The Rovina Valley Project (RVP) in west-central Romania lies within the historic gold-mining district known as the ‘Golden Quadrilateral’ (GQ) with estimated +55 Moz of gold produced well before the Roman period (more than 2000 yrs ago). The bulk of this historic production has come from volcanic-hosted low-to-intermediate sulphidation epithermal veins. Since opening-up to western exploration companies, a further 20 Moz gold resources have been defined associated with these systems. The GQ is also host to copper-porphyry deposits of similar age which can occur in proximity to the epithermal gold mineralization. This paper presents recent discoveries of gold-rich porphyry systems in the GQ.

Carpathian Gold Inc. through its Romanian subsidiary, SAMAX Romania SRL was awarded the Rovina Exploration License in late 2005. Carpathian geologists recognized the potential of this terrain for multiple gold-rich porphyry deposits and concurrent with detailed generative exploration, diamond drilling was initiated in 2006 with 71,375 metres drilled to date. Drilling in 2006 and 2007 discovered the Au-rich Colnic porphyry and defined a significant gold component in the previously-recognized Rovina-Remetea porphyry. Colnic is located 2.5 km south of Rovina-Remetea with both containing isolated outcrop occurrences of Au-Cu stockwork mineralization. Drilling in 2008 discovered the ‘blind’ Ciresata –V. Garzii Au-rich porphyry 4.5 km south of Colnic where mineralization starts 50-150 metres below the surface.

The Rovina-Remetea Cu-Au Porphyry Deposit is hosted in a feldspar-amphibole diorite porphyry complex with the bulk of mineralisation hosted in the earlier “Porphyry C” and the later axial core “Porphyry B” both intruding a pre-mineralisation Intrusive Magmatic Breccia. “Porphyry C” has higher Cu grades than “Porphyry B” while the latter is enriched in gold. A post-mineral phreato-magmatic “Glamm Breccia” cuts part of the mineralised porphyries. The main alteration types associated with the mineralization at Rovina-Remetea are: early potassic alteration (biotite – magnetite – quartz - k feldspar) and an overprinting “Mace” alteration (magnetite - chlorite - epidote ± k feldspar ± quartz ± anhydrite ± carbonates). The mineralization is represented by a quartz-magnetite-pyrite-chalcopyrite stockwork and disseminated pyrite-chalcopyrite outcropping in a stream-bed exposure in the Baroc Valley and extending to about 450-550m below the surface. The deposit measures ~350m in the NW-SE direction and ~600m in the NE-SW direction. Typical grades range between 0.1-1.0 g/t Au and 0.05-0.70% Cu with a central higher grade core associated with “Porphyry B” (0.4-0.6 g/t Au and 0.4-0.6% Cu) that extends ~400m below the surface.

The Colnic Au-Cu Porphyry Deposit is exposed along the Bucuresci-Rovina road and extends to 200-350m below surface. The deposit measures ~600m in the NW-SE direction and ~400m in the NE-SW direction. The mineralization is hosted in an intensely developed quartz-pyrite±chalcopyrite stockwork within a feldspar-amphibole diorite porphyry complex. The most intense mineralisation is hosted in the “Colnic Porphyry” interpreted to have two stages, with lower-grade mineralisation hosted in the later “F2 Porphyry”. Both porphyries intrude an earlier unmineralised wallrock Porphyry. Post-mineral barren dykes are also present. The earlier alteration associated with the mineralization at Colnic is potassic alteration (biotite – quartz ± K feldspar with pyrite > pyrrhotite > magnetite >> molybdenite). Multiple-phase mineralizing events created at Colnic a series of overlapping events: “Mace” alteration (quartz – magnetite – chlorite ± epidote – carbonates – pyrite – chalcopyrite) overlaps the potassic alteration and both “Mace” and Potassic Alterations are overprinted by a later quartz-sericite alteration (sericite – quartz – pyrite ± clay minerals) associated with the intense developed stockwork in the upper part of the “Colnic Porphyry”. Typical grades range between 0.3-1.3 g/t Au and 0.05-0.18% Cu with a central higher grade core (0.8-1.2 g/t Au and 0.1-0.2% Cu) that develops from surface to -200m.
The “blind” Ciresata-V.Garzii Au-Cu Porphyry Deposit has been discovered by a combination of ground-magnetic survey, geochemical soil sampling and detailed surface alteration mapping. The deposit, as it is known today, measures ~350m in the NW-SE direction and ~400m in the NE-SW direction. Drilling indicates mineralisation starts 50 to 150m below surface and extends vertically at least 800m below surface. The mineralization is hosted in both feldspar-amphibole diorite porphyry (“Early Mineral Porphyry”) and in the adjacent hornfelsed siliciclastic Cretaceous Sediments. Sub-vertical Late-Mineral Porphyry dykes, less then 40m in width, hosting low-grade mineralization, represent the last intrusive event. The gold-copper mineralisation occurs in intensely developed quartz-magnetite-pyrite-chalcopyrite stockwork that locally comprises +80% of rock volume. This mineralisation occurs within magnetite-potassic alteration (magnetite - biotite – quartz ± K feldspar, pyrite, chalcopyrite). The alteration occurs both in the “Early Mineral Porphyry” and the hornfelsed sediments. Typical grades range between 0.3-5.0 g/t Au and 0.05-0.4% Cu with a central higher grade core (0.8-2.0 g/t Au and 0.15-0.3% Cu). These exceptionally high gold grades, make the Ciresata-V.Garzii deposit the richest Au-porphyry occurrence known to date in Romania. The deposit is still open towards the south-west, south and east directions as well as at depth. Exploration drilling is ongoing to delineate the size of this deposit.

Gold in the RVP deposits occurs mainly as liberated grains at the contact with pyrite and locked in chalcopyrite +/- magnetite. Locked cycle flotation testing has demonstrated that a simple flotation flow sheet with moderate grinds and low reagent additions is able to generate saleable copper concentrates averaging 18 to 22% copper and 50 to 60 g/t Au concentrate.

The Rovina-Remetea, Colnic, and Ciresata-V. Garzii porphyry deposits comprise the RVP, for which a 43-101 compliant Resource Estimate was completed in November 2008 as summarized in the table below:

<table>
<thead>
<tr>
<th>Resource Category</th>
<th>Tonnage (Mt)</th>
<th>Au (g/t)</th>
<th>Cu (%)</th>
<th>Au-eq* (g/t)</th>
<th>Gold (Moz)</th>
<th>Copper (Mlbs)</th>
<th>Au-eq* (Moz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured+ Indicated</td>
<td>193.1</td>
<td>0.49</td>
<td>0.18</td>
<td>0.82</td>
<td>3.07</td>
<td>759.1</td>
<td>5.09</td>
</tr>
<tr>
<td>Inferred</td>
<td>177.7</td>
<td>0.68</td>
<td>0.17</td>
<td>0.99</td>
<td>3.89</td>
<td>663.1</td>
<td>5.66</td>
</tr>
</tbody>
</table>

*Au-eq. uses US$675/oz-Au; US$1.80/lb.-Cu
Base case cut-offs: Colnic 0.45 g/t Au-eq.; Ciresata 0.70 g/t Au-eq.; Rovina 0.30% Cu-eq.
Note, tonnes are rounded

In March 2010 a group of independent engineering companies finalised a Preliminary Economic Assessment (PEA) over the Rovina Valley Project deposits. The PEA returned positive results, focusing on mining the higher grade core contained in each deposit. Highlights of the PEA Study include:

- Mine Type: Open Pit (Rovina-Remetea and Colnic) & Underground (Ciresata-V.Garzii)
- Ore Processing Rate: 20,000 tpd Open Pit; 20,000 tpd Underground; Total 14.4 Million tpa
- Tonnes Produced: 265 Million tonnes of 0.66 g/t Au & 0.18% Cu
- Recovery (flotation process): 68% Au & 91% Cu
- Concentrate Production (wet metric tonnes) 122,000 tpa
- Concentrate Grade (dry) 50 – 60 g Au/t; 18% - 22% Cu
- Annual Production: 196,000 oz Au; 49.4 Million Ib Cu
- Mine Life: 19 years
- Total Recoverable Production Life Of Mine: 3.72 MM oz Au & 938 Million lbs Cu
- Operating Cost: US$8.49/t ore Open Pit; US$11.51/t ore Underground
- Total Cash Cost (net of Cu credits): US$379/oz Au
- Initial Capital Cost: US$509 Million
- Total Capital Cost, including sustaining capital: US$786.4 Million