

Specific gravity is a term that you will hear often among prospectors especially when panning gold. It refers to the weight relationship of minerals in water as compared to their weight in air. **Water**, being the basic material with or in which we work when panning gold or other minerals from streambeds, is **assigned a specific gravity of 1** and we relate all else to that. It is the weight of the mineral in air compared to its weight in water. This weight relationship or property of specific gravity enables us to separate the heavier precious metals from the lighter unwanted materials in our gold pans, sluice boxes, dredges and dry washers. The heavier or higher specific gravity that a mineral possesses, the more energy is required to move it. Therefore, the precious metals lag behind as lighter materials move on through and out of our separating device. **Gold, with a specific gravity of 19.3 roughly means that it is 19.3 times heavier than water. All minerals with a specific gravity greater than 3.5 are considered to be heavy minerals while those less than 3.5 are considered light minerals.** Most heavy minerals are of high value. Following are the average specific gravities of many of the minerals with which the precious metals are associated and which concern us here:

Chart B: Specific Gravity

Quartz	2.6	Gold	19.3	Pyrite	5.0
Mica	2.9	Platinum	22.0	Iron	5.0
Garnets	3.5	Palladium	12.0	Black sand	5.5
Sulfur	2.0	Rhodium	12.4	Copper	8.8
Carbon	2.1	Silver	10.5	Tellurium	8.2
Aluminum	2.7	Mercury	13.5	Tin	7.0
Zinc	3.5	Lead	8.2	Chromium	4.5
Lime/Ca,	2.7	Nickel	7.5	Titanium	5.1