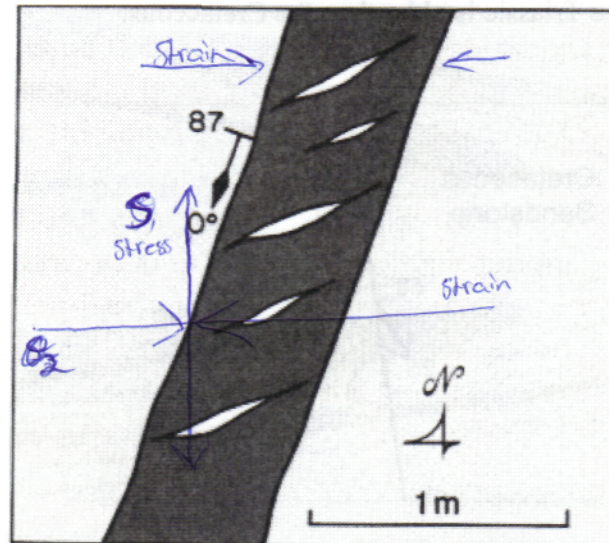


**Question 6:** Examine the following field sketch from a geologist's notebook, which shows a large-scale map of a fault plane with quartz veins developed within the fault rock.



- 6a. What is the term which describes the orientation of these veins? (1 mark)
- 6b. Deduce the orientation of (i) the strain ellipsoid and (ii) the stress ellipsoid. Add them to the sketch, including labelled strain and stress principle axes (5 marks)
- 6c. From the stress ellipse which you have drawn, deduce what type of fault is shown. What is the sense of movement? (4 marks)

**Question 7:** Briefly discuss the differences between **coaxial deformation** and **noncoaxial deformation**. Use diagrams to illustrate your answer. (10 marks)

(Total = 55 marks)

**This class test is worth 35% of the semester mark**