

**NEWSLETTER
NOVEMBER 2007**

The first speaker of the evening was to have been Ron Jacobson but he had unfortunately injured his wrist and in his place Gary Sutherland had been asked to deliver the first talk on : -

‘The Giant Selenite Crystals of Naica, Mexico’

The Naica mining area is situated about 100 km to the NE of the city of Chihuahua which is the capital of the Mexican state of the same name in the north of Mexico bordering on the United States. Prospectors originally found silver in Naica in 1794 and by now there are a number of operating silver-lead-zinc mines in the area which has become well-known to collectors as the source of very fine mineral specimens. In 1910 underground tunneling at Naica at a depth of 120 meters broke into a cavern which became known as ‘The Cave of Swords’ containing what were then the largest crystals found anywhere on, or under, the earth - of gypsum up to five feet long. The Cave of Swords was gradually completely ransacked for its crystals, although not before some made their way to the Smithsonian Institution and other museums.

In April 2000 miners Eloy and Javier Delgado tunneling at a depth of 300 meters broke into a cavern about ten by twenty meters filled with crystals of gypsum some four feet in diameter, up to fifty feet long and weighing over 55 tonnes. (In some reports on Internet sites about the Naica caves the discoverers are given as Juan and Pedro Sanchez). One and a half months later another group of miners found another cave nearby even larger than the first about thirty by fifty meters and also filled with crystals. The larger cave was named in Spanish ‘Cueva de los Cristales’ – ‘Cave of the Crystals’.

The caves would ordinarily be flooded with hydrothermal solutions and are accessible only because of large-scale pumping being carried out by the mine owner, the Peñoles Company, in order to facilitate mining operations. When the mining ceases the mine will be allowed to flood and the caves with their crystals submerged again and the crystals continue growing. The caves and silver-lead-zinc ore-bodies are situated in 200 million-year-old limestone massifs with hydrothermal solutions being generated from a magma chamber two to three miles beneath the surface. The combination of limestone, sulphide ores and hot water has led to the development of the huge crystals of gypsum with the supposition that there may be more caves and crystals yet to be found under this site.

The temperature in both caves is about 150^oF with 100% humidity and visitors cannot spend more than a few minutes in either before becoming severely dehydrated and disoriented. Company policy has been to allow limited access by study and university groups to the caves and it is considering installing air-conditioning to cut down the heat and humidity and allow public visits by more people but by all accounts a very substantial amount of air-conditioning would be needed. There has already been some attempted pilfering of specimens of crystals from the caves with locks broken and one fatality of a fellow who in possibly wrestling with a large crystal had it fall on and trap him. “The heat did him in within a few minutes” was the report.