Considerations Related to the Application of UNFC-2009 to Uranium Projects and Associated Resources in Paraguay

By: Clyde Yancey (UEC), Victor Fernández (UEC), Hari Tulsidas (IAEA), Luis López (CNEA)

Geneva, Switzerland
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LOCATION OF KNOWN URANIUM OCCURRENCES IN EASTERN PARAGUAY

- In Paraguay all known uranium occurrences are found in the eastern part of the country, related to sandstones in the western flank of the Parana Basin.
There is one uranium deposit called Yuty, where drilling indicates elongated, uranium-bearing roll fronts.

At least one other area, denominated Coronel Oviedo, with good potential for becoming a new uranium district is presently under investigation.

To date, no uranium mining in Paraguay has been undertaken.
## URANIUM RESOURCES IN PARAGUAY

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Type</th>
<th>Million Tonnes Ore</th>
<th>Grade %U₃O₈</th>
<th>Pounds* U₃O₈</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yuty</strong> (Uranium Energy Corp) NI 43-101 Resources</td>
<td>Sandstone Hosted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4,290 tU</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coronel Oviedo</strong> (Uranium Energy Corp) NI43-101 Exploration Target</td>
<td>Sandstone Hosted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>8,900 - 21,500 tU</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 tonne U = 2,600 pounds U₃O₈

<table>
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</thead>
<tbody>
<tr>
<td><strong>Yuty</strong> (Uranium Energy Corp) NI 43-101 Resources</td>
<td>Sandstone Hosted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td></td>
<td><strong>2.054</strong></td>
<td><strong>0.062</strong></td>
<td><strong>2,801,000</strong></td>
</tr>
<tr>
<td>Indicated</td>
<td></td>
<td><strong>5.783</strong></td>
<td><strong>0.048</strong></td>
<td><strong>6,113,000</strong></td>
</tr>
<tr>
<td>Inferred</td>
<td></td>
<td><strong>2.139</strong></td>
<td><strong>0.047</strong></td>
<td><strong>2,226,000</strong></td>
</tr>
</tbody>
</table>

**Exploration Target Range**

| Exploration Target Range     |               | **26.3 to 48.9**   | **0.040 to 0.052** | **23,100,000 to 56,000,000** |
The pumping testing performed in both projects indicates that the uranium bearing unit has aquifer characteristics that would support operational rates for ISR mining.

Limited core data from both project sites indicate that the uranium mineralization is in radiometric equilibrium.

Limited agitated leaching studies at Yuty indicate that either alkaline or acid leach liberate the uranium.
SOCIO-ECONOMIC CONSIDERATIONS

- As granted by the Ministry of Public Works and Communications the Yuty Project is in the first year of the Exploitation Phase, and the Coronel Oviedo Project is in the fourth year of the Exploration Phase.

- Projects granted in the territory of the Republic of Paraguay must be compliant with all applicable regulations and plans, and the licenses approved by the Secretary of Environment (SEAM).
SOCIO-ECONOMIC CONSIDERATIONS

- During the prospection and exploration phases the local population was directly involved in project work to support drilling and field development activities.

- The economic benefits of the drilling activities carried out near Yuty were well perceived by the surrounding community, which has been positively affected by the development of residential and commercial infrastructure.

- No significant conflicts over activities related to uranium exploration projects have been reported through the use of the voluntary processes of public hearings.
### Uranium Resources in Paraguay Shown in UNFC-2009 - NEA/IAEA Classification Schemes

<table>
<thead>
<tr>
<th>Project</th>
<th>UNFC Class</th>
<th>UNFC Sub-class</th>
<th>UNFC Category</th>
<th>Resources (tU)</th>
<th>NEA/IAEA Production Centre Status</th>
<th>NEA/IAEA Classification</th>
<th>Resources (tU)</th>
<th>Total (tU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuty</td>
<td>Potentially Commercial Project</td>
<td>Development Pending</td>
<td>E2 F2.1 G1</td>
<td>1,080</td>
<td>Prospective</td>
<td>RAR &lt;$130/kgU</td>
<td>3,430</td>
<td>4,290</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>E2 F2.1 G2</td>
<td>2,350</td>
<td>IR &lt;$130/kgU</td>
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<td>860</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>E2 F2.1 G3</td>
<td>860</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coronel Oviedo</td>
<td>Exploration Project</td>
<td></td>
<td>E3.2 F3.1 G4</td>
<td>8,900 to 21,500</td>
<td>---</td>
<td>PR</td>
<td>8,900 to 21,500</td>
<td>8,900 to 21,500</td>
</tr>
</tbody>
</table>

**Notes:**
- **Resources (tU)**: Metric tonnes of uranium.
- **NEA/IAEA Classification Schemes**:
  - **RAA**: Resources Assessment.
  - **RAR**: Resources Assessment, Reliable.
  - **PR**: Preliminary Resources Assessment, Reliable.
  - **IR**: Initial Resources Assessment, Reliable.
  - **$130/kgU**: Uranium Price.

**Legend:**
- **E2 F2.1 G1**: Uranium resources category and sub-class.
- **G4**: Geologic category.

*Source: NEA/IAEA Classification Schemes.*
The application of the Bridging Documents between the CRIRSCO Template or the NEA/IAEA “Red Book” Classification and UNFC-2009 make the transfer of uranium quantities from one system to another accurate and consistent, thus making reporting done under different schemes comparable.

UNFC-2009 can be helpful to reflect the accurate project maturity based on the current status of the project and will be useful in the company’s resource management functions.

At a national level, the application of UNFC-2009 contributes to a better understanding of the availability of reliable resources in Paraguay and how these resources can contribute to the mining industry and the supply of nuclear fuel resources for the international market.
United Nations Economic Commission for Europe
Expert Group on Resource Classification
Seventh Session

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THANK YOU VERY MUCH!