

MY HUNT FOR FACET GRADE BARITE FROM THE NORTHERN PENNINES

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1. INTRODUCTION

Barite is a very common mineral and can be found throughout the U.K. in a variety of geological environments. In some places the mineral has been found in such a large amount as to be mined in its own right as an economic product. The Northern Pennines contain a series of mineral deposits which were originally worked for lead ore (galena) but in the twentieth century came into their own as barite producers. It is from these deposits, or rather the wastes produced from them, that facet grade barite can be collected. I suspect that facet grade material can be collected from many places but two definite localities are Silverband Mine and Dufton Fell mine, both near Appleby in Cumbria (see Fig.1).

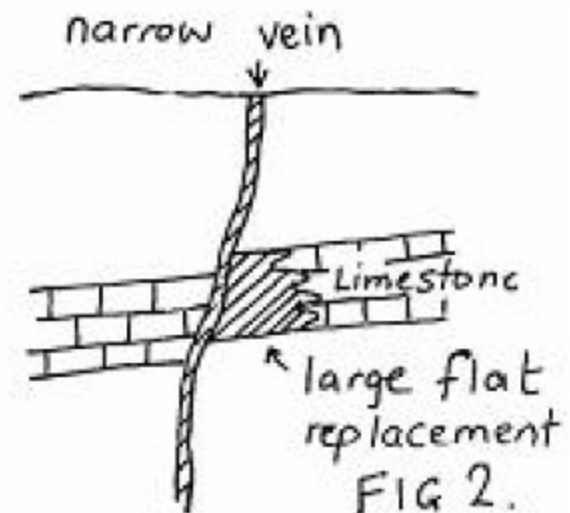


2. INITIAL DISAPPOINTMENT

I first went looking for faceting barite in October 2002. As Silverband mine is the most recently worked mine in this area and because it is already noted for producing facetable material (Sinkankas, J. 1962) it seemed the obvious place to start.

Having worked as a geologist in the northern Pennines, I was already familiar with the general deposit types. However, for those not familiar I

will give a brief description here. Dunham (1990) comprehensively covers the mineral deposits of this area and assigns both mines to the outer barium zone of the orefield. These deposits are either *veins*, predominantly of barite with a little galena, infilling faults and fractures or *flats* which are replacements of limestone beds adjacent to these veins by barite, siderite and galena. In comparison to veins which are usually narrow deposits, the replacements can be very large (see Fig.2).



At Silverband Mine the total production of barite may be of the order of 250 000 tonnes, mostly from open pit operations on the replacement deposits. Of interest to the faceter is the presence of transparent tabular barite crystals known as 'water-clear spar'.

The open pit is situated at 700m elevation on the exposed western escarpment of the Pennines at grid reference NY703320 (Landranger 1:50000 sheet 91). For anyone not familiar with this terrain it is difficult to realise just how bleak it can be. The hills are covered in rough tussocks of a dun colour (Silverband Mine is on Dun Fell). In places it is peaty and the black brown hags of peat are the only contrast with the monotonous dun.

Astonishingly, instead of the rain, wind and cold that normally dogs my collecting trips, the weather was superb. I visited on a Friday evening after work and the day was sunny, warm and absolutely calm. I was still up at the mine as the sun dipped towards the horizon and although the temperature of the air dropped, the stillness meant that the cool was never uncomfortable.

There is a tarmac road up from Knock village to the top of the escarpment where there is an Air