**GG58**

**Lithology:** Quartzite.

**General structure:** This outcrop is at the southeastern most end of the high quartzite cliffs above the Burro Trail. Cm- to dm-scale layers of grayish white massive quartzite are separated by small 1-2 cm thick layers of a slightly more micaceous quartzite. The layers appear to be relict bedding but the micaceous layers appear to have a penetrative foliation that is in most places nearly parallel to the layering and that could be tectonic. Overall, the layering in the outcrop, when viewed towards the northeast (photo) has a wavy appearance caused by 10’s of cm to meter-scale open to close folding. Locally, some tighter folds with similar geometry are present (photo). Some parts of the outcrop where folded layers reach a maximum in curvature display a kind of fractured appearance that could be a reflection of an axial planar foliation that is developed at a high angle to the layering (photo).

**Measurements:** Several different measurements of the bedding were taken along the cliff face and their strikes, dips are (1) 281, 30, (2) 060,39, (3) 345,20, (4) 013,25, and (5) 035,51. Two more measures of bedding were made on opposite limbs of a cm-scale fold at the far right of the outcrop (Photo 4 and sketch) and they are (6) 22,54 and (7) 259,51. The second one [060,39] is probably a good approximation for layering over the whole outcrop. Two different measurements of the strike,dip of the steep axial planar foliation in the areas of Photos 2 and 3 are (1) 055,73 and (2) 050,71. The plunge -> trend of the hinge of the cm-scale fold at the far right side of the outcrop (Photo 4 and sketch) is 29 -> 052.

A rocky mountain with trees in the background

Description automatically generated

**Photo 1.** View looking NE at the base of the large cliffs. Note the wavy appearance of the layering (bedding) and the locations of Photos 2, 3, and 4.

A close up of a rock

Description automatically generated**Photo 2.** Close view, near left (NW) end of cliff base, of multi-color layers in quartzite interpreted as bedding. A steeply dipping foliation is locally observable in the quartzite and its trace is indicated by the orientation of the pencil. View looking NE.

A close up of a large rock

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**Photo 3.** Close view, near right side (SE) of cliff base. The curving layers in the quartzite are interpreted as bedding. These three 10’s of cm-thick layers are separated by slightly more micaceous horizons. A steeply dipping foliation is locally observable in the quartzite and its most obvious expression is the steep fracture pattern. The trace of this foliation is also indicated by the orientation of the pencil. View looking NE.

A pile of hay

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**Photo 4.** Close view at the far right side (SE) of cliff base. Looking down on a near horizontal surface. NE is towards top of the photo. This is a centimeter-scale synformal fold, from which two of the bedding strike, dip measurements came and the hinge line measurement (pencil parallel to hinge). Sketch shown below.

A close up of a map

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