

MINERAL RESCUE COLLECTING AT THE ALVA SILVER MINES

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of Scotland

Again, after almost 225 years, the old familiar sounds of industry returned to the Silver Glen at Alva in April of this year. The long abandoned silver and cobalt mines have received much attention in recent years. Mineral collectors, researchers, geologists and students have visited the old spoil heaps and slowly their contents are being removed. Surprisingly, there are hardly any mineral specimens from the old workings in museums. In order to safeguard material for future research or display, the National Museums of Scotland (NMS) in conjunction with researchers and local mineralogical activists undertook, with the permission of the landowner, a rescue collecting dig.

Guided by Dr Stephen Moreton, who has studied the old mines and their history, the old dumps were excavated using a JCB and sometimes by hand. Water was pumped from the burn to a sluice box made by the NMS joiners from old 1910 diagrams. The excavated gravel was washed in this and the heavy minerals recovered.

Surprisingly, even at depth, there was very little mineralisation left in the spoil heaps. Barite, the main constituent of the mineral veins was the most abundant. However it was the metallic ores and their alteration products that were of most interest and there was hardly any evidence of these. Pink coloured erythrite, an alteration product of the primary cobalt ore, was the easiest to recognise.

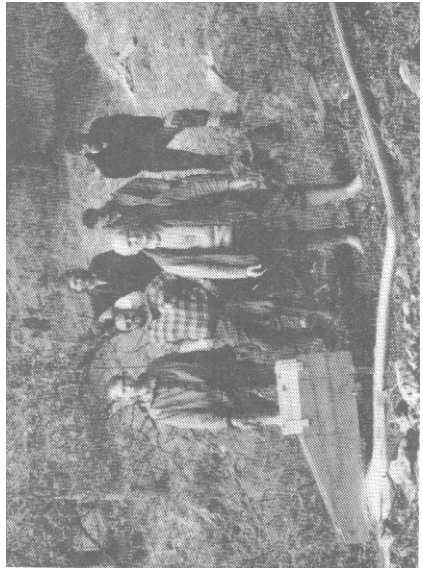
Only a few ore specimens larger than 2-3 cm were recovered. Most material was smaller than this but still contained good silver crystals and cobalt ore. The type of cobalt ore in the veins has always been subject to conjecture. A cobaltite (cobalt arsenide with sulphur) specimen in the Glasgow Museum and Art Gallery, Kelvingrove, is labelled as coming from Alva. The locality has always been questioned by those familiar with worldwide cobaltite occurrences. All cobalt ore specimens collected during the dig were clinosafflorite: sulphur deficient cobalt arsenide. It seems likely therefore that the main cobalt ore at Alva was clinosafflorite.

Besides the metal ores, representative specimens of barite were recovered and alteration products of the cobalt arsenic metal ore: erythrite and tyrolite. Some rock specimens showing the brecciated vein structure were also removed. All these specimens are available at the NMS to researchers and the public.

The spoil heaps have been reinstated and perhaps this successful rescue collecting operation may lead to future work on the veins themselves.



Sorting and selecting material excavated



NMS working party with Stephen Moreton on the left, and the 'sluice'.



Heavy mineral separation - sluice box in action, Moreton and Jackson