



Chapter 11

Discovery History of the Navidad Silver Deposits, Chubut, Argentina: One Thousand Years in the Waiting

PAUL G. LHOTKA[†]

López 1151, La Puntilla, Lujan de Cuyo, Mendoza, Argentina

Abstract

The Navidad silver deposits in the Somuncura Massif of Patagonia in the province of Chubut, Argentina, were discovered in 2002 by following up results of a geochemical stream-sediment survey. The multisample Ag-Pb-Zn anomaly was recognized by the company that undertook and interpreted the survey, but it recommended that the anomaly not be staked. The anomaly was rediscovered in data passed to another company on November 28, 2002, and this led to a field examination on December 10, 2002. This quickly confirmed the source of the anomaly in outcropping and subcropping mineralization hosted in Jurassic volcanic and sedimentary rocks. Unlike most other silver occurrences in the region, the Navidad deposits contain no significant gold values and are not vein deposits.

Once the initial discovery was made, Navidad was quickly shown to host one of the world's largest silver resources. It is now recognized to contain 23,359 metric tons (t; 751 Moz) Ag and 1.59 Mt Pb in 201.1Mt of mineralized rock at a grade of 117 g/t Ag and 0.79 percent Pb.

Navidad should easily have been found at an earlier date using only simple technology because it is easily accessible and outcropping. However, over the last 1,000 years different groups including indigenous peoples, European settlers, government mineral exploration programs, and finally modern exploration companies, failed to make the discovery due to cultural, not technological, factors. The cultural factors that impeded discovery are varied ranging from the general lack of interest in metallic minerals by early European settlers of Patagonia to the incomplete investigations of the government exploration programs and relatively inaccessible nature of the data they generated. Later corporate explorers emphasized gold, and ignored silver, or focused on remote sensing alteration mineral anomalies which are not well developed at Navidad. Finally, corporate culture including dogmatic model-, and/or commodity specific-, driven exploration instead of a more pragmatic react-to-the-data approach, may have also been a factor.