



## The 1<sup>st</sup> International Symposium on Gemstone Trading in Iran Focusing on Persian Piroozeh (Turquoise) and Agate

### **Turquoise (Piroozeh), its etymology, occurrences and genesis**

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Most probably, Turquoise is the oldest gemstone mined since ancient times across the world. Several names can refer to this gemstone of which Agaphite, Callais, Kaloslitho, Chalchuite, Coeruleolactite, Piroozeh, Henwoodite, Johnite, Oriental Turquoise, Rashleighite, Orodontolite, Turkey stone and Turquois can be mentioned. The term which is used in Persian is “Piroozeh” that means victory. Taking into account that most of the turquoise pieces are not pure turquoise mineral and the name turquoise come originally from the turquoise samples of Neyshabur mines transported to Europe through Turkey or the name of the adjacent ancient city close to these mines (Torshiz), it is here suggested that the term “Piroozeh” can refer to the rock mined from the Turquoise mines as gemstone. The most important occurrences of turquoise include southeastern China, Iran, Sinai Peninsula and USA. Turquoise forms in the weathering environment, via the interaction of meteoric waters with copper, phosphorous, and aluminum-bearing rocks. In many cases, these host rocks are inferred to have supplied the elemental and molecular constituents necessary to form turquoise; copper from copper-bearing minerals (e.g. chalcopyrite), phosphorous from apatite and aluminum from feldspars, clays (especially kaolinite) or other aluminum-rich phases. Turquoise is not limited to be formed from the weathering of igneous rocks. Turquoise deposits on the Sinai Peninsula in Egypt are found in sedimentary rocks, where copper and phosphorous-charged ground waters interacted with aluminum-rich concretions made of alunite and gibbsite. Minerals commonly associated with turquoise include (but are not limited to) quartz, pyrite, limonite, kaolinite, alunite, sericite and jarosite. Pyrite is an iron-sulfide mineral that, when oxidized, acidifies meteoric water and makes it possible to leach copper and phosphorous from the country rock. So, beside the turquoise mineralization it is expected to have the formation of iron oxides that can be used as an exploration factor.

**Keywords:** Turquoise, Piroozeh, Etymology, Occurrences, Genesis.