assigned has an effect on the diamond's value in the present market. Perfect or flawless diamonds are extremely rare. The effect of very minor inclusions and blemishes on beauty is infinitesimal. On the other hand, a heavily included diamond will not allow the light the freedom of traversing the diamond without being blocked, distorted or deflected and this will ultimately effect the overall brilliancy of the diamond. A diamond of lower clarity may give more satisfaction to a customer for his dollar than a smaller high clarity grade diamond.

Section Fourteen

The Different Clarity Grades of Diamonds

Let's discuss exactly what each clarity grade means. Diamonds in the flawless category are free from internal and external blemishes when examined by a skilled observer under 10X magnification.

Diamonds in the internally flawless category have no internal imperfections but some surface blemishes may be present.

The terms VVS-1, very very small 1, and VVS-2, very very small 2, describe diamonds that when viewed under 10X magnification by an expert show only very, very small inclusions which are difficult to be seen. The inclusions should be light colored. The features of the VVS grade are exceptionally difficult to discern. The typical inclusions of this grade are dot-like inclusions. Whether a diamond is VVS-1 or VVS-2 depends on the relative degree to which the minute inclusions are present. If they are present to a minimal degree then the VVS-1 grade is chosen. Just a little added touch to the degree of inclusions will result in a VVS-2 grade.

Diamonds are classified into the VS, very small inclusions grade, when the expert using a ten times magnification can discern very small inclusions which are difficult to be seen. The experienced grader does not find the internal faults at once, but does not have too great difficulties to see the inclusions when he moves the diamond a little from side to

side. Typical inclusions of this group are small, light clouds or small light cracks on the girdle as well as single crystals just slightly larger than a dot. Inclusions in this clarity grade should be mainly light-colored. Very small dark inclusions are allowable under the girdle. Depending on the degree of inclusions the diamond is either rated VS-1 having fewer inclusions or VS-2 having just a little higher degree of inclusions.

The SI or 'small inclusions' term comprises diamonds which, when viewed with ten times magnification have small inclusions. These are usually easily seen by an experienced grader. As soon as he observes the diamond with the right magnification the inclusions jump into the field of view and should be light and around the girdle there can be small, dark inclusions. Again, depending on the degree to which inclusions are present the diamond is either rated SI-1 or SI-2, with the SI-1 having a lesser degree of inclusions than an SI-2.

The I-1 (Imperfect-1) grade sometimes is referred to as the P-1 or (Pique'-1) grade. The word pique' is a French word meaning 'mark' or 'spot'. The I-1 grade comprises those diamonds which when viewed with ten times magnification show several inclusions at once but which do not diminish the brilliance. With the naked eye, when viewed through the crown, these faults, even in larger diamonds, are only discernible with difficulty. Typical defects of this group are larger colored inclusions as well as larger cracks or plane-like inclusions.

The I-2 (Imperfect-2) or P-2 grade is comprised of diamonds with larger and/or numerous inclusions which can be seen with the naked eye through the crown and which may diminish the brilliance somewhat even in smaller diamonds. There might be dark inclusions or numerous light-colored features. Another characteristic is larger cracks which may influence the durability of the stone and they could possibly expand under stress into the interior of the diamond, especially if they are to be found near the girdle. ***I do not recommend purchasing a diamond with a clarity grade of I-2 or lower since the multitude of inclusions will tend to block or impede the passage of light through the diamond and thus reduce the overall brilliancy. Also, the presence of larger inclusions especially cleavage-like inclusions will create a certain amount of internal strain that will ultimately weaken the diamond.***

However, there are to be found large diamonds with an I-2 clarity that seem to be quite brilliant and are quite strong. Ask your independent gemmologist his opinion on any I-2 or lower clarity diamond. Ask him specifically about reduced brilliancy and the overall strength of the diamond.

The I-3 (Imperfect-3) or P-3(Pique'-3) clarity grade is the lowest grade of clarity and is comprised of large and/or numerous inclusions which are easily visible through the crown with the naked eye. The number and size of inclusions diminish the brilliance considerably.

BE VERY CAREFUL WHEN PURCHASING MARQUIS AND PEAR-SHAPED DIAMONDS IN REGARDS TO INCLUSIONS THAT MAY BE PRESENT TOWARDS THE

TIPS OF THESE DIAMONDS. INCLUSIONS ARE VERY HARD TO NOTICE IN THESE PARTICULAR AREAS AND SEEM TO GO UNDETECTED. TOWARDS THE TIPS OR POINTS OF THE DIAMONDS THERE ARE A GREAT MANY REFLECTIONS THAT MAKE INCLUSION DETECTION HARD. ASK YOUR JEWELLER TO PARTICULARLY NOTE THESE AREAS OF FANCY CUT DIAMONDS.

Section Fifteen

The Colour Grading of Diamonds

In order to colour grade a diamond, the loose diamond or diamond ring is viewed in a special apparatus referred to as a Diamond Lite. (*See Section Three, paragraph 3)*

Just as a matter of interest it is the presence of nitrogen that causes the yellowish tinge to appear. One part in a million will cause the yellow tint to appear in a K colour diamond.

Although diamonds range from colorless to almost every hue, the vast majority contains some tint of slightly greenish-yellow. Thus, diamond colour grading is usually a comparison of diamonds having faint tints of this slightly greenish-yellow hue. The starting point for colour grading is the diamond without the slightest tint of colour. The next one or two grades of any detailed colour grading system are based more on a difference in transparency than on tints of colour. Subsequent grades increase in colour to the point where the light yellow classification is reached.

With respect to the colour lettering grades D and E refer to the rarest white diamonds. F, G & H refer to white diamonds. Mounted diamonds that are either D E F G or H will appear colorless except to the trained eye. I, J, & K diamonds are referred to as tinted white. I, J, & K diamonds that are mounted will appear colorless but larger diamonds will appear to be tinted white. Any diamonds from L to R will appear yellowish. Mounted diamonds from L to R will display a yellowish tint even to the untrained eye. Diamonds from R to X will appear yellow either as loose diamonds or mounted diamonds.

Diamonds have been found and cut in some tones and intensities of each of the six spectral hues. However, they are usually either colorless or range from very light to strongly colored yellow or brown. The yellow is usually slightly greenish, a characteristic that becomes obvious only when a number of yellow diamonds are grouped together. Both the relative rarity of the colorless diamonds and the fact that they are considered more attractive by the majority of jewellers and customers has made them the most valuable of the usual range of diamond colours.

Despite the common usage of terms such as "blue-white" and " gem blue", blue diamonds are exceedingly rare. Most diamonds that are referred to by one of these terms in the trade are actually very faintly tinted with yellow, although some are colorless. Of the thousands of diamonds submitted to the Gemological Institute of America for colour grading, not more than one in 500 has shown even the faintest trace of blue body colour in

incandescent light. Fluorescent diamonds that are exposed to sunlight may display a slight bluish overcast.

The term "blue-white" in diamonds actually refers to a particular type of white diamond from the Jagersfontein Mine in South Africa that is very slightly bluish, usually owing to its strong blue fluorescence. The term "blue-white" arose from such stones. 'Jagers' are very few indeed and it is incorrect to call other stones "blue-white".

As yellow and brown in diamonds increases from the colorless end of the usual grading scale, value drops to the point at which the colour becomes deep enough to be an asset. In other words, faint tints of yellow or brown, in the opinion of many jewellers, detract from a diamond's beauty, whereas attractive deep tones of these colours increases desirability.

Section Sixteen

The Cutting Grade of Diamonds

The cut of the diamond involves the finish of the diamond as well as the proportions of the diamond.

The four main factors to consider under the finish are *the girdle surface, minor elements of symmetry, the size of the culet and the quality of the polish.*

The Girdle Surface

The girdle is the outer edge or periphery of the diamond that separates the top or crown section from the bottom or pavilion section. The girdle may either have a whitish appearance or it may be transparent. See the sheet at the end of this guide that illustrates all the sections of the round brilliant cut diamond since a diagram of the girdle is shown on that sheet.

A typical, well-finished girdle surface is one that is so smooth that it is waxy rather than dull. If a diamond is rounded up too quickly in the fashioning process the result will be a fuzzy appearance to the inner edge of the girdle when viewed looking down into the table. A rough girdle may make a diamond appear grayer or darker when viewed face up detracting from its appearance. This is caused by oil and dirt becoming embedded in the girdle surface. The girdle may also possess numerous minute feathers that extend into the diamond. A girdle with this appearance is referred to as being 'feathered', 'fuzzy' or 'bearded'. 'Bearded' is the most commonly used term today. A bearded girdle will not wear as well as a girdle that is not bearded because it is possible to extend some of the minute feathers with wear. *A frosty but smooth girdle surface is completely acceptable.* If the surface has a pronounced granular appearance, similar to a lump of sugar, or if tiny nicks extend into the crown or pavilion surface, it is referred to as being rough. Some diamond cutters maintain that polishing the girdle improves the appearance of the diamond. *Whether or not the girdle is polished has no effect on the clarity and value.*

The ideal girdle has only a sufficient thickness to protect the diamond against chipping or cleaving in the setting. **Even though a diamond is the hardest material known and it takes one diamond to scratch another diamond, diamonds will cleave if they receive a blow at just the right angle. Diamonds will cleave along the octahedral planes of the rough crystal. The octahedral planes refer to those planes where there is the greatest separation between the carbon atoms. Cleavage cracks may form in diamonds in clean and regular separations between atomic planes. Once they occur the diamond is prone to extensions of those already existing cleavage cracks.**

Minor Symmetry Faults

One of the factors to consider under the finish of a diamond is 'minor symmetry faults'. The following factors may slightly lower the value of a diamond and may slightly detract from the beauty of a diamond:

1. **The table or culet being very slightly off centre.**
2. **Unequal sizes of opposing facets.**
3. **Misshapen facets.**
4. **The girdle outline being slightly out of round i.e. oval, or squarish.**
5. **The table not being parallel to the girdle.**
6. **The pavilion and crown main facets are out of alignment.**

The Culet

The culet (pronounced Q-let) is the bottom tip of the diamond. The culet should be small to medium in size. Refer to the sheet at the end of the guide that has all the parts of the round brilliant cut diamond. The 'culet' is illustrated on this sheet.

The culet should be small to medium in size. **A diamond with a large to very large culet is referred to as having a 'well', and this detracts from the beauty of a diamond. Facet edges as well as the culet may be rough and, as well, show signs of abrasion. This may be the result of abrasion from other diamonds or may have occurred during the fashioning process.**

The Quality of the Polish

In order to achieve maximum brilliancy in any transparent diamond it is essential that the facets be flat planar surfaces. ***Hasty and careless polishing of a diamond can leave obvious wheel marks that affect brilliancy and lustre, although they are seldom visible to the unaided eye. Such a minutely grooved surface will cause diffusion of the light that is transmitted through and reflected from the diamond.*** **To evaluate the polish of a diamond look through the diamond to the opposite side in order to see the polishing lines. For instance, when looking for lines on the pavilion surface look through the crown facets. When looking for polishing lines on the crown look through the pavilion facets.**

THE PROPORTIONS OF DIAMONDS

The 'proportions' is the other major factor in addition to the finish previously described. To understand proportions certain definitions are in order. The first is fire:

> ***'Fire' refers to the flashes of the different spectrum colors seen in diamonds as a result of the diamond separating white light into the spectrum colors as the light leaves the angled crown facets after being totally internally reflected in the diamond.***

> ***'Brilliancy' in the diamond is the amount of light reaching the eye as a result of reflections from the internal surfaces of facets, called total internal reflections, and reflections from the external surfaces of the table and other facets of the diamond***

Why is reference made to the ideal cut when judging the proportions of a round brilliant cut diamond?

The reason is that it displays the most suitably balanced display of brilliancy and fire, and it is the style of modern brilliant cutting that retains the least weight from the average rough diamond.

Why a diamond displays high brilliancy and fire.

Light that escapes out of a diamond is said to be leaked from the diamond. Leakage is desirable in a diamond when it occurs from the crown or top facets, for then the light is returned to the eye of the observer and contributes to the visible brilliancy of the diamond. The angles of the crown facets as well as the pavilion facets must be carefully planned in cutting to take advantage of total reflections in the pavilion and planned leakage in the crown. The critical angle refers to the angle beyond which total reflections occur. Rays of light traveling inside a diamond will be totally internally reflected back into the diamond if they strike a surface within the diamond at an angle greater than the critical angle. Should the light ray within a diamond strike within the critical angle it will leak out of the diamond. If the light ray strikes outside the critical angle it will be totally internally reflected within the diamond.

The pavilion facets of a diamond are placed in such a manner that the majority of the light that enters the crown facets strikes the pavilion facets at an angle greater than the critical angle cone. The light therefore undergoes total internal reflections at both pavilion facets and returns to the crown or upper section of the diamond where the light escapes as planned leakage.

The angles of the crown facets must be planned as carefully as those of the pavilion. Planned leakage in the crown area is necessary if the totally reflected light from the pavilion is to be returned to the eye of the observer.

Most of the light returned to the eye through a well made round brilliant cut diamond passes through the table and through those portions of the crown facets near the table. The light that emerges through the crown facets is the light that is most highly dispersed. If a diamond cutter enlarges the table too much he would therefore reduce the amount of fire that could be returned to the eye. At the same time, a reduction in the size of the table results in increased fire. Since prismatic fire is the result of dispersing white light, a balance is necessary in order to obtain the maximum brilliancy consistent with a high degree of fire. For example, the very thick high crowned round brilliant which was cut regularly a number of years ago and is now called an 'old-European' cut had a high degree of fire but less brilliancy.

The importance of diamonds is based on the demand that was created originally by its beauty and durability. Since diamonds are usually colorless or near colorless, their beauty depends on brilliancy and fire. Obviously, any reduction in either of these vital properties has a material effect on beauty and thus on appeal.

The table is the large 8-sided horizontal flat surface on the top of the diamond. The distance across the table from point to point is measured in millimeters. The diameter of the diamond is the distance from edge to opposite edge of the diamond.The table percentage is the table measurement in mms.divided by the diameter of the diamond in mms. The tables of modern round brilliant cut diamonds may range from 53% to approx. 70%. The majority of diamonds today have a 60 to 65% table. This is considered acceptable. The ideal cut has a 53% table. The ideal angle for the pavilion is approx. 41 degrees and the crown angle is 34.5 degrees.

The angle of the pavilion main facets with the plane of the girdle is a vital consideration in determining the brilliancy of a diamond. Since any material departure from the 41 degree angle is sure to reduce brilliancy, most diamond cutters adhere closely to this angle.

TABLE REFLECTIONS IN THE PAVILION

Usually a diamond examined under ten magnifications in a table-up position shows a reflection of the table in the pavilion. The pavilion facets act exactly like mirrors and will reflect the crown into it. By looking through the table you can see the reflections of the crown of the diamond in the pavilion.

The table reflection should occupy approximately one-third to 40% of the width of the table, if the pavilion angle is ideal. The depth percentage is a percentage figure that is arrived at by dividing the diameter of the diamond into the depth of the diamond. The 41 degree ideal pavilion angle results in a pavilion depth percentage of approximately 43.1% and when the table reflection covers the entire table area, the pavilion depth percentage is at least 49%. If it is very black it is likely to be at least 50% or 51%.

A pavilion depth of approx. 37% will show the entire girdle reflecting into the table at all points. This is referred to as a 'fisheye' and the diamond appears dead in the centre.

The 'fisheye' is an obvious circular rim that is seen reflected just within the table of the diamond. Avoid these diamonds. On the other hand, a pavilion depth of approximately 51% will result in a table that is completely covered by the table reflection. The table will appear not just dark but black since a great deal of light has escaped through the pavilion facets. Avoid these diamonds as well.

The ideal pavilion depth is 43.1% and the table reflection should occupy one-third to 40% of the width of the table.

Overview of Proportion Grading with respect to all diamond cuts.

Regardless of the shape into which a diamond is cut, brilliancy is important. In order to achieve brilliancy a pavilion angle of 40.75 degrees or 41 degrees is essential.

Section Seventeen

THE DIFFERENT CUTTING GRADES - Terminology

The possible cutting grades in descending order are as follows:

1. ***Very good.***
2. ***Very good-good.***
3. ***Good***
4. ***Medium-Good***
5. ***Medium***
6. ***Medium-Fair***
7. ***Fair***
8. ***Fair-poor***
9. ***Poor***

The assigned grade is determined by comparison with the ideal American standard cut diamond. The cutting grade assigned to a diamond is determined by the following factors: the proper crown and pavilion angles, table and depth percentage, polish, girdle thickness and finish, culet size, facet alignment and symmetry as well as minor symmetry faults.

The term 'very good cut' is used for diamonds within the tolerances of the standard American ideal cut.

The term 'good cut' is used for diamonds just outside the tolerances of the standard American ideal cut.

The term ' medium cut' is used for diamonds of average proportions.

The term 'poor cut' is used for diamonds with distinctly reduced light effect to the untrained eye.

Generally, a good to very god cut has a table size from 53 to 60%, crown angles that are 34 to 35 degrees and a medium to slightly thick girdle. The polish and symmetry is very good to excellent. In diamonds half a carat or less larger tables up to 62% are acceptable.

Generally, a medium cut diamond has a 61 to approx. 65% table, a 32 to 34 degree crown angle and a thin to thick girdle. The diamond would have a pavilion depth of approx. 42 to 44% The polish and symmetry are good.

Generally, a fair cut will range in between the description as seen above in the medium cut and the description as seen below in the poor cut.

Generally, a poorly cut diamond will have a 65 to 70% table, approx. 30 to 32 degrees crown angle, and a thin or very thick girdle. The pavilion depth may range from approx. 41 to 46%. The polish and symmetry may be fair.

The poorest cut diamonds will have table sizes larger than 70%, crown angles shallower than 30 degrees, and knife-edged or very thick to extremely thick girdles. The pavilion depth may be shallower than 40% or deeper than 46%. The polish and symmetry may be fair to poor.

CUT PROPORTIONS MAY OVERLAP INTO MORE THAN ONE GRADE. POLISH AND SYMMETRY ARE COLLECTIVELY KNOWN AS FINISH.

Section Eighteen

PROPORTION JUDGMENT WITH RESPECT TO FANCY CUT DIAMONDS

Since cuts other than round girdled types are not equidimensional, a loss of efficiency compared with modern round brilliant cut diamonds is unavoidable. This makes it all the more important to maintain the best possible proportions with fancy cut diamonds in order to avoid any further reduction in brilliancy. When proportion grading fancy cut diamonds the key element is the narrow cross section of the diamond. Fancy cut diamonds are referring of course to marquis, ovals, pears, hearts, emerald cuts, princess cut diamonds etc. In all fancy shapes the long cross section must be given some consideration. It is possible to keep the pavilion angle close to ideal figures in that direction by elongating the culet. In excessively long and thin marquises and emerald cut diamonds the culet is seldom extended long enough to make the angles reasonably close. In such diamonds, the great disparity between length and width tend to reduce the brilliancy.

PROPORTIONS WITH REGARDS TO PEAR-SHAPED DIAMONDS

Some pear shapes resemble the marquise, with the only difference being that the pear shape has one rounded end. Other pear-shape diamonds are only slightly loner than they are wide. Some are rather long and slender and others are shorter and wider. Since the shape depends on the original shape of the crystal, it is considered only from the

viewpoint of salability and not from the viewpoint of relative value. Thus, if one prefers a long, slender marquis diamond to a shorter and wider one, it is a matter of choice.

One important point that is unique with the pear-shaped diamond is the relative position of the culet with respect to pointed and rounded ends. ***The culet should be centered under the widest part of the table, or very close thereto. The objective is to cut the diamond in such a way that the angles on the rounded end are maintained as closely as possible to the ideal 41 degrees. This is impossible if the pear has a long, narrow shape, but should be exact if the pear-shaped diamond is largely circular on one end.***

Additional weight may be maintained in the rounded end of the fancy cut. Distortion of what should be a smooth pleasing curve may occur to the extent that the girdle outline of the pear-shaped diamond takes on the appearance of a round triangle. This pear-shaped diamond would be referred to as having "high shoulders". Please see the diagram concerning "high shoulders" under the cautionary notes section towards the end of the guide.

PROPORTIONS WITH REGARDS TO MARQUISE-SHAPED DIAMONDS

As with the other fancy shaped diamonds, the narrow cross section is used to evaluate the marquise-shaped diamond. If the diamond is too long and narrow, it means that unless the culet or bottom point of the diamond is elongated a great deal, the pointed ends will be so flat that the reflection of light back through the crown, and thus the brilliancy, will be reduced materially. A more brilliant marquise is one that has a wider cross section with respect to its length. The fact that the marquise diamond has pointed ends means that it is not as brilliant as a finely cut transparent modern round brilliant cut diamond. Therefore, it is important when choosing an elongated marquise that the culet be rather elongated, since this permits the diamond to be cut more closely to the 41-degree ideal pavilion angle. To achieve maximum brilliancy in the marquise it is necessary, as it is in any other cut to have a 41 degree angle on the pavilion in the narrow cross section. Since the marquis is a form of brilliant cutting, the analysis of the narrow cross section is not difficult. As with the emerald cut, the length versus width dimensions are a matter of taste.

RECOMMENDED LENGTH TO WIDTH RATIOS IN THE FANCY CUT DIAMONDS

THE FOLLOWING LENGTH-TO-WIDTH RATIOS ARE RECOMMENDED FOR FANCY CUT DIAMONDS:

PEAR	***1.50:1***	***TO***	***1.75:1***
MARQUISE	***1.75:1***	***TO***	***2.25:1***
EMERALD	***1.50:1***	***TO***	***1.75:1***
OVAL	***1.50:1***	***TO***	***1.75:1***
HEART	***1:1***	***TO***	***1.25:1***

The brilliancy of the modified brilliant cuts or the fancy cut diamonds may be seen to differ with respect to the length versus the width directions within a given diamond, being more brilliant in one area or direction and less brilliant in another.

The difference of brilliance may produce a shadow effect through the narrow cross section of these following fancy shapes: oval, pear, and marquise. Most examples of these cuts exhibit this effect and few examples do not exhibit this effect. This is termed the "bow-tie" effect which, when sufficiently pronounced, warrants a deduction in value. A pronounced "bow-tie" will appear quite dark and will assume the shape of a bow-tie across the narrow central section of the marquise, pear or oval-shaped diamond. See the diagrams of the "bow-tie" effect under the cautionary notes section towards the end of the guide.

Section Nineteen

EXTERNAL AND INTERNAL FEATURES

It is helpful to know the different external and internal inclusions which may be present in a diamond. It is especially useful to know those inclusions which may weaken or strain the structure of the diamond. External features in a diamond are called blemishes and internal features are called inclusions. Let us examine the possible external features. I will note any possible hazards or complications that may arise from any blemishes or features that may be present.

External features

1. Cavity

Cavities are openings on the surface of a diamond. They may be caused by cleavage, by a blow, or they may have been "pulled out" from the surface during polishing. *Be careful when wearing a diamond with cavities. Do not subject the diamond to hard blows where the cavities are as this may extend additional fractures and cleavages from the inner base of the cavity.*

2. Nicks

Nicks are minor surface chips caused by abrasion due to long and hard wear. Most nicks occur along the girdle, however, they may also appear along facet junctions or elsewhere. *The same precautions apply to nicks as they do to cavities (No. 1 above).*

3. Twin Lines, Knot Lines or Grain Lines

These are lines that are caused by twinning or by large inclusions that are oriented differently from the host crystal. They stand out as visible lines at the surface. Twinning lines or knot lines are distinguished easily from polishing marks by the fact that they run across facet junctions. These should not be confused with crystal growth lines, which affect light in a manner that makes them visible as a banded effect within the diamond, instead of

on the surface. ***Twin lines, knot lines or grain lines should not affect the way you wear the diamond. Excessive twin lines, knot lines or grain lines may cause strain within a diamond but generally, you shouldn't worry about these when wearing your diamond.***

4. Naturals

A natural is an unpolished surface on a cut diamond that is part of the surface or "skin" of the crystal from which the stone was cut. Naturals are usually found on or near the girdle, but they may extend onto the crown or pavilion. They are the result of an effort to retain some extra weight from the original rough in the rounding-up process. ***Do not worry about naturals. You may wear your diamond ring normally and you do not have to take any extra precautions.***

5. ***Scratches and Wheel Marks***

Loose diamonds that are stored in the foldover diamond papers used by diamond dealers are likely to have their facet junctions become abraded and scratches may also appear on the diamonds. Scratches may also result from wear or contact with other diamonds in a jewel box. ***Remember that one diamond may touch another so it is important to separate your diamond jewellery. Plastic zip lock jewellery bags are excellent for this. In a well finished diamond, the grooves left by the rough grinding process are polished out. In hastily polished diamonds prominent grooves are usually left and this would cause some diffraction and loss of brilliancy. You may want to have the diamond repolished by a diamond cutter. There are no extra precautions that you have to take with a diamond that has these external blemishes.***

6. Extra Facets

Extra facets are those additional facets that are placed on a diamond without regard for the diamond's symmetry. These facets are in addition to those needed to fulfill the requirements of a modern round brilliant cut diamond or any other style of fancy or round cutting. They are commonly used to polish out a minor blemish such as a natural or a nick. ***Do not worry about extra facets. There is no need for any special precautions of any sort.***

7. Rough Girdle

A rough girdle is one that has an irregular, granular, pitted girdle surface. A rough girdle is usually accompanied by bearding or feathering. The term rough girdle describes a girdle that appears waxy. It also describes a girdle that is badly pitted and even chipped. ***Should your diamond have an excessively rough girdle you may want to have it repolished. Avoid purchasing a diamond with a very rough girdle. Should your diamond have a rough girdle be cautious and especially avoid wearing the diamond while doing rough work.***

8. Burn Marks

When a diamond is polished too rapidly the heat caused by friction may build up enough so that the surface clouds slightly under the metal jaws of the dop.

The internal features referred to as inclusions shall now be discussed.

1. Cleavages

A cleavage is any break along the grain of the diamond. Cleavages usually extend inwards from the surface but sometimes small internal cleavages will extend short distances on each side of an inclusion. ***A cleavage may affect the durability of a diamond. Be careful not to do especially rough work when wearing a diamond that has severe cleavages.***

2. Fractures

A fracture is any break in a diamond that does not follow the grain. Compared with flat cleavages, fractures are usually irregular in appearance. Due to the fact that any break in a diamond will follow the grain, portions of any fracture are almost sure to follow the grain for a small distance. ***The same precautions apply to diamonds with large fractures as they do to diamonds with cleavages. (see above)***

3. Feathers and Hairline Feathers

A feather is a cleavage or a fracture that has a feathery appearance when viewed at right angles to the separation. **A feather or cleavage that appears white to the grader is often referred to as a 'glet'.**

A hairline feather is usually a cleavage, but possibly a feather that is so shallow that it appears to be a scratch at first glance. A hairline feather would extend a small distance into the diamond.

4. "Carbon Spots"

"Carbon" spot is the term that is used loosely to refer to any black appearing inclusion in a diamond. Black inclusions actually are rare. Careful examination by dark-field illumination reveals most so called "carbon" spots to be small cleavages or inclusions of transparent diamond crystals or other transparent minerals. When large and unsightly they reduce the value of a diamond substantially. Some black inclusions may actually be particles of graphite or other dark materials. Take normal precautions when wearing your ring. If there are numerous and large "carbon" spots take extra precaution as the excessive number of "carbon" spots may create more internal strain within the diamond.

5. Pinpoint Inclusions

These are almost the same as "carbon" spots except that they are exceedingly small and are somewhat more likely to be opaque. Due to their minute size they reduce the value very little. Numerous pinpoint inclusions are often found together as groups.

6. A cloud

A cloud refers to white cottony inclusions that are composed of minute hollow spaces or very small patches of tiny crystals or other impurities. If present over large areas, clouds may reduce the transparency of a diamond materially and thus its beauty. ***Take normal precautions when wearing your diamond ring.***

7. Knots

A knot is an included crystal of diamond that is oriented differently from the host crystal. As a result, the polisher using the optimum polishing direction for the host crystal finds the inclusion harder, and so it stands out on the surface as a harder area. ***Take normal precautions when wearing your diamond ring.***

8. Percussion Marks or Bruises

Percussion marks or bruises are the results of sharp blows to a diamond, and are seen at the surface of polished diamonds as tiny white marks usually with a square or hexagonal outline.

9. Included Crystals

An included crystal often appears black by transmitted light when it is actually a diamond crystal that is surrounded by the growth of the main crystal. The included crystals are enclosed during the growth of the diamond. Their effect on durability varies depending on whether they have set up an unusual strained condition in the diamond.

10. Crystal Growth Lines

Within many diamonds a banding effect may be revealed under certain lighting conditions. This banding effect is usually parallel to octahedral faces so there may be four sets. These growth lines are usually hard to detect.

11. Bearded or Feathered Girdle

If a diamond has suffered extensive abuse and rough treatment in the rounding up or cutting and fashioning process, then not only will the girdle be rough but it may possess numerous, minute, hairlike fractures that extend into the diamond. Be extra careful not to expose the diamond to further hard blows or knocks.

12. Fissures

A fissure is a cleavage or fracture that is open at the surface as a long cavity.

PLEASE TAKE NOTE OF THE FOLLOWING:

- ***When viewing inclusions in a diamond, many times what appears to be several inclusions may simply be one inclusion that is reflected one to several times within the***

diamond. The ability of a diamond to reflect inclusions is unbelievable. Turning the diamond so as to view the inclusion(s) from another direction is usually sufficient to prove that there is one, rather than several inclusions.

- *When holding a diamond in a tweezer, the tweezers will reflect into the crown facets of the diamond. These reflections should not be confused with inclusions. Likewise, the claws holding the diamond in a setting will reflect into the diamond and these reflections should not be confused with inclusions.*

INCLUSIONS ARE SPECIAL AND UNIQUE TO EVERY DIAMOND. THE INCLUSION PLOT MUST ACCOMPANY THE APPRAISAL AS THIS WILL SERVE TO IDENTIFY YOUR DIAMOND IF IT IS EVER LEFT ANYWHERE. THE COMBINATION OF THE LASER GEMPRINT PLUS THE DIAMOND INCLUSION PLOT IS YOUR PROTECTION SHOULD YOUR DIAMOND EVERY BE LEFT ANYWHERE.

Section Twenty

LASER DRILLED, YEHUDA FILLED & IRRADIATED DIAMONDS

Laser Drilled Diamonds

Diamonds are sometimes seen with tiny surface hole(s) that extend down into the diamond in the form of a tubular round channel. At the end of the channel may be a somewhat larger seemingly mild inclusion. These are laser drill holes that are made to try and burn out the internal inclusion and thus improve the clarity of the diamond. They may improve the clarity up to one full clarity grade. Oftentimes though, laser gemprinting has no effect on the clarity grade. I believe that laser drilled diamonds are fully acceptable PROVIDING that you are told that they have been specifically laser drilled in order to reduce the size of certain inclusions. The laser drilling does not have any negative effect on the diamond.

The effect of pricing on laser drilled diamonds is not known. Certain diamond dealers feel that the price should not be affected since the grade may not change while other diamond dealers feel that the price of laser drilled diamonds should be lowered by one full grade.

Yehuda Filled or Koss Enhanced Diamonds

These two processes fill in the inclusions that reach the surfaces of diamonds and will generally improve clarity grades by one or two grades. FULL DISCLOSURE SHOULD BE MADE .

Irradiated Diamonds

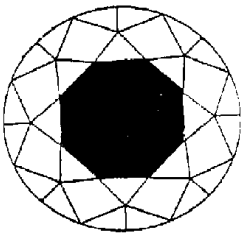
Diamonds can be irradiated to a wide range of colours. Irradiation is usually done on diamonds of M colour or below.

Section Twenty-One

SUMMARIZING THE IMPORTANT NOTES OF CAUTION

Tables That Appear Very Dark

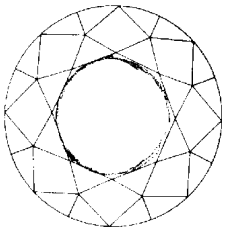
If purchasing a modern round brilliant cut diamond be on the lookout for a table that appears very dark. This is a result of the pavilion or lower section of the diamond being cut too deep. The figure below shows a dark table due to the pavilion being cut too deep. AVOID THESE DIAMONDS. Ask your independent gemmologist to make sure you don't receive a



diamond cut too deep.

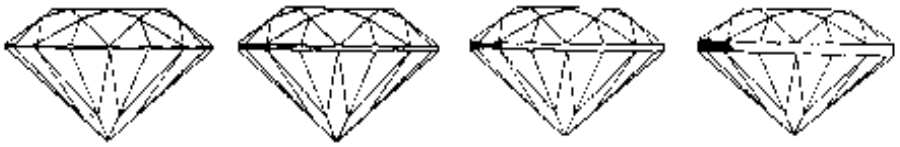
Tables That Appear Glassy and Show the 'Fisheye' Effect

If purchasing a modern round brilliant cut diamond be on the lookout for 'glassy', 'hollow-looking' diamonds that show a circular rim similar to a 'fisheye' appearance just within the table of the diamond. The diamond will show this effect as a result of the pavilion being cut too shallow. AVOID THESE DIAMONDS. See the illustration below. Ask your independent gemmologist to be sure you don't receive a diamond cut too shallow.



Cautionary notes on the girdles of diamonds

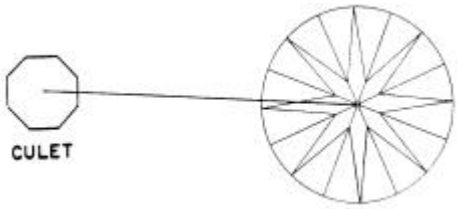
The ideal girdle on a diamond should be one of medium thickness. The girdle refers to the circular narrow section between the crown and the pavilion. The girdle is that portion of the diamond which is usually grasped by the claws or the mount in order that it is firmly held in place. Avoid a very thin girdle, referred to as a 'knife-edged' girdle as this may result in a diamond that can easily break and chip around the girdle. A very thick to extremely thick girdle is unsightly and does not at all add to he beauty of the diamond. All that a very thick to extremely thick girdle does is add to the weight of the diamond. The girdle usually has a whitish-grey colour and a waxy type texture. The girdle may also be polished and may even have facets polished on. Avoid diamonds with excessive bearding. Bearding refers to numerous small fractures that extend into the diamond from the girdle. This is a result of the diamond cutter 'rounding' the girdle up too quickly.



MEDIUM **THICK** **VERY THICK** **EXTREMELY THICK**

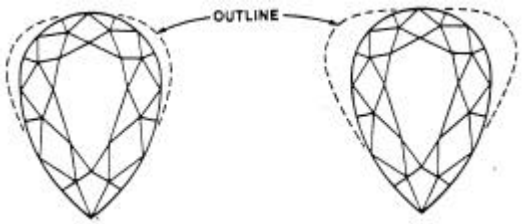
A Cautionary note concerning the Culet of the diamond

The culet or the tip of the diamond should come to a small point. A large culet is known as a well and is unsightly. Avoid diamonds with a large culet. Ask your gemmologist about the size of the culet. The culet should appear as a tiny polished facet at the tip of the pavilion. Should the culet be chipped or abraded, this will detract from the diamond's appearance.



A Cautionary note concerning pear-shaped diamonds

Additional weight may be retained in the rounded end of this fancy cut. Instead of having a nice 'pleasing' curve at the rounded end, the cutter may retain weight by leaving that end to appear similar to a rounded triangle. See illustration below. The value of the pear-shaped diamond becomes less due to the 'high shoulders'. Watch out for this when purchasing a pear-shaped diamond.



Also, with pear-shaped diamonds the relative position of the culet with respect to the pointed and rounded ends is important. It should be centred under the widest part of the table or very close to. The objective, of course, is to cut the diamond in such a way that the angles on the rounded end are maintained as closely as possible to the ideal 41 degrees. This is impossible if the pear-shaped diamond is long and narrow but should be exact if the pear-shaped diamond is largely circular on one end.

A cautionary not concerning emerald cut and princess cut diamonds.

Excessive weight may be saved on the diamond by having the diamond bulge as seen in the diagram below. The further out the sides bulge the less desirable that it is. The area in white is the correct area. It is very difficult today to find a princess cut diamond without some bulge.

A cautionary note concerning marquise-shaped diamonds.

The narrow cross section is used to evaluate a marquise shaped diamond. If the marquise diamond is too long and narrow it means that unless the culet is elongated a great deal, the pointed ends will be so flat that the reflection of light back through the crown, and thus the brilliancy, will be reduced significantly. A more brilliant marquise diamond is one that has a wider cross section with respect to its length. It is important when choosing an elongated marquise that the culet be rather elongated since this permits the diamond to be cut more closely to the 41-degree ideal pavilion angle. Many marquise diamonds are too shallow for the length of the diamond.

To achieve maximum brilliancy with the marquise diamond it is necessary, as it is in any other cut, to have a 41-degree angle on the pavilion in the narrow cross section. As with the emerald-cut, the length-versus-width dimensions are a matter of taste.

A Special Note about Heart-shaped Diamonds

A heart-shaped diamond may be considered as a special variety of the pear-shape. It is very similar to the pear shape except for the indentation on the rounded end. The heart-shaped diamond is a wider pear-shape than usual. To analyze the proportions of a heart-shaped diamond the diameter taken is that which crosses the two lobes, rather than along the line that bisects the heart This is used to determine the size of the table, total depth measurement and the thickness of the girdle, crown and pavilion.

A Cautionary Note Concerning the "Bow-Tie" Effect on Diamonds

The oval, pear and marquise shaped diamonds are modifications of the round brilliant cut diamond. The modifications produce a loss of brilliancy which becomes more noticeable as the disparity between length and width increases. Elongating the culet tends to minimize this effect, but the elongation of the culet may not be sufficient to provide a reasonable approximation of the correct pavilion angles. Consequently, the brilliancy of these modified brilliant cuts may be seen to differ with respect to the length versus the width directions within

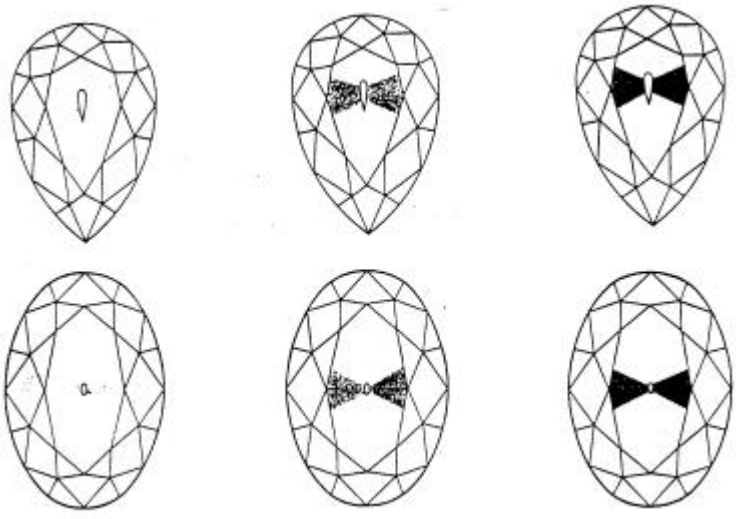
a given diamond. The marquise, pear or oval-shaped diamond will appear more brilliant in one area or direction and less brilliant in another direction.

This difference in brilliance may produce a shadow effect through the narrow cross section of these fancy shaped pear, marquise, and oval cut diamonds. Most examples of these fancy cut diamonds exhibit the "bow-tie" effect. If the bow-tie effect is sufficiently pronounced then the value of the diamond will come down, as shown in the illustration in group C below. Group 'A' has a minimal effect, Group'B' has a normal "bow-tie" effect and Group 'C' has a severe effect. Try and purchase a diamond with as little as the "bow-tie" effect showing as possible.

On fancy cut diamonds proportions are judged through the narrow cross section only.

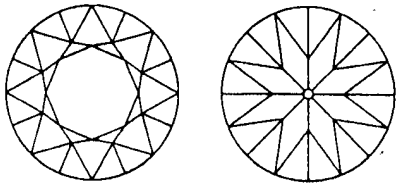
GROUP 'A' **GROUP 'B'** **GROUP 'C'**

GROUP 'A' **GROUP 'B'** **GROUP 'C'**



A Cautionary Note Concerning Early Modern Brilliant Cut Diamonds vs. the Earlier Modern Brilliant or Transition Cut Diamonds.

The earlier modern brilliant cut diamonds were cut around 1925 to 1940. They do closely resemble the modern round brilliant cut diamond however, they are priced approx. 15% lower. Be careful that you do not receive an earlier modern brilliant cut diamond instead of a modern round brilliant cut diamond. The earlier modern brilliant cut diamonds are quite beautiful and there is nothing wrong with them, but you should be told by the jeweller. The earlier modern brilliant cut diamonds had a little larger culet and they had a higher crown height and a smaller table. The earlier modern brilliants can be distinguished by the pavilion main facets (see definition section at beginning of guide) which are positioned about half way from the girdle to the culet whereas in a modern round brilliant cut diamond they extend about 2/3 the way down to the culet. In the earlier modern brilliant cut diamond the bezel facets are longer than in the modern round brilliant cut diamond.



Earlier modern brilliant

PLEASE NOTE THAT THERE ARE OTHER CAUTIONARY NOTES CONCERNING DIAMONDS THAT ARE MENTIONED IN OTHER SPOTS THROUGHOUT THE GUIDE. PLEASE READ ALL SECTIONS OF THE GUIDE IN ITS ENTIRITY.

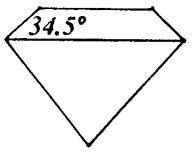
FORMULAE FOR ALL YOUR DIAMOND CALCULATIONS

Please take note of all the formulae presented in this section. They are here for easy reference should you have to make any quick calculations once you are given the dimensions of the diamond. Also, should you be given a detailed appraisal on a diamond by a jewellery store or by your own independent gemmologist you will know exactly what all the figures stated on the report mean.

The most important calculations involve the first two formulae, one for the depth percentage and the one for the table percentage.

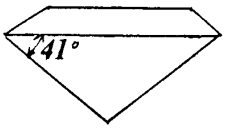
1. Depth Percentage	=	*Total depth of the diamond in mms. as measured from the table to the culet.* *_____(divided by)_____* *Diameter of the diamond in mms.*
2. Table Percentage	=	*Measurement in mms. of table from corner to corner* *_____(divided by)_____* *Diameter of diamond as measured from girdle edge to opposite girdle edge.*
3. Girdle Thickness	=	*Thickness of the girdle in mms. where the*

Percentage		***pavilion main facets and bezel facets meet***
		_____(divided by)_____
		Diameter of the diamond in mms.
4. Pavilion Depth percentage	***=***	***Depth of the pavilion as measured from the culet to the girdle in mms.***
		_____(divided by)_____
		Diameter of the diamond in mms.
5. Crown Height percentage	***=***	***Height of the crown as measured in mms. from the girdle to the table***
		_____(divided by)_____
		Diameter of the diamond in mms.
6. Crown angle	***=***	***34.5***



Should ideally be 34.5 degrees.

7. Pavilion angle	***=***	***41***



Should ideally be 41 degrees.

Section Twenty-Two

THE PROPER PROCEDURES TO TAKE WHEN LEAVING YOUR RING IN FOR SERVICING

Should you ever have to leave the diamond ring at the jewellers for repair it is important to take the following steps:

1. ***Make sure that you have a current appraisal dated within the last three years. This appraisal should be done by a qualified gemmologist with a recognized degree at a recognized jewellery appraisal laboratory.***

2. ***Be sure that the appraisal of the diamond ring has a diamond inclusion plot of the main diamond.***

3. ***For your own protection also have the diamond ring lasergemprinted by an authorized Gemprint dealer if there is one within a reasonable distance from you. Call 1-888-GEMPRINT for the closest location.***

THE ABOVE 3 STEPS SHOULD BE DONE PRIOR TO TAKING YOUR RING IN FOR SERVICING. THIS WILL PROTECT YOU AND HELP ENSURE YOU GET THE SAME DIAMOND BACK. ALSO, IF ANY DAMAGE IS DONE TO THE DIAMOND WHILE LEFT FOR REPAIR OR SERVICING IT MAY BE DETECTED.

4. ***Before leaving the diamond ring at the jewellers for repair have the jeweller acknowledge the inclusion plot as being correct. The jeweller will of course examine the diamond with a 10X loupe to verify that the inclusions as specified on the diamond inclusion plot. If the diamond has been laser gemprinted let the jeweller acknowledge that fact as well.***

5. ***Before leaving the diamond ring at the jewellery store it might be a good idea to ask the jeweller what would happen in the event that the ring were lost or stolen. On the repair receipt you receive there are usually statements and disclaimers that you may want to read and discuss with the jeweller. It is always a good idea to have things put in writing.***

6. ***When picking up the diamond ring check that all service work is done properly. Check the interior of the diamond with a 10X loupe and make sure to verify all existing inclusions as registered on the plot by the independent gemmologist. Check to make sure that there is no damage done to the diamond.***

7. ***At this point should there be any discrepancies or uncertainties, DISCUSS THEM WITH THE JEWELLER.***

8. ***If there are still doubts or uncertainties in your mind about whether or not you have received the same diamond back, or whether or not there may be damage to your diamond, then return to your independent gemmologist who can do the necessary examinations and gemprint verifications. If the diamond is not the same then discuss***

the matter with your independent gemmologist and, if you had the diamond laser gemprinted, call 1-888-GEMPRINT and they will immediately assist you.

LONG TERM CARE OF YOUR DIAMOND RING

FOLLOW ALL THE INSTRUCTIONS ON PAGES 21 AND 22 REGARDING THE LONG TERM CARE OF YOUR DIAMOND RING. THESE TWO PAGES HAVE ALL THE IMPORTANT TIPS FOR THE PROPER CARE OF YOUR DIAMOND RING.

THE GIA DEFINITIONS FOR EVALUATING CUTS OF DIAMONDS

The Gemological Institute of America analyzes the cut of round diamonds using a classification system comprising of Class 1, Class 2, Class 3, and Class 4. The GIA guidelines are as follows.

Class 1 (also considered more "ideal of a cut")
Table size.....53-60%
Crown angles…..34-34
Girdle.....medium to slightly thick
Pavilion depth.....43%
Polish.....very good to excellent
Symmetry.....very good to excellent

These cut guidelines apply for diamonds 0.50cts. and up. For smaller sizes slightly larger tables up to 62% are acceptable.

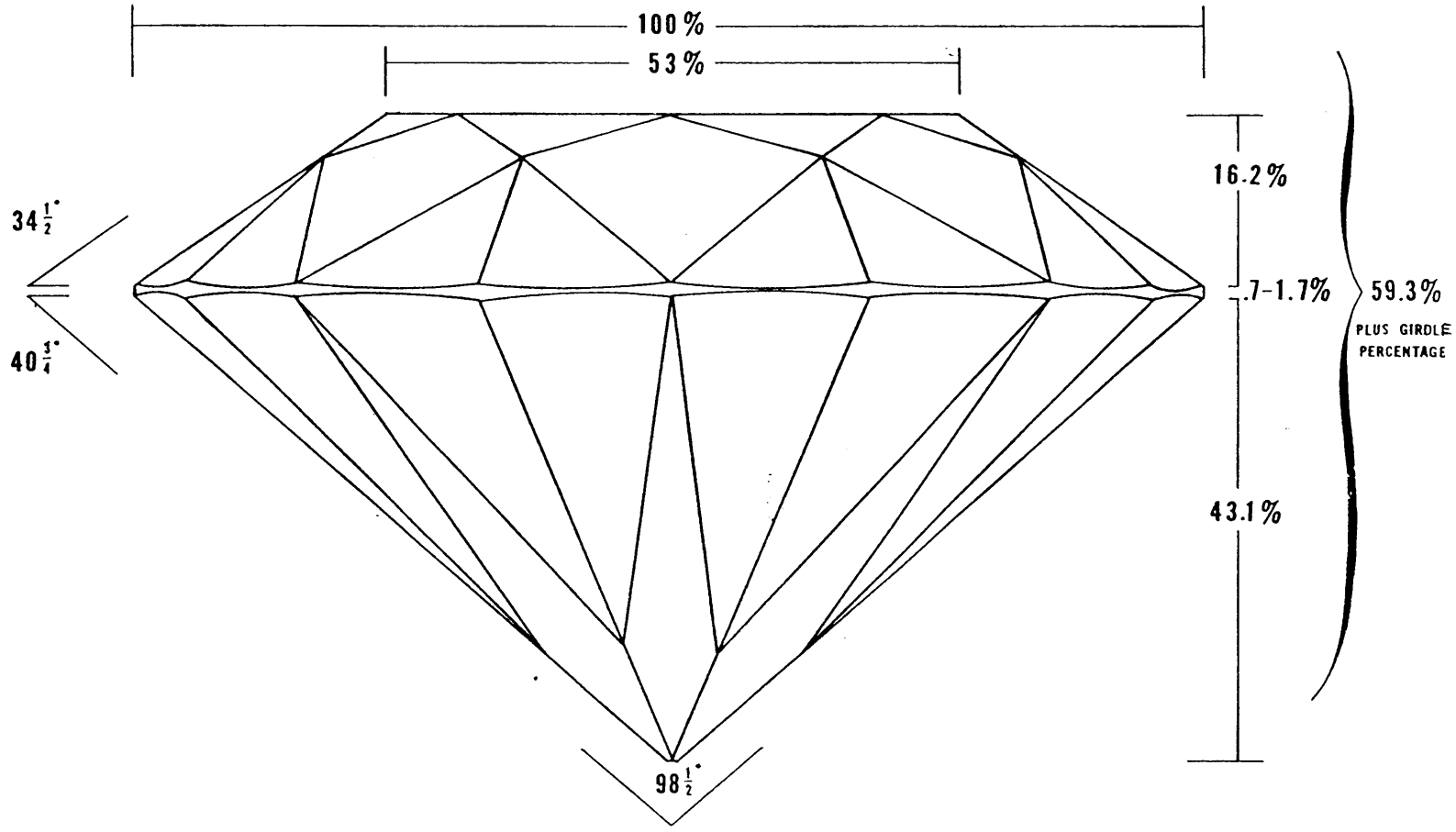
Class 2 (internationally perceived as well cut)
Table size 61-64%
Crown angles....32-34
Girdle.....Thin to thick
Pavilion depth...42-44%
Polish.....Good
Symmetry.....Good

Class 3 (Diamonds in this class are considered average cut.)
Table size.....….65-70%
Crown angles….32-34
Girdle.....…..Thin or very thick
Pavilion depth…41-46%
Polish.....…..Fair
Symmetry.....….Fair

Class 4 (Diamonds in this class are considered below average)
Table size.....….larger than 70%
Crown angles…shallower than 30
Girdle.....…Knife-edge or very thick to extremely think
Pavilion depth...Shallower than 40% or deeper than 46%
Polish.....Fair to poor
Symmetry.....Fair to poor

In all of the above classes culet sizes should be none to medium to be acceptable.
Some diamonds will invariably have cut proportions or finish which overlaps into more than one class. Diamonds which fall very close to the next class may be closer in price to that class. Polish and symmetry are collectively known as finish. Finish may have a greater effect on price than small differences in table size or girdle thickness. Finish is directly related to skilled labor. The above tables serve simply as guidelines to help you determine the cutting grade. Your independent gemmologist, however will do that for you at the time you bring your diamond in to have it independently appraised. As you can see there are many factors that come into play when determining cut.

PLEASE UNDERSTAND THAT IGS INC. IS NOT RESPONSIBLE OR LIABLE FOR THE CONSEQUENCES OF THE USE OF ANY INFORMATION IN THE ABOVE PRICE GUIDE, NOR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE OCCURRED.



AMERICAN CUT

INDEPENDENT
GEMMOLOGICAL
SERVICES

THE IGS LAB FEATURES LASER "GEMPRINTING"

24HR. GEMPRINT™ INFORMATION LINE NUMBER (905) 882-6257

Laser gemprinting is a unique system for registering your diamond or gemstone and is the only 100% accurate means of proving ownership and protecting your valuable gemstone.

Gemprinting means that an owner has proof of ownership of his/her diamond. This is essential when leaving a loose or mounted diamond or other gem at a jeweller for setting or repair.

A gemprint is made by using harmless state-of-the-art laser technology in order to create a 'fingerprint' of your diamond. Once this LASER scan (or "fingerprint") is stored in Gemprint's International data base, the police and your insurance company can instantly identify the owner even years after a theft has occurred. Law enforcement agencies worldwide have access into the Gemprint files and seek to match recovered items with their owners.

Insurance companies and law enforcement agencies (including the Metro Toronto Police, the OPP, and the RCMP) both endorse and fully encourage the use of Gemprinting. Gemprinting is also recognized by the Courts of Ontario and Canada.

IGS can quickly, safely and inexpensively gemprint your diamond and coloured stone jewellery. The stones can be loose or in a setting. Gemprinting needs only to be done once and may be done at the same time your jewellery is appraised or may be done even after your jewellery has been appraised. Currently, IGS, is the sole lab in Ontario authorized by Gemprint to take the laser fingerprints.

Gemprinting may mean an insurance discount. Upon request IGS will supply you with a list of insurance companies that offer premium discounts for gemprinting.

A Gemprint provides positive proof of ownership and makes possible the recovery of your lost and stolen valuable gems. Should you ever question whether a particular gem is yours, with "Gemprint" you now have a way to prove it.

For more information on "Gemprinting" please call the IGS Gemprint Information line at (905) 882-6257

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FAX(905)882-1847 E-Mail igsatidirect.com http://web.idirect.com/~igs

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Allstate US	10% Discount
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American Family Insurance	10% Discount
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Cigna Property & Casuality Company	10% Discount
CNA Insurance Company	10% Discount
Country Companies	10% Discount
Erie Insurance Company	10% Discount
Farm Bureau Insurance Company of Michigan	10% Discount
Fireman's Fund Insurance Company	10% Discount
INA Insurance Company	10% Discount
La Capitale Compagnie d'assurance generale	10% Discount
Lloyds of London	Discount on Jewellers Block Policy
Metropolitan Property & Casuality Co.	10% Discount, Required on High Value and High Risk Replacement
PAFCO Insurance Company	Discount on Jewellers Block Policy
Premier Insurance	10% Discount, Required on Replacement, High Value and High Risk
Prudential Assurance Company Limited	10% Discount
Sovereign General Insurance	Discount on Jewellers Block Policy
Scottish & York	10% Discount
Symons International Group Inc.	Discount on Jewellers Block Policy
Travelers Insurance	10% Discount, Required on Replacement, High Value and High Risk
Traders General Insurance	10% Discount
Western General Mutual Insurance	10% Discount
Zurich Insurance (Canada)	10% Discount

IGS Diamond Comparison Shopping Chart

Store Name	Ring #	Dia. Shape	Weight	Clarity	Colour	Cut	Reg. Price	Final Price	IGS Appraisal Value	Comments