The map area is a 1:24,000-scale bedrock geologic map of the Plainfield Quadrangle, Union, Middlesex, and Somerset Counties, New Jersey. The map was prepared in 2013 by Richard A. Volkert, Donald H. Monteverde, and Shay Marie Silversti.

**INTRODUCTION**

The map area encompasses the northeastern part of the State of New Jersey, north of New York City, and covers approximately 90 square miles. The map is compiled from the results of field and laboratory investigations, including mapping, sampling, and testing of bedrock materials. The map provides a detailed depiction of the geologic structure and stratigraphy of the area.

**STRATIGRAPHY**

The bedrock consists of progressively younger formations from south to north. Sedimentary units include shale, siltstone, sandstone, and limestone, which range from 1682.5 to 1587 feet in thickness. Igneous units, such as gabbroid and basalt, range from 1587 to 1482.5 feet in thickness.

**EXPLANATION OF MAP SYMBOLS**

Intrusive Contact
Nonconformity
Jurassic
Cretaceous
Eocene
Pleistocene
Quaternary
Pliocene
Oligocene
Miocene
Eocene
Oligocene
Miocene
Pliocene
Quaternary

**TABLE 1: MICRO RADIATION DOSIMETRY**

<table>
<thead>
<tr>
<th>Location</th>
<th>Micro R/Hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Market Pond</td>
<td>11-17 (mean=14.5)</td>
</tr>
<tr>
<td>Orange Mountain</td>
<td>14-27 (mean=20)</td>
</tr>
<tr>
<td>Potters Pond</td>
<td>3000</td>
</tr>
</tbody>
</table>

**SURVEY TECHNIQUES**

Geologic mapping was performed using traditional field techniques, including hand-held GPS units, compasses, and geologic maps. Bedrock geology and stratigraphy were determined using core samples, outcrop observations, and subsurface exploration techniques. The map was compiled using geologic maps, reports, and other geologic data.

**ACKNOWLEDGEMENTS**

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**REFERENCES**


**REFERENCES CITED**

