

OUTSTANDING INNOVATOR - Alberto Benavides de la Quintana



Alberto Benavides de la Quintana (Don Alberto) is considered to be one of the leading mining and business innovators in the recent history of Peru. His innovation is all-encompassed in his successful exploration, development, operation and sustainability of one of Peru's best known mining companies, for his outstanding support of the mining industry in general, and for his passion for social advancement and sustainability in Peru. In

short, his influence touched every possible aspect of the Peruvian mining industry over many years. For all of this he will be remembered as an outstanding innovator in the ultimate sense of the word. Benavides, founding President of Compañía de Minas Buenaventura, formed the company in 1953 at the age of 33 and was its President for 58 years until his retirement in 2011 at the age of 91.

He continued to play an active part in the company and in the Peruvian mining industry until his unfortunate death in 2014 at the age of 93. He is recognised for his pioneering efforts to establish mining as one of the most important economic activities in the modern Peruvian economy. Over his long career, in addition to his leading role in Buenaventura, he was instrumental in the privatisation of the Cerro Verde mining property in Arequipa, the development (with Newmont) of the Yanacocha mining complex in Cajamarca, which later became one of the largest gold producers in the world. He was instrumental in the discovery of the Conga, Tambomayo, Trapiche and Chucapaca mineral deposits as well as the development of the La Zanja and Tantahuatay mines in Cajamarca, as well as the Orcopampa, Uchucchacua, Shila, Mallay and Antapite mines in other regions of Perú. Born in Lima in 1920 as a tenth-generation member of the Benavides family in Peru, he surprised his family by choosing mining as a career.

He graduated in mining engineering from the School of Engineers [now the National University of Engineering (UNI)] in 1941 and was awarded a scholarship by Cerro de Pasco Corp to continue his studies towards a master's degree in geology at Harvard University. Returning to Perú in 1944 he continued as a geologist at Cerro de Pasco and Goyarisquisga, where, due to his hard work and dedication, he was promoted in 1950, at age 30 to be the first head of exploration of the corporation. It was during this period that he recognised the geologic importance of the Tintaya, Bambas, Cuajone and Antamina properties but was unable to persuade the company to explore further. Fifty years later all these properties have successfully been, or are being, developed by international mining companies. In recognition of his business acumen, Don Alberto was invited to be President of Cerro de Pasco, where he led the Peruvian branch of the corporation from 1964 through to 1971. During this period he was ably supported by his brother, Jorge, in running Buenaventura. Cerro de Pasco was, for more than half a century, the dominant force in Peruvian mining. It produced a third of the copper, two thirds of the lead and 60% of the silver and zinc as well as bismuth, of which it was the world's largest supplier. Don Alberto founded the mining faculty of the Universidad

Católica del Peru in 1971. This faculty is well known today for producing the best mining professionals in the country.

During the 1970s he led the design and engineering of the Uchucchacua mine which today has become the largest silver mine in Peru. This mine has a very peculiar mineralogy with some manganese sulphurs and sulphosalts, one of which was a new discovery and was named benavidesita after him. Due to the high manganese content, problems were encountered with the smelting of these concentrates. Over a period of 40 years of patient work and innovative research working with his friend Carlos Plenge, he was finally able to develop the \$110 million Rio Seco processing plant which was built in 2013 in Huaral, near the coast down the road from the mine. This facility acid washes the concentrates, produces sulphuric acid from the gases generated from the reaction and manganese sulphate crystals which are used for agriculture and as a micronutrient. This innovative plant solved a severe mineral processing problem with a unique, efficient and sustainable process. Under Don Alberto's leadership, Minas Buenaventura acquired the Julcani mine in 1953. Between 1956 and 1975 the company added the El Brocal, Orcopampa and Uchucchacua mines to its direct operations and from 2010 added three more direct operating mines. In 2013, the company produced 15% of Peru's 3.6Mkg of silver and 12% of its 151,000 kg of gold. He also founded Buenaventura Ingenieros SA (BISA) in 1977 to retain talented engineers in Peru and develop new mining projects. He was always up to date with all the geological and exploration techniques and he kept a close relationship with Harvard and academia. In 1980 he was distinguished by the French Government as Oficial in the Orden Nacional al Merito for his contribution to the Bureau de Recherches Géologiques et Minières (BRGM) in its exploration and research work in Peru.

He received the Society of Mining and Metallurgy of America (SME) Gold Medal Award in 2000 and the Society of Economic Geologists (SEG) honored him with the Penrose Medal in 2001. Harvard distinguished him as Chair alumni for his Life Time Achievement in 2011, the highest honour Harvard gives to its alumni. The Sociedad Geologica, where he was twice its president, also honoured him with its highest award; Universidad de San Marcos named him Profesor Honoris Causa in 2001; the UNI, his Alma Mater, did it first in 1995, and he has been recognised by all the professional mining institutions in Perú. He was named Amauta, the highest recognition in education by the Peruvian government. He was a miner and an entrepreneur with a social challenge. He believed mining was the tool to develop Peru, especially the highlands of the Andes. Mining should bring infrastructure to "dominate" the steep mountains and generate energy, roads, telecommunications, decent housing and services in order to integrate the coast and the Amazon rain forest. This would consolidate the real integration of Peru. He was obsessed with water. He kept a model of the Ica river basin in his office that included the highlands of Huancavelica. Using this model he explained to whoever would want to listen how to irrigate the deserts in the coast of Ica with the water dams and channel that he had engineered. His constant promotion and marketing of Peru as a mining destination made the country attractive to mining companies all around the world. Newmont, BRGM, Noranda, BHP, Southern Peru, Rio Tinto, Barrick, Cyprus Minerals, Phelps Dodge, Freeport, etc.; all were convinced to do business in Peru in his office. His commitment to society led him to be mayor of the city of Cerro de Pasco in 1945, deputy mayor of Lima from 1975 to 1977, Director of the board of the Central Bank of Peru in 1977 and again from 1992 to 2000, President of INCITEMI (Institute for scientific research and mining technology). He headed the privatisation committee of Centromin Peru, and he died being President of the Patronato UNI, an institution created to raise funds for research grants and scholarships for the best UNI students.