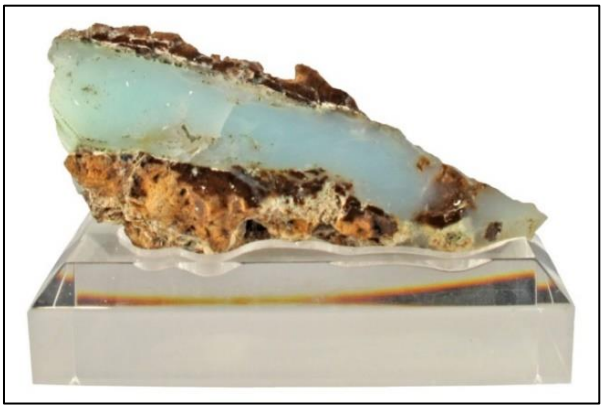
Opal [$SiO_2 \bullet n(H_2O)$]

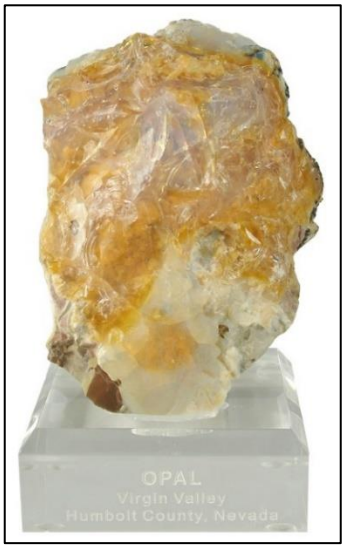
Opal, considered to be a mineraloid due to the presence of 3 percent to 21 percent water within the crystalline structure, is famous for its display of rainbow-like hues that change with the lighting or angle of observation. The internal structure of precious opal is composed of silica spheres (some 150 to 300 nanometers in diameter). These ordered spheres produce the internal color by causing the interference and diffraction of light passing through the specimen. First discovered in Quilpie, in Western Queensland in 1870, the boulder opal is highly desirable, and found within thin veins of ironstone boulders. Most stones are cut to include some of the host matrix—the contrast giving it its appeal.

Opal *P1*



Prase Opal *PK6*

Opal var. Boulder Opal *B62*



Opal *OR5*

Opalescence as shown in these two samples