

## HOLIDAY GEOLOGY

### Wadi Ghul, Oman

Oman is an up-and-coming holiday destination, taking a slice of the Gulf States' visitors and also now easily accessible by a short drive from Dubai. For geologists, one of the key destinations has to be the Jabal Akhdar, the mountain range across the north of the country, where a breached anticline of Cretaceous limestone rises above the jagged lowland of the well-known ophiolite outcrops. The mountain summit is Jabal Shams, and just below lies the huge canyon of Wadi Ghul. Often called the Grand Canyon of Oman, it has the layered walls of its Arizona namesake, but everything is tipped up at a dip of about 15°. It is hundreds of metres deep, barren and wild, and truly spectacular. It is also very accessible, with a tarred road that rises from Al Hamra, near Nizwa, before turning into a dirt road that is perfectly drivable in a 2WD car. This climbs the flanks of Jabal Shams until it emerges on the rim of Wadi Ghul at a series of stunning viewpoints.

The highlight of the site is the village of Sap Bani Khamis, lying almost directly below the first viewpoint (so only visible from promontories to the right). This incredible village stands on ledges of thinly bedded

limestone, between vertical cliffs of massive limestone both above and below. Some of the ruined stone houses can be seen from the canyon rim, but they are 100 m down, below a vertical cliff. So the keen visitor will walk round to the village - along a very airy path that traverses the canyon wall, with vertical cliffs both above and below; this starts 4 km south in a gully where the upper limestone has been largely removed by erosion, and the views from this path are unforgettable.

Perched, almost literally, on its canyon wall ledge, Sap Bani Khamis was the ultimate defensive site, established when there was almost perpetual fighting between neighbouring village tribes. It once held about 15 families, and the last moved out just 30 years ago, in favour of a more relaxing environment. Survival of the village depended on the very small perennial stream that emerges from a bedding plane at the foot of the upper cliff (directly above the houses in this view). The stream flows for less than 100 metres, cascades over small ledges, and then drops over the main overhang into the depths of Wadi Ghul. Next to the stream channel, carefully crafted field terraces stand directly above 500 m of open space that undercuts the one strong bed of limestone spanning the void. The hardy folks who once lived at this amazing site must have had an unusual understanding of what geology is all about.

*Tony Waltham*

*The limestone ramparts of Wadi Ghul, with key features indicated below.*

*<< upper cliff, with another 30 m up to the canyon rim*

*<< spring from bedding plane at foot of upper cliff*

*<< Sap Bani Khamis village in dark shade beneath a small overhang left of the stream, and the terraced fields right of the stream*

*<< main limestone overhang*

*<< another 400 vertical metres of the lower cliff extending off this photograph*

