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**ABSTRACTS VOLUME**

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### 653152 Hydrocarbon Prospectivity of the Vaupes-Amazonas Basin Colombia

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The Vaupés - Amazonas basin of Colombia is considered an intracratonic basin with an approximate area of 93.000 km<sup>2</sup>. It is located to the south of Colombia.

#### Geological Framework

The main tectonic phases in the Vaupes-Amazonas area took place in the Precambrian and the Paleozoic eras. Subsequent events with less intensity were recorded during the Mesozoic and Cenozoic eras. The stratigraphic record includes metamorphites of the Mitú Migmatitic Complex, which is overlaid by the Proterozoic Piraparana Formation. The Ordovician Aracuara Formation overlays unconformably the previous formations. The upper Paleozoic layers are represented by the Calizas de Berlín and the upper Permian sandstones. The Mesozoic sequence does not seem to outcrop in the Vaupés Amazonas Basin. The Tertiary sequence includes fossiliferous limestone-claystone and tuff layers, alluvial deposits and eolian sands.

#### Hydrocarbon Potential of the Vaupes -Amazonas basin

This study concludes the existence of two petroleum systems: 1) the Lower Paleozoic system, this sequence contains the source rock. This Paleozoic sequence has been proved in the Solimoes basin, and it is considered that this sequence extends toward the west into Colombia 2) the Tertiary system, which includes coal seams reported in the Chiribiquete, Aracuara and Leticia areas. The sandstones of the Aracuara Formation are the reservoir rock characteristics. The seal rocks are the Tertiary shales.

Three horizons have been identified; all of these corresponding to unconformities. Horizon 1 separates the crystalline basement, with an overlaying Paleozoic sandstone sequence. Horizon 2 corresponds to the limit of the Lower Paleozoic sequence with the Upper Paleozoic limestone sequence. Horizon 3 corresponds to a clear uneven contact between upper Paleozoic limestone sequence and Tertiary sandstone sequence.

#### Conclusions

Seismic lines illustrate the continuation of the stratigraphic sequence from the Solimoes basin into Colombia. Consequently the southern area of the Vaupes-Amazonas basin is the most promising area to locate an active upper Paleozoic system with oil and gas accumulations like in the Solimoes basin of Brazil. Other possible prospective areas are the Chiribiquete and Vaupes sub basin in the northern region of the basin.