

Virginia Energy: Geology and Mineral Resources Program Glossary

Term	Definition	Definition Source(s)
abandoned adit	A horizontal passage from the surface into a mine no longer in active use. Sometimes called a tunnel.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
abandoned mine	Remnants of an underground excavation formerly used for mineral extraction. Refers to areas or properties where mining activity has ceased. Condition is circumstantial and varies by location.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
abandoned pit	A previously excavated area where earth material (sand, gravel, etc.) was taken to be used for fill at another location.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
abandoned quarry	Remnants of open workings. Previously the site of industrial or commercial extraction of aggregate, slate, and other resources no longer in active use. Condition is circumstantial and varies by location.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
adit	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
anticline	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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anticlinorium	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
antiform	A fold, generally convex upward, where stratigraphic order of folded layers is unknown or poorly constrained.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
asymmetric anticline	A generally convex upward fold whose core contains the stratigraphically older rocks and whose limbs have different angles of dip relative to the axial surface.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
asymmetric fold	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
axial plane	A planar surface that connects the hinge lines of the strata in a fold.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
axial surface	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
borehole	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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breccia	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
breccia pipe	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
certain	Identity of a feature can be determined using relevant observations and scientific judgment; therefore, one can be reasonably confident in the credibility of this interpretation.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
coal bed	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
concordant bedding	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
contact	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
contact metamorphism	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
core hole	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
crenulation	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
crenulation cleavage	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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crenulation lineation	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
cross section line	A line on a map, indicating the position of a geologic cross section. It is the profile line of the section as seen in plan.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
cross section neatline	The cartographic line that surrounds a geologic cross section, representing vertical depth or horizontal distance along the line of the cross section. The vertical depth may be exaggerated relative to the horizontal distance to emphasize certain geologic features.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
depression	The sinkhole feature is characterized by a sunken or depressed landform.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
dike	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
DMUHeading2	The first subheading of the Description of Map Units table. For this map, these headings generally correspond to geologic provinces.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
DMUHeading3	The second subheading of the Description of Map Units table.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
DMUHeading4	The third subheading of the Description of Map Units table.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.

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DMUHeading5	The fourth subheading of the Description of Map Units table.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
DMUUnit1	Paragraph style for description of a first-order map unit within the Description of Map Units table.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
DMUUnit2	Paragraph style for description of a second-order map unit within the Description of Map Units table. Such map units are subsidiary to (commonly subdivisions of) first-order map units.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
DMUUnit3	Paragraph style for description of a third-order map unit within the Description of Map Units table. Such map units are subsidiary to (commonly subdivisions of) second-order map units.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
dredging	The process of sucking, scooping up, or excavating earth material from the bottom of a body of water, raising it to the surface, and discharging it to the bank through a floating pipeline or conveyor, into a scow for removal, or, in the case of certain mining dredges, into the same body of water after removal of the ore mineral.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
drill hole	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
elevation tick	A location on the y-axis of a cross sectional diagram, typically labelled with a number indicating the relative elevation above or below sea level at that point.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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fault	A discrete surface or zone of discrete surfaces separating two rock masses across which one mass has slid past the other.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
float	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
fold	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
fold axis	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
foliation	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
form line	A line (usually broken) on a map or cross-section, sketched or drawn by visual observation, depicting the general surface configuration or shape of the terrain without regard to a true vertical datum and regular spacing and usually without indicating elevations; an uncontrolled or interpolated contour line, or one that is not instrumentally or accurately surveyed. Also spelled: formline. Cf: indefinite contour.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
fossil locality	A site where a fossil was found that recorded within the Virginia Department of Energy, Geology and Mineral Resources Program fossil repository.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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furnace	A structure in which, with heat so produced, the operation of roasting, reduction, fusion, steam-generation, desiccation, etc., are carried on.	Thrush, P.W., ed., 1968, A dictionary of mining, mineral, and related terms: Washington, D.C., U.S. Department of the Interior, Bureau of Mines, 1269 p. This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
gas well	A well that is capable of producing natural gas or that produces chiefly natural gas.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
geochronology sample	A physical specimen or portion of rock, mineral, sediment, or charcoal collected for the purpose of determining its age through radiometric or other quantitative (numerical) measurement methods. The sample is used to establish the timing of geological events, such as crystallization age, metamorphism, mineralization, or deposition by analyzing isotopic or other diagnostic characteristics.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
gneissic layering	A type of foliation in metamorphic rock defined by compositional layering. Typically, gneissic layering consists of alternating dark (mafic) and light (felsic or silicic) bands of rock. Gneissic layering may reflect original compositional layering in the protolith, or lit-par-lit intrusion, or metamorphic differentiation by diffusion, or transposition.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
High	The selected term in the GeoMaterial field (and its definition) adequately characterizes the overall lithologic nature of rocks and (or) sediments in the map unit.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.

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high-angle fault	A fault with a dip greater than 45 degrees where apparent offset is known and map pattern suggests displacement is dip-slip, but the dip direction of the fault plane is unknown and it is uncertain whether the fault is reverse or normal.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
high-strain zone	A zone of intense ductile deformation marked by high differential strain, commonly expressed by mylonitic foliation, lineation, boudinage, shear sense indicators, and other structures.	DAS682 DAS682 Evans, N.H., 2017, Geology of the Zion Crossroads quadrangle, Virginia: Virginia Division of Geology and Mineral Resources, Open-file report 17-04, 1:24,000-scale geologic map.
horizontal bedding	A planar or nearly planar bedding surface that visibly separates each successive layer of stratified rock from the preceding or following layer. Is observed in a flat lying, horizontal plane and has no inclination or dip.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
horizontal cleavage	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
horizontal cumulate foliation	A horizontal layering formed by the accumulation of crystals that settle out from a magma by the action of gravity.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
horizontal foliation	A horizontal parallel to ground locally planar fabric in a rock defined by a fissility, a preferred orientation of crystal planes in mineral grains, a preferred orientation of inequant grain shapes, or from compositional banding.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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horizontal lineation	A planar or nearly planar locally linear structure or fabric in a rock.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
horizontal mineral lineation	A planar or nearly planar linear fabric element defined by the preferred orientation of inequant mineral grains (e.g. prismatic grains of hornblende) or elongated grain aggregates.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
horizontal joint	A horizontal planar fracture, crack or parting in a rock, without shear displacement.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
inclined bedding	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
inclined cleavage	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
inclined compositional layering	Alternating layers of different minerals in an igneous or metamorphic rock that is not parallel to the ground surface and is inclined relative to the ground surface.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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inclined dike or vein	An inclined tabular igneous intrusion that cuts across the bedding or foliation of the country rock or an inclined fracture that contains mineralized material.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
inclined flow banding	The structure of an igneous rock that is inclined relative to the ground surface, characterized by alternating layers of color, mineralogic composition, and/or texture, formed as a result of the flow of magma or lava.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
inclined fold hinge	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
inclined fold hinge of small, minor anticline	A plunging line connecting the points of maximum curvature of the bedding planes of a small or minor anticline.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
inclined fold hinge of small, minor fold	A plunging line connecting the points of maximum curvature of the bedding planes of a small or minor fold.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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Term	Definition	Definition Source(s)
inclined fold hinge of small, minor syncline	A plunging line connecting the points of maximum curvature of the bedding planes of a small or minor syncline.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
inclined foliation	An inclined locally planar fabric in a rock defined by a fissility, a preferred orientation of crystal planes in mineral grains, a preferred orientation of inequant grain shapes, or from compositional banding.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
inclined igneous foliation	A locally planar fabric in an igneous rock defined by planar parallelism of flaky or tabular minerals and mineral aggregates, slabby xenoliths, or flattened vesicles as well as compositional layering.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
inclined joint	An inclined planar fracture, crack or parting in a rock, without shear displacement.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
inclined lineation	A plunging locally linear structure or fabric in a rock.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>

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Term	Definition	Definition Source(s)
inclined metamorphic foliation	An inclined locally planar metamorphic or tectonic fabric in a rock defined by a fissility, a preferred orientation of crystal planes in mineral grains, a preferred orientation of inequant grain shapes, or from compositional banding.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
inclined mineral lineation	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
inclined sedimentary lineation	A linear fabric element defined by sedimentary features that are deformed where the long axis defines a lineation.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026). Hobbs, B.E., Means, W.D., and Williams, P.F., 1976, An outline of structural geology: John Wiley & Sons, Inc., New York, NY, 571 p.
inclined slaty cleavage	An inclined foliation defined by elongated domains of quartz or feldspar aggregates separated by anastomosing, mica-rich laminae. The width of the domains is typically less than 100 micrometers. Slaty cleavage is the characteristic foliation in fine-grained sedimentary and volcanic rock deformed under anchizone and lower greenschist metamorphic conditions.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
inclined undulatory bedding	A term for warped or contorted bedding inclined to the principal surface of deposition.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
intersection lineation	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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Term	Definition	Definition Source(s)
isograd	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
karst area	An area of depression, either man-made or natural, formed by the dissolution of soluble rocks such as limestone or gypsum, through the removal in solution of underlying material.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
key bed	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
kiln	An oven, furnace, or heated enclosure used for processing a substance by burning, firing, or drying.	Merriam-Webster.com Dictionary, 2022, Available online: https://www.merriam-webster.com .
kink band	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
Left flank of landslide or left-lateral shear feature	Slip surface on the left side of a landslide.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
listric fault	A curved downward-flattening fault, generally concave upward.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
Low	Either (1) the overall lithologic nature of rocks and (or) sediments in this map unit is not adequately classifiable using the available list of GeoMaterial terms (and their definitions), but the selected term is the best available, or (2) this map unit is not sufficiently known enough to confidently assign a GeoMaterial term.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.

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Term	Definition	Definition Source(s)
low angle fault	A fault along a flat or gently inclined plane with a dip of 45° or less.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
low angle normal fault	A fault with a dip of 45° or less, in which the hanging wall has moved downward relative to the footwall.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
main toe of landslide	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
map neatline	The cartographic line that surrounds a geologic map, separating the map from the margin.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
massive outcrop	Rock(s) possessing a more or less homogenous texture (fabric) over wide areas and lacking layering, foliation, cleavage, or similar features.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
Medium	The selected term in the GeoMaterial field (and its definition) generally characterizes the overall lithologic nature of rocks and (or) sediments in the map unit, but one or more significant but minor lithologies are not adequately described by the selected term.	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.

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Term	Definition	Definition Source(s)
mine	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
[mineral] bearing zone	A belt, band, or strip of earth materials, however disposed, characterized as distinct from surrounding parts by bearing higher concentrations of [mineral] than surrounding areas.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
minor dip-slip fault	A mesoscale on which the movement is parallel to the dip of the fault.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
minor fault	A minor discrete surface or zone of discrete surfaces separating two rock masses across which one mass has slid past the other.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
minor shear fault	A small-scale discrete surface or plane separating two rock masses, across which one mass has slid past the other, resulting from stresses that cause or tend to cause contiguous parts of a body to slide relative to each other in a direction parallel to their plane of contact.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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Term	Definition	Definition Source(s)
minor strike-slip fault	A mesoscale fault on which the movement is parallel to the fault's strike.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
mylonitic foliation	A locally planar mylonitic fabric in a rock defined by a fissility, a preferred orientation of crystal planes in mineral grains, a preferred orientation of inequant grain shapes, or from compositional banding.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
normal fault	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
oblique-slip fault, left-lateral	A fault that strikes oblique to, rather than parallel or perpendicular to, the strike of the constituent rocks or dominant structure. Displacement along the fault is such that in plan view, the side opposite the observer appears displaced to the left.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
oblique-slip fault, right-lateral	A fault that strikes oblique to, rather than parallel or perpendicular to, the strike of the constituent rocks or dominant structure. Displacement along the fault is such that in plan view, the side opposite the observer appears displaced to the right.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
occurrence	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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Term	Definition	Definition Source(s)
outcrop	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
overturned anticline	A fold, generally convex upward, whose core contains the stratigraphically older rocks that have tilted beyond perpendicular. Sequence of the strata thus appears reversed.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
overturned antiform	A convex-upward, concave-downward fold, where the fold or a limb of the fold has tilted beyond the perpendicular. The term is usually used when the folded layers do not possess a stratigraphic order, when the stratigraphic order of the folded layers is not known, or when the fold core also contains the stratigraphically younger rock.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
overturned bedding	A planar or nearly planar bedding surface that has tilted beyond the perpendicular.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
overturned syncline	A fold, generally concave upward, whose core contains the stratigraphically younger rocks that have tilted beyond perpendicular. Sequence of strata thus appears reversed.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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Term	Definition	Definition Source(s)
overturned synform	A fold whose limbs close at the bottom, where the fold or a limb of the fold has tilted beyond the perpendicular. The term is usually used when the folded layers do not possess a stratigraphic order, when the stratigraphic order of the folded layers is not known, or when the fold core also contains the stratigraphically	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
overturned thrust fault	A thrust fault that has tilted beyond the perpendicular. The sequence of the strata thus appears reversed.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
photo locality	A map-representation indicating the location where a photograph or multiple photographs were taken while conducting fieldwork.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
pit	An excavated area where earth material (sand, gravel, etc.) is taken to be used for fill at another location.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
plunge	The angle between a linear structure such as a fold hinge, slip lineation, mineral lineation, and the horizontal as measured in the vertical plane containing the line.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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Term	Definition	Definition Source(s)
plunging anticline	A fold of which the fold hinge line is inclined to the horizontal, and the core contains the stratigraphically older rocks.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
plunging fold	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
plunging syncline	A fold of which the fold hinge line is inclined to the horizontal, and the core contains the stratigraphically younger rocks.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
point of geologic interest	A useful or important geologic observation or location.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
possible	The feature may be a sinkhole, but further investigation is necessary to confirm its identity.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
probable	The feature is likely a sinkhole based on its characteristic features in LIDAR and/or aerial photography.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
processing plant	A facility with the purpose of processing or refining natural resources of economic value.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
profile section	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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Term	Definition	Definition Source(s)
projected contact	A plane or irregular surface between two types or ages of rocks, projected above ground to illustrate previous position or extent in an interpretive cross section.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
prospect	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
quarry	Open workings, usually for the industrial or commercial extraction of aggregate, slate, and other resources.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
questionable	Identity of a feature cannot be determined using relevant observations and scientific judgment; therefore, one cannot be reasonably confident in the credibility of this interpretation. For example, IdentityConfidence = questionable is appropriate when a geologist reasons "I can see some kind of planar feature that separates map units in this outcrop, but I cannot be certain if it is a contact or a fault."	U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A standard format for the digital publication of geologic maps: U.S. Geological Survey Techniques and Methods, book 11, chap. B10, 74 p.
reverse fault	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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rodding lineation	In metamorphic rocks, a linear structure in which the stronger parts, such as vein quartz or quartz pebbles, have been shaped into parallel rods.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
sample	A hand specimen; rocks, sediment, fossils, or other material of a size that is convenient for megascopic study and for preserving in a study collection.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
shaft	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
shear zone	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
shoreline	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
sinkhole	A closed depression in a karst area, commonly with a circular or ellipsoidal pattern. These depressions form in soluble rocks such as limestone and gypsum.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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Term	Definition	Definition Source(s)
sinkhole area	An area of depression, either man-made or natural, formed by the dissolution of soluble rocks such as limestone or gypsum, through the removal in solution of underlying material, or area with multiple sinkholes.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
slickenline	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
spaced cleavage	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
spring	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
state boundary	The cartographic boundary of the Commonwealth of Virginia.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
station	A point where a qualitative observation is taken.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
stretched-pebble lineation	A linear fabric element defined by pebbles that are flattened parallel to foliation and elongated to define a lineation.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026). Hobbs, B.E., Means, W.D., and Williams, P.F., 1976, An outline of structural geology: John Wiley & Sons, Inc., New York, NY, 571 p.

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Term	Definition	Definition Source(s)
strike-slip fault, left-lateral	A fault on which the movement is parallel to the fault's strike. Displacement along the fault is such that the side opposite the observer has been displaced to the left.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
strike-slip fault, right-lateral	A fault on which the movement is parallel to the fault's strike. Displacement along the fault is such that the side opposite the observer has been displaced to the right.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
subsurface workings	Area beneath the ground surface where a system of openings or excavations have been made for mining; esp. the area where the ore is actually mined.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
syncline	A fold, generally concave upward, whose core contains the stratigraphically younger rocks.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
synclinorium	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p>

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Term	Definition	Definition Source(s)
synform	A fold, generally concave upward, where stratigraphic order of folded layers is unknown or poorly constrained.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
tension fracture	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
thrust fault	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
tick marks	Short, regularly spaced lines along the edge of an image or map that indicate intervals of distance.	Esri Support GIS Dictionary, 2023, Available online: https://support.esri.com/en-us/gis-dictionary .
upslope boundary of landslide mass	An irregular plane or surface separating an intact landslide deposit from underlying bedrock or other type of deposit.	This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
vein	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .
vertical bedding	A planar or nearly planar bedding surface that is perpendicular to a horizontal plane and parallel to which the force of gravity acts.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).

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vertical cleavage	A vertical surface along which a rock tends to split because of secondary, aligned fractures or other closely spaced, planar structures or textures, produced by deformation or metamorphism.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
vertical compositional layering	Alternating vertical layers of different minerals in an igneous or metamorphic rock.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
vertical dike or vein	A vertical tabular igneous intrusion that cuts across the bedding or foliation of the country rock or a vertical fracture that contains mineralized material.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
vertical flow banding	The structure of an igneous rock characterized by alternating vertical layers of color, mineralogic composition, and/or texture, formed as a result of the flow of magma or lava.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
vertical foliation	The vertical planar arrangement of textural or structural features in any type of rock, especially the locally planar fabric in a rock defined by a fissility, a preferred orientation of crystal planes in mineral grains, a preferred orientation of inequant grain shapes, or from compositional banding.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>

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Term	Definition	Definition Source(s)
vertical gneissic banding	A type of vertical foliation in metamorphic rock that is defined by compositional banding. Typically, gneissic banding consists of alternating dark (mafic) and light (felsic or silicic) bands of rock. Gneissic banding may reflect original compositional layering in the protolith, or lit-par-lit intrusion, or metamorphic differentiation by diffusion, or transposition.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
vertical igneous foliation	A vertical locally planar fabric in an igneous rock defined by planar parallelism of flaky or tabular minerals and mineral aggregates, slabby xenoliths, or flattened vesicles as well as compositional layering.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
vertical joint	A vertical planar fracture, crack or parting in a rock, without shear displacement.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
vertical metamorphic foliation	A vertical locally planar fabric in a metamorphic rock defined by a fissility, a preferred orientation of crystal planes in mineral grains, a preferred orientation of inequant grain shapes, or from compositional banding.	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ . This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf , updated January 2026).
vertical schistosity	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/ .

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Term	Definition	Definition Source(s)
vertical slaty cleavage	A foliation, that is vertical to the horizontal, which is defined by elongated domains of quartz or feldspar aggregates separated by anastomosing, mica-rich laminae. The width of the domains is typically less than 100 micrometers. Slaty cleavage is the characteristic foliation in fine-grained sedimentary and volcanic rock deformed under anchizone and lower greenschist metamorphic conditions.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
vertical undulatory bedding	A term for warped or contorted bedding vertical to the principal surface of deposition.	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p> <p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>
water well	See American Geosciences Institute definition, available online: https://www.americangeosciences.org/pubs/glossary	<p>Neuendorf, K.K.E., Mehl, J.P., and Jackson, J.A. (eds), 2011, Glossary of Geology, 5th edition (revised), American Geological Institute, 800 p. Available online: https://glossary.americangeosciences.org/.</p>
waterfilled	The sinkhole feature is partially or completely filled with water.	<p>This glossary (Virginia Department of Energy, Geology and Mineral Resources Program GeMS Glossary, 2022. Available Online: https://energy.virginia.gov/geology/documents/GEMSGlossary.pdf, updated January 2026).</p>