INCLUSIONS IN GEMSTONES

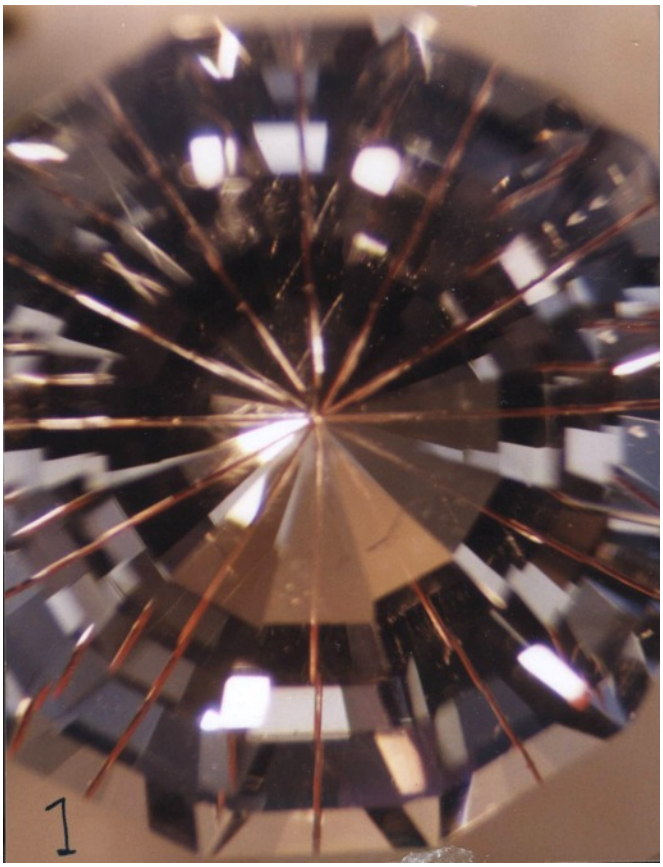
by Dennis Durham

PART 1 - BY DESIGN

The principles of faceting usually incur accuracy of cutting, exacting meets, polish & design etc.

Adding an extra dimension makes it possible to cut a gem which falls into the category of 'one of a kind'. This means it will never be repeated, similar maybe, but not the same.

We are talking about an inclusion of tourmaline or other material which has visible presence when the feature is captivated within the cut stone. An example of this is when a single crystal of tourmaline, rutile etc intrudes centrally through the table and exits through the culet.



Photograph 1 shows a rock crystal with a single central inclusion of rutile.

It is a common occurrence in transparent quartz to find multiple needles of other minerals, but rarely as a single intrusion, which can be easily isolated. For the best results the intrusion needs to be fine and straight, too prominent and it appears too heavy, too slender and its impact is not as visual.

From the rough, form a cylinder with the needle quite central and square off each end and dop on the 'table elect', making sure the bond is also very central to a dop of almost the same diameter as the cylinder. This is an important step being 'blind' to the needle, but not as difficult as you may imagine.

Faceting in a step cut design gives the stone a very pleasing appearance with a reflection of the needle on all radial pavilion facets. Step cut the pavilion of the stone with say 3 rows of facets to a culet of 43° and later the crown with 3 rows of facets with the centre row at 42° showing a mirror image symmetry in the finished stone.

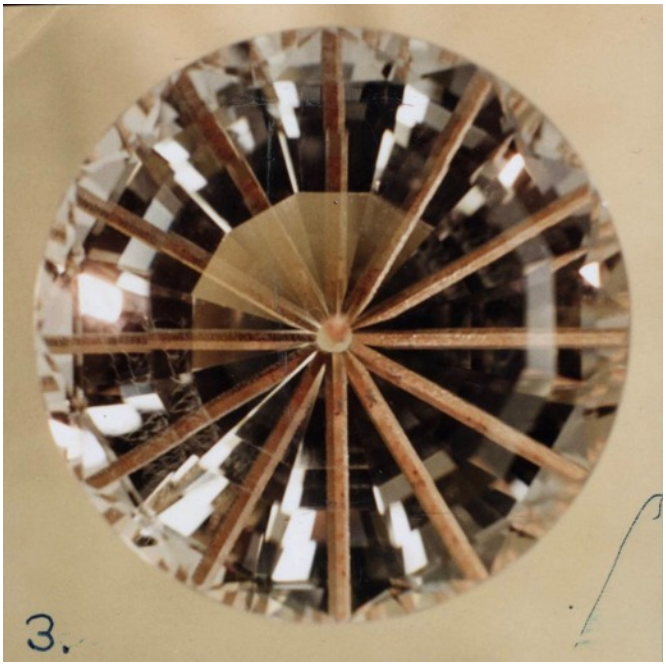
Photograph 2 shows a single inclusion of tourmaline

As a guide and ideally in a 20 mm diameter stone it should contain a needle of say 0.5 mm approximately and cut into a stone with a simple 12 sided design to resemble a clock face.

Finding the material from which these stones can be cut is the most difficult task, 'it does not grow on trees'.

One will have to search much rough material before spotting a piece that could have possibilities. The rough material ideally needs to be flawless and surrounded with enough clear quartz for the best results.

If you get the opportunity look at a friendly dealers who has a new stock of crystal quartz. Let dealers know what you are looking for, it could eventually bring rewards.



A decomposed hexagon from 12 different viewpoints

Archaeologists

After having dug to a depth of 10 feet last year, French scientists found traces of copper wire dating back 200 years and came to the conclusion that their ancestors already had a telephone network more than 150 years ago. Not to be outdone by the French, in the weeks that followed, American archaeologists dug to a depth of 20 feet and shortly after, published an article in the New York Times: "American archaeologists, finding traces of 250-year-old copper wire, have concluded that their ancestors already had an advanced high-tech communications network 50 years earlier than the French."

A few weeks later, The British Archaeological Society in Northern England reported the following: "After digging down to a depth of 33 feet in the Skipton area of North Yorkshire in 2011, Charlie Hardcastle, a self-taught amateur archaeologist, reported that he found absolutely sod all. Charlie has therefore concluded that 250 years ago, Britain had already gone wireless."

Just makes you proud to be British, doesn't it? *(Thanks for this, Ken)*

Article from Mineral Chatter - Cape Town Gem & Mineral Club, April 2012