

## New Field Research Confirms Tibetan Andesine

An international group traveled to Tibet in late September 2010 to investigate the controversial origin of red andesine from China. The group was organized by coauthor AA and hosted by miner Li Tong and his wife Lou Li Ping. It also included Richard Hughes (Sino Resources Mining Corp., Hong Kong), Flavie Isatelle (geologist, France), Christina Lu (M.P. Gem Corp., Kofu, Japan), Thanong Leelawatanasuk (GIT, Bangkok), Young Sze Man (Jewellery News Asia, Hong Kong), and coauthor BML. Our goal was to examine three reported Tibetan andesine localities located close to one another 90 minutes southeast of Shigatse: Bainang, Zha Lin, and Yu Lin Gu.

AA visited the Bainang mine, reportedly Tibet's principal source of andesine, in 2008. Most of the mining there took place in 2005-2008 and was

organized by Li Tong. Unfortunately, despite having official permission from the Chinese government and police escorts, a powerful local lama would not allow us to visit the deposit.

Local people using simple hand tools mined the Zha Lin deposit in 2006-2008, reportedly producing approximately 2 tonnes of andesine. We saw a series of shallow pits within the medium-gray silty soil that underlies alluvium consisting mainly of shale and mudstone. We recovered andesine from two small pits (120 cm maximum depth) we dug in the mine area, and from two out of three pits dug in random areas of undisturbed alluvium 30-50 m upslope from the mining area. As seen previously in Tibetan andesine, all the rough material was rounded and ranged from pale to deep red with a few pieces containing bluish green areas.

The Yu Lin Gu occurrence is hosted by an alluvial fan located approximately 2 km up-valley from Zha Lin. Nearly 200 kg of andesine has reportedly been picked up from the surface by locals since 2006. We recovered andesine from the surface or slightly below the surface in loose silty soil, but did not find any stones when we dug pits into the alluvial fan. The range of color and degree of rounding of these pieces were similar to those from Zha Lin, but many had less-saturated coloration.

We were unable to verify whether Yu Lin Gu is a true andesine deposit because we could not find samples at depth. Our discovery of andesine within pits dug in random, previously unexplored areas near the Zha Lin mine, however, provided proof of a genuine Tibetan andesine deposit. The original source rock for the andesine was not evident in the area, and may have previously eroded away.



Shallow pits dug in silty soil are the source of andesine at the Zha Lin deposit (top; andesine samples in inset weigh up to 1.1 g). The Yu Lin Gu andesine occurrence is situated on this alluvial fan (bottom; inset samples up to 1.6 g). Photos by B. M. Laurs and Robert Weldon (insets).

- Ahmadjan Abduriyim  
*Gemmological Association of All Japan – Zenhokyo, Tokyo*

- Brendan M. Laurs  
*Editor, Gems & Gemology, GIA Carlsbad*