

## **A MISSISSIPPI VALLEY TYPE MINERALIZATION AT THE NEUQUEN BASIN: ARGENTINA**

1,2 DOMINGUEZ, E.,<sup>1</sup> GARRIDO, M.,<sup>1</sup> GOMEZ, M. C.,<sup>1</sup> CESARETTI, N.,<sup>1</sup> ALIOTTA, G.,<sup>3</sup> VALENTE, M. <sup>1</sup>)Departamento de Geología. <sup>2</sup>)CONICET. <sup>3</sup>)CIC. Bahía Blanca. Argentina

At the retro arc petroliferous basin a carbonate dolomitized reef layer with zinc and lead mineralization (2,3% Zn and 0,075% Pb) has been found in Lajas Formation (Jurassic). The layer outcrops at the limbs of a tight anticline. The mineralized bed has a thickness of 0,70 m and has been laterally followed along for more than 300 m. In one of the limb the bed dips 15° and the mineralization is continuous for 80 m. The carbonate reef outcrops on the sides of a small creek in which the sedimentary sequence starts with marine sandstones, followed by pelites, carbonate reefs, and ended at the top with fluvial sandstones. The carbonate reef bears molluscs, brachiopods and colonial cnidaria typical of warm marine waters. The carbonate reef has been dolomitized, brecciated, and cemented by calcite with sulfides. The mineralization texture is coarse grained with sphalerite, minor galena and pyrite hosted in fractures inside the carbonates. The sphalerite is translucent, euhedral, with large cubic crystals of light brown colour (1,5-4 mm). It has internal yellow and light red reflections. The galena has coarse cubic crystals (4 mm). The pyrite is fine grained, cubic or framboidal (melnikovite), and also has a texture that seems replacement of bryozoans. Average S isotopic values (15 ‰) indicate a cortical source sustaining a Mississippi Valley type model formation for this mineralization. The MVT districts can be large in terms of metal contents, for this reason the basin represents a very interesting exploration zone.