Foliation and lineation in structural geology pdf

This article needs additional quotes to verify. Please help improve this article by adding quotes to reliable sources. Non-sources of materials can be challenged and removed. Find sources: Geology Line - News newspaper book scientist JSTOR (June 2017) (Learn how and when to remove this pattern message) Lines in structural geology are linear structural features in rocks. There are several types of lines, lines of intersection, lines of roll, mineral line and stretching lines that are the most common. Measurements of linear field measurements are recorded as map lines with an angle of immersion and azimuth. Crossing the lines of the Stretched Pebble Conglomerate L-tectonic illustrates the stretching of the line in the haircut area, Glengarry Basin, Australia. The expressed asymmetric haircut stretched the conglomerate of pebbles on the pro-patched (cigar-shaped) rods. Crossing lines are linear structures formed by the intersection of any two surfaces in three-dimensional space. A trace of bedding on an intersecting folio plane is usually displayed as colored stripes, usually parallel to the loops of the local folds. Crossing lines can also be associated with the intersection of two fouls. Crossing lines are measured in relation to the two structures that intersect to form them. For example, according to the conventions measuring structural geology, the original bedding, S0 intersect with the wasp plane foliage times, forms the crossing of the L0-1 line, with azimuth and plunge determined times. This is a typical angle crossing the cleavage of bedding and diagnosing immersion times on all parts of the fold. Stretching lines of L-teconite milinite formed from coarse-grained sandstone protolite, Glengarry Basin, Australia. This photo illustrates a pronounced and noticeable line of stretching, steeply plunging north like a rake on the main sheath, parallel stretch. Stretching lines can form in any fault mode, when the conditions are such that the rocks deform ductiley, including expansion, compression, transpression and transtension. Stretching lines are formed by cutting rocks during asymmetric deformation of stone mass. Stretching the lines of the record are primarily the vector of the greatest stretch, which is perpendicular to the principle of plane reduction. Stretching the line can be visualized as a ball of molasses (patoka), which, when pulled out, forms a cigar-shaped rod parallel to the direction in which it is pulled out. This is parallel to the direction in which the force of the haircut, as it is in the slair zone, stretches the rock. The reduction occurs at the same time as the lengthening, but in a perpendicular sense with a stretched rod. With reference to the image on the right (above), the pebble conglomerate was most likely deposited as pebbles and boulders. During the deformation, the rock was flattened and then stretched along the duct mowing zone in which this outcrop is located. Spherical conglomerate pebbles stretched along the direction of movement of this haircut zone, reaching its current somewhat flattened cigar-shaped. Thus, the pebbles record important information about the orientation of the shee zone (subvertical) and the direction of the movement of the shee zone, as well as the general change in the shape of the pebble from the original subspheric to now elongated cigar-shaped, allows to quantify the tension experienced by the stone mass in the geological past. Stretching lines can also appear as linear objects on pre-existing surfaces, such as in the haircut zones (see image on the right, below). In this case, the line may not be as obvious in the plan and may require measurement as a rake on the planar surface. In this case, two lines are formed in the same deformation event, but manifest differently due to different relogies of deformed rocks. Finally, the key difference between the stretching line and the line of intersection is that the stretching lines do not carry any information about the orientation of other planar fabrics in the stone mass. In the case of illustrated lines in sandstone, they do not record an earlier folio deformation event and cannot be used to deduce orientation information for folds or original bedding. See also Shire (geology) Foliage (geology) Rock Microstructure Fold (geology) Tectonic Links - Parker, Sybil (1994). Dictionary of Geology and Mineralogy. McGraw Hill. Received from (geology) 'oldid'901406100 LinkedIn emplea biscuits para mejorar la funcionalidad y el rendimiento de nuestro sitio web, as'como para ofrecer publicidad relevante. Si contineas navegando por ese sitio web, aceptas el uso de cookies. Consulta nuestras Condiciones de uso y nuestra Pol'tica de privacidad para m's informacion. LinkedIn emplea cookies para mejorar la funcionalidad y el rendimiento de nuestro sitio web, as como para ofrecer publicidad relevante. Si contineas navegando por ese sitio web, aceptas el uso de cookies. Consulta nuestra polystica de privacidad y nuestras condiciones de uso para mas informacion. Go to the main content Go to the Content Table Reference Work entryDOI: in the rock body of any array of widely developed linear structures with a noticeable preferred orientation. The most famous lines are those seen in outcrops or hand samples of deformed metamorphic rocks such as Schyts and gneisses, but some lines are the main features of wine or sediment, and there are no upper or lower limits on absolute size Line. The only important feature of any line is that the responsible linear structure occurs with such frequency and regularity in a given body of rock that it is a characteristic part of its fabric (see Turner and Weiss, 1963, 19). The common lines of metamorphic rocks to which this entry is limited fall into four categories: (1) lines defined by the intersection of joliasis (e.g., bedding lines and the splitting of many low-grade metasedements); (2) lines defined by small folds (e.g. ,... This is a preview of the content of the subscription, log in to check access. Cloos, E., 1946, Lineation, Geol. Soc. America Mem. 18, 122p. Google ScholarDurney, D. W., and Ramsay, J. G., 1973, Incremental strains, measured by syntectonic crystallines, in K. A. DeJong and R. Scholten, eds., Gravity and Tectonics. New York: John Wiley and Sons, 67-96.Google ScholarHobbs, B. E.; So, V.D.; and Williams, P. F., 1976, Description of Structural Geology. New York: John Wylie and Sons, 571p. 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