YOUR GIA RUBY AND SAPPHIRE REPORTS

This report provides information describing the source type of your ruby or sapphire. GIA’s Source Type Classification separates rubies and sapphires according to their individual features and properties. These features and properties are related to the geologic environments in which they originated. These environments may be categorized as classic metamorphic (often marble), classic magmatic (often basaltic or related to an eruptive event), and others with non-classic characteristics. The chart below outlines the relationships between source types and indicates how they relate to geographic origin. Further information is available at www.gia.edu.

### Internal Features

<table>
<thead>
<tr>
<th>Internal Features*</th>
<th>Type I</th>
<th>Type II</th>
<th>Type III</th>
<th>Type IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CMT) Classic Metamorphic</td>
<td>“Rutile” needles, or the lack of any of those inclusion features that designate types II, III and IV (except CMG Type IV rubies and purple/pink sapphires)</td>
<td>“Milky” zonal clouds and/or general turbidity</td>
<td>Cross-hatch, flake-like, stringer formations, or patterned clouds</td>
<td>Clusters of zircon crystals may be either: High concentration of zircon crystals or negative crystals with equatorial thin films. Negative crystals with equatorial thin films</td>
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<tr>
<td>(NCM) Non-classic Metamorphic or Magmatic</td>
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<tr>
<td>(CMG) Classic Magmatic</td>
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</tbody>
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*These dominant inclusion features are only one of the factors considered in GIA’s Source Type Classification. Additional considerations may include: general color appearance, absorption spectra and chemistry.

The possible sources given below are not all encompassing. Some smaller sources may not be included and new sources are frequently discovered. The most significant sources for each type are given at the time of printing. The information compiled here focuses on red and blue corundum (ruby and sapphire). However, any color of corundum may be classified using this system.

### Type I: Possible CMT (Classic Metamorphic) Ruby Sources

- Burma (Mogok)
- Afghanistan
- Sri Lanka
- Tanzania
- Madagascar
- Pakistan
- Nepal
- China

### Type II: Possible NCL (Non-classic Metamorphic or Magmatic) Ruby Sources

- Tanzania
- Malawi
- Colombia
- Kenya
- Madagascar

### Type III: Unknown at this time

### Type IV: Possible CMG (Classic Magmatic) Ruby Sources

- USA-Montana
- Tanzania
- Australia
- Colombia

### Type II: Possible NCL (Non-classic Metamorphic or Magmatic) Blue Sapphire Sources

- Burma
- Sri Lanka
- Madagascar
- Tanzania
- Việt Nam

### Type III: Unknown at this time

### Type IV: Possible CMG (Classic Magmatic) Ruby and Sapphire Sources

- Australia, Cambodia, China, Madagascar, Nigeria, Thailand, Vietnam, Laos
- Thailand, Cambodia

<table>
<thead>
<tr>
<th>Blue / Green / Yellow Series</th>
<th>Ruby and Pink to Purple Sapphire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia, Cambodia, China, Madagascar, Nigeria, Thailand, Vietnam, Laos</td>
<td>Thailand, Cambodia</td>
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