VIVIANITE FROM RUTH, NEVADA

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Vivianite was found during mining operations in the Liberty Pit of
the Nevada Consolidated Company's mine at Ruth, Nevada. The
mineral was noted by Mr. Emmett Spencer, who called the writer's
attention to it during a visit to the property in June, 1937. The vivianite
is found only in a small exposure near the bottom of the pit, near the
south wall.

The host rock is the Ely limestone, of Pennsylvanian age, as recorded
by Spencer.1 The limestone contains fine veinlets of pyrite and chalco-
pyrite. Vivianite was deposited in numerous crystals on the surfaces of
joint planes and also in seams. Within the rock mass are small grains
and occasional spherical aggregates. The globular masses, some of which
measure about a half inch in diameter, are composed of slender radi-
ating crystals. Small crystals have found also in vugs where they have
grown upon an encrustation of calcite. Some of the crystals on the joint
surfaces are over an inch in length. Where the globular masses are cut
by fractures, the section shows the stellate arrangement of the vivianite.
The color ranges from pale green to dark blue, while some of the smaller
crystals are practically colorless. The dark blue crystals are nearly
opaque while the nearly colorless ones are clear and transparent. When
finely crushed, the lighter colored material produces a white powder
which darkens very rapidly. A marked blue tone develops within a few
moments and after long exposure it eventually turns to a dark blue.

No reference to vivianite is found in the reports on the district and, so
far as is known, this is the first occurrence of vivianite to be reported
from Nevada.

As no material was available at the time of the writer's visit, Mr.
Emmett Spencer2 kindly collected specimens when the mineral was again
exposed by mining. The mineral was identified by Professor Walter S.
Palmer.3

1 Spencer, Arthur C., The geology and ore deposits of Ely, Nevada: U. S. Geol. Survey,
Prof. Paper 96, pp. 27-28, 1917.
2 Assistant Engineer, Nevada Consolidated Copper Company.
3 Director, Nevada State Analytical Laboratory.