



American Lithium and Cobalt  
**CORPORATION**

**PROJECT**  
Uyuni Salt Brine  
Mining Property



# 1.1 Location

It is located in the Potosí and Oruro departments in southwest Bolivia, near the crest of the Andes, and is elevated 3,656 meters (11,995 ft.) above mean sea level. It is covered by a few meters of salt crust, which has an extraordinary flatness across the entire area of the Salar and contains 50 to 70% of the world's lithium reserves..

## 1.1. Local Geologic Attributes

Host rock(s): Lacustrine sediments and evaporites including extensive clay and mud layers, massive halite. Associated rocks(s): Area is largely surrounded by and in part or wholly underlain by Cenozoic volcanic rocks, largely andesitic in composition. Variable amounts of Pre-Quaternary continental sedimentary and volcano-sedimentary deposits are also present in the drainage area, as well as minor amounts of Pre-Tertiary rocks. Ore mineralogy: halite, ulexite, brine, sylvite; possibly Cu, Au, Ag. Gangue mineralogy: gypsum, clays. Alteration: Strong hydrothermal clay alteration on islands of exposed volcanic rocks of a shallow buried ridge that bisects the salar from north to south. Structure setting: Closed basin. The salar is bisected by a shallow buried ridge running from the major peninsula on the southern edge to the north shore.

## 1.2 Volcanism

Volcanism began in this area in the late Cretaceous or early Tertiary with extrusion of the alkaline Potoco lavas which are of minor extent. Younger volcanism, beginning in the Miocene and continuing today, is of calc-alkaline composition and includes ignimbrites erupted from large calderas and lavas associated with stratovolcanoes. In general, the ignimbrites decrease in age to the west and are thought to be the most likely source of Li and B mineralization. The ignimbrites include parts of the Miocene Upper Quehua and the Pliocene Ignimbrite Formation to the south and west.

There are also scattered domal bodies of intrusive-extrusive rhyolite. Composite volcanoes as old as Miocene are known, but most have erupted during the Holocene. The Salar de Uyuni drainage basin contains many thermal springs enriched in Li, B, and other elements that are related to the continuing volcanism.

## 1.3 Uyuni Resources

Known mineralization in the Salar de Uyuni includes extensive salt (sodium chloride) deposits, sub-economic to economic brines, and borate mineralization. Salt and ulexite have been produced from the salar. The crust covers an area of approximately 10,000 km<sup>2</sup>; of which this project can access to approximately 3,000 ha of mining property. According to USGS, Uyuni Salar has approximately 5.5 Mt and @ 423 g/l of lithium.



# 1.4 Economic Evaluation

It is located in the Potosí and Oruro departments in southwest Bolivia, near the crest of the Andes, and is elevated 3,656 meters (11,995 ft.) above mean sea level. It is covered by a few meters of salt crust, which has an extraordinary flatness across the entire area of the Salar and contains 50 to 70% of the world's lithium reserves.

Table 11: Economic evaluation parameters  
Source: Own elaboration

Parameter	Value
Lithium Carbonate Production [Ton/year]	20.000
Osmosis Treatment Cost [Euro/m3]	0,7
Crystallization Treatment Cost [Euro/m3]	7,0
Euro/Dollar Factor	1,16
Contingency [%]	10 %
Tax [%]	27,5 %

In addition, the evaluations for each salar were made under a pessimistic and an optimistic assumption based on the amount of lithium present in each salar. The following is the lithium grade used:

Table 12: Pessimistic and optimistic assumptions  
Source: Own elaboration

Salar	Pessimistic Case (Li ppm)	Optimistic Case (Li ppm)
Chile (Maricunga)	800	1.200
Argentina (Hombre Muerto)	500	800
Bolivia	700	1.000

