### GEOLOGIC COLUMN AND UNIT DESCRIPTIONS

<table>
<thead>
<tr>
<th>ROCK UNIT</th>
<th>GEOLOGY/TEXTURE</th>
<th>AGE</th>
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<tbody>
<tr>
<td>Alluvium</td>
<td>Clay, sand and gravel; thickness less than 10 metres</td>
<td>Miocene</td>
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<tr>
<td>Noyes Formation</td>
<td>Sedimentary, clastic, volcanic, intrusive and granitic; thickness variable</td>
<td>Miocene</td>
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<tr>
<td>Pre-Cretaceous</td>
<td>Granitic, gneissic, metamorphic</td>
<td>Eocene</td>
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#### Noyes Formation

- The Noyes Formation near Noyes (4° 8' W), resting on the pre-Cretaceous granite, consists of reddish yellow to gray soft sandstone, dark brown to black clayey shale, feldspar, schist and gravel. It is generally flat lying and is overlain by the Pliocene continental deposit along the near river.

#### Pre-Cretaceous

- Pre-Cretaceous granite in light gray, pinkish gray or pinkish green, fine- to coarse-grained, subequigranular and more or less gneissic, consisting of orthoclase, epilamprophyllite, small amount of quartz, feldspar, hornblende, amfibole, and accessory minerals such as apatite, magnetite, ulvospinel and zircon. Monzodiorite porphyry occur also in pre-Cretaceous granite. Metamorphic porphyry or schist is intersected by the Cretaceous gneissic quartz veins which are considered to be the source of the placer gold in the nearby Placer deposits. The planation boundary between this granite and the Cretaceous granite is indefinite.

#### Alluvium

- Alluvium, consisting of clay, sand and gravel, is distributed in the drainage basin of the Bozeman River (4° 8' W), the Thompson River (4° 8' W), the Noyes River (4° 8' W), the Virginia River (4° 8' W), the Big Horn River (4° 8' W) and their tributaries. The deposit contains promising placer gold derived from the pre-Cretaceous granite (3a).

#### Gold

- Gold placer gold is found in the Noyes deposits along the Thompson River (4° 8' W), on the Noyes River (4° 8' W) and the Virginia River (4° 8' W) in the Beartooth Mountains in the following mining districts: the Noyes (4° 8' W), the Thompson River (4° 8' W) and the Virginia River (4° 8' W). It was formerly worked progressively. Some of the gold mines are now abandoned. In the Noyes mining district, the West end of the Noyes River (4° 8' W), along the Thompson River (4° 8' W), was formerly called the Thompson No. 1 Gold Mine. A gold-bearing sand and gravel body, lying 0.0 - 1.0 m below the surface, is 4.0 to 5.0 m thick. The deposit is widely distributed and contains 12 - 27 g per ton in average. A total of 765 kg of pure gold was produced in 1931 - 1932 in the Thompson River (4° 8' W) mining district.

#### References

- Mineral resources and mining industry in the U.S., 1932. (Map)
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