

Gem Mining at the Cryo Genie Pegmatite Mine, southern California
Report #2, September 1, 2002

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Another week of drilling, blasting and mucking. The weather has been mild but it definitely feels better to be working underground rather than on the surface.

A bit more background on the mine: The Cryo Genie Mine has been in operation on and off for the last 30 years, although records go back as far as 1906. All the workings had been surface pits or shallow declines until now. The outcrop is in a horseshoe shape with the western outcrop dipping 11 degrees to the east and on the eastern outcrop the dike is dipping 35 degrees to the west. I projected the two dips and thought there should be a major roll at the depth of about 10 meters down dip from the eastern outcrop. One of the coyote holes on that side had been developed into a short adit with a shallow decline just inside the entrance. After installing an iron door and a ventilation system, I started developing the decline to the roll I thought to exist at about 10 meters. My idea was to explore the pegmatite down dip using the most basic method of mining, determine the lowest portion of the pegmatite worth mining, then drive a proper size tunnel to use underground loaders and trucks and then exploit the pegmatite up dip in all directions. Well, we are still using the most basic methods of mining searching for the lowest producing portion of the dike. This means all muck goes up the decline in five gallon buckets, a slow process (see Figure 2, Report #1).

Currently, the core zone we started in last week has opened up and produced ten small pockets and the beginning of another about the size of the last pocket of consequence. The first few pockets had barrel shaped beryl crystals that have turned slightly pinkish in the sun. Unfortunately, the largest is a thumbnail in size, but nice. As we continued north, the small pockets contained blue-green tourmaline. One such pocket was not much bigger than the tourmaline cap, 3.75 cm X 2.5 cm X 1.8 cm tapering along the *c* axis. Both Dana and Ken say it is the finest blue-green cap they have seen at the Cryo Genie. In another small pocket Ken found a gem pencil of the same color. After our last blast for the day on Friday, and after waiting the proper amount of time for the gasses to ventilate, we found another pocket with a crystal section 3.75 cm in length and about 2.5 cm in diameter. The crystal was a pink and blue-green bicolor and tapered. Neither termination was found in the immediately area but the pocket was starting to open up when I left. It seems that tapered crystals will be the Cryo Genie's signature.

Be listening for our whooping and hollering if we hit the big one. If you don't hear us then read next weeks up date to get the scoop. Until then...

Jim



Figure 1. Early stages of excavation of the pocket that produced the large tourmaline in Week 3 (September 1-7, 2002). Ken Gochenour on the left, Jim Clanin on the right.



Figure 2. David Kalamas holding the one and only tourmaline crystal to come out of the big pocket. It is 22.5 centimeters in length and doubly terminated.