

STAR GARNET

Star garnets are a special form of the gemstone garnet. While colored like other garnets they display a reflection-like image of a four or six pointed star caused by the inclusion of rutile needles (an effect known as *Asterism*). Tiny rods of rutile in the garnet are arranged along the crystal planes of the stone. They come both in 4 & 6 ray Stars.

Star garnets are mostly found in hues of red. Star garnets have a hardness of 7.5. Refractive index of 1.72 – 1.94. Crystal system is isometric, rhombic dodecahedra or cubic. Luster is vitreous to resinous. Streak is white. Specific Gravity is 3.1 – 4.3.

These 12-sided (dodecahedron) crystals range in size from sand particles to golf-ball or larger size. Sometimes a star garnet may show additional stars when rolled around and viewed from a different angle. Each arm of the star might show another star when turned at the proper angle. Not all stones display this effect and hence these gems fetch extra value. The garnet varieties that occasionally exhibit asterism are almandine and a mixture of almandine and pyrope garnet.

The star phenomenon is also known as Asteriated Almandine. There are very few cabochon gem cutters that are able to correctly orient a star garnet, and even fewer are able to maximize the size and quality attainable from the rough gem. Most star garnets look blackish red or dark purplish red. Bright red star garnets are said to cost more than good star rubies!

The majority of star garnets from Idaho are very dark, almost black until they are viewed in direct sunlight or strong bulb light where you can see their deep purple color. Very few are dark red and show red in the sun, but the star is generally weak. Fine 6-ray star on a star garnet that shows red or pink in the sunlight are rare. The unique color of Emerald Creek garnets comes from mineral impurities such as manganese, magnesium and iron. Most of the star garnets found in Idaho display four ray stars and greatly outnumber six ray star garnets.

Star garnets come from Emerald Creek, Idaho and a few other lesser Idaho locations. India was once considered the only other existence of Star Garnet. There are a couple of other US states with rare occurrences of Star Garnet. New to the market are some reportedly brownish red stars from Russia.

Star garnet occurs in quantity only in a few places such as India (red), Russia (brownish purple), Brazil (purple) and the U.S.A. (purplish brown and usually quite fractured internally). Idaho is said to be the only place, which produces six-ray star garnets.

Dudley Stewart discovered the way in which to cut the rough garnet from the Emerald Creek area into a stone, which revealed the rays of the star in 1951. The best of the rough cutting garnet material came from the 281 gulch, of the Emerald

Creek area. 100 % chance of a 4 ray star and 50 chance of a 6 ray. The left fork of the 281 produces the best “silk” in the garnet, which produces the star. 281 has been completely dredged at least 3 times and virtually no material remains to be found. Stones are occasionally found in Emerald Creek, which have washed there from the 281 site. A site directly above 281 provides the collecting to date, the gravel being dozed and made available to collectors. There is rumor of a Forest Service closure, if new sources are not found.

The Emerald Creek garnet site is under the management of the U.S. Forest service and a permit is required for collecting. The digging season opens the Saturday of Memorial Day weekend and closes the Tuesday following Labor Day. Hours are 9 a.m. to 5 p.m. Friday through Tuesday. Closed on Wednesdays and Thursdays. Permits are available at the A-frame building at the digging site. The cost is \$10.00 for adults, \$5.00 for children age 12 or under, and is valid for one day. A permit is required for anyone digging, screening or washing gavel. A permit allows you to dig in designated areas only! You may take up to five pounds of garnets with your daily permit. If you want to remove more garnet during the same day, you can buy another permit for each additional five pounds or fraction thereof that is removed. You are limited to six permits or 30 pounds of garnet per year.

From St. Maries, Idaho, follow Highway 3 south 24 miles to Road 447. Proceed southwest 8 miles on Road 447 to the parking area. Permits, information, and digging areas are a 1/2 mile hike up 281 Gulch.

Star garnet values vary by carat weight and number of star points. Garnets with 3 pointed stars are valued at \$20-30 per carat. Those with 4 points garner \$30-40 per carat. Six pointed star garnets are extremely rare and found only at Emerald Creek. Amateur prospectors sometimes find star garnets worth thousands of dollars at the Emerald Creek star garnet site.

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