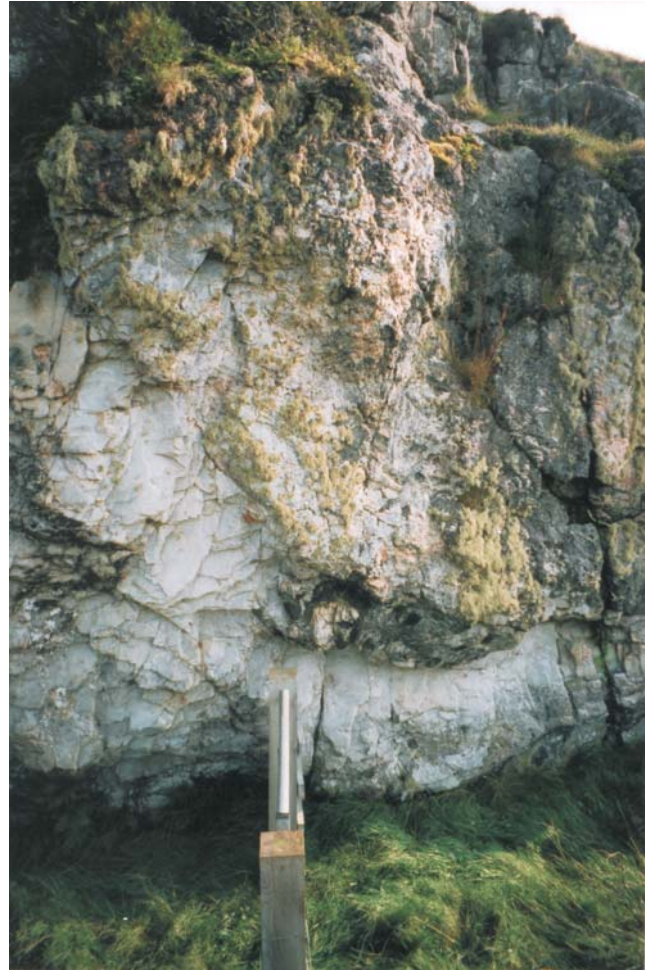


## 4 The quartz vein

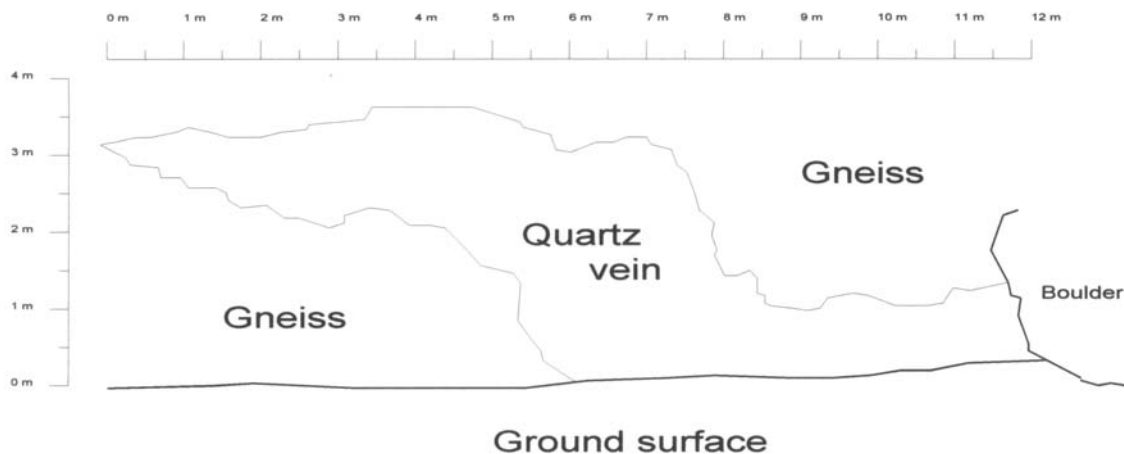
The Cnoc Dubh quartz vein consists entirely of homogeneous white milky quartz and would, in prehistoric time, have presented a valuable source of lithic raw material. The rock matrix, in which it is embedded, is typical grey or silvery Lewisian gneiss (Smith & Fettes 1979). The vein is not particularly large, measuring approximately 12 m from north-east to south-west. Its height varies between c. 0.3–0.5 m at the north-eastern and south-western ends and c. 3 m at its widest point, that is, slightly south-west of the centre. The shape of the vein is like a recumbent, reversed S, starting in the north-east at 3 m+, curving down to ground level in the middle, and terminating in the south-west slightly above ground level (Illus 4). The shape of the outcrop is somewhat obscured by a cover of lichen but, viewed from the stone circle Ceann Hulabhig in the afternoon sun, the white quartz of the vein is clearly visible.

Though assumed to have been exposed to the weather for millennia, the quartz is well-preserved. It does, however, show signs of some exterior alteration, mainly in the form of slightly frosted surfaces. Frosted surfaces are characteristic of, for example, quartz artefacts from the deflation zones of the Western Isles machair (eg, the finds from Rosinish on Benbecula [Ballin in prep. c] and Barvas 2 on Lewis [Ballin in prep. f]).

It is impossible to estimate the size of the vein in precise cubic measures, but an approximate measure of the quarried material is obtainable. The vein has mainly been worked in the most extensive, central part and in the area between the centre and the south-western terminal, resulting in prominent overhanging steps of gneiss (Illus 5). Measured from



*Illus 5 View of the central part of the vein with its prominent overhangs.*



*Illus 4 Sketch of the Cnoc Dubh quartz vein.*

the outermost part of the overhang to the innermost part of the worked vein (*c.* 4.5 m from the southwestern terminal), one achieves an estimate of *c.* 1 m of quartz which has been removed. As the worked part of the vein has a length of approximately 4–5 m, it is reasonable to assume that up to 3 m<sup>3</sup> of quartz may have been quarried. For comparison, the estimated amount of rhyolite extracted from the Mount Jasper outcrop, USA ([Gramly 1984](#), 12) was 30–40

m<sup>3</sup>; rhyolite from the Bømlø outcrop, SW Norway ([Alsaker 1987](#), 76) was 150–230 m<sup>3</sup>; greenstone from the Hespriholmen outcrop, SW Norway ([Alsaker 1987](#), 77) was *c.* 427 m<sup>3</sup>. Though neither [Broadbent 1973 & Broadbent 1979](#) nor [Cantley 2000](#) attempt to estimate the cubic measures of the worked quartz veins they investigated, these outcrops appear to have been of sizes comparable to that of the small Cnoc Dubh vein.