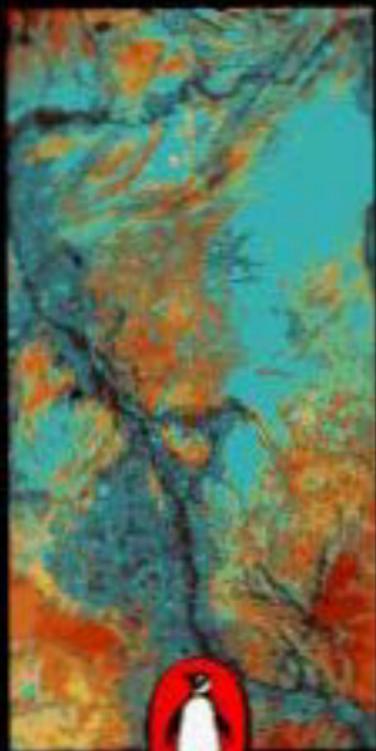


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THE NEW PENGUIN

DICTIONARY OF GEOLOGY

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boundary layer

of successive sediments deposited by a waning *turbidity current*, from base to top: A) structureless, most coarse-grained; B) *plane bed* in coarse- to fine-grained sand; C) *current ripple laminated bed* in fine sand-silt; D) *plane bed* in silt; E) structureless to very fine-grained in mud. All five units may not be developed.

boundary layer The marginal region of a flow where frictional resistance causes the velocity to decrease near the boundary and *shear stresses* are developed in the fluid.

boundary mapping (contact mapping) A method of *geological mapping* involving the following of a geological contact via a zigzag route, used when *exposure* is good or the contact follows a topographic or vegetational feature.

boundary stratotype A *chronostratigraphic* division comprising a sequence of rocks with standard reference points which are particularly complete at the sequence boundary. See *geological timescale*.

boundstone A *limestone* in which the grains were bound by an organism or organisms. See also *bafflestone*, *bindstone*.

bourne An intermittent *spring* in *chalk* forming when the *water table* rises sufficiently high for water to flow in a normally dry valley.

bournonite (PbCuSbS_3) A *sulphide mineral* found in *hydrothermal veins* associated with copper and lead mineralization.

bow-tie effect A feature of an *unmigrated seismic reflection* section in which reflection events cross each other. Arises

over a *synformal* feature because reflections from different parts of the curved surface are focused onto the same portion of the section. Can be removed by *migration*.

bowenite A yellow/green variety of *serpentine*, sometimes used as a substitute for *jade*.

Bowen's reaction series A series of *minerals* crystallizing from a *magma* of specific chemical composition in which any *mineral* formed early in the series will later react with the melt to form a new *mineral* further down the series.

bowlingite See *saponite*.

box fold A composite *fold* with two *antiformal hinges* lying between two *synformal hinges* or vice versa.

boxstone A hollow *concretion*.

boxwork A honeycomb-like *structure* commonly found in *gossans* which forms when residual *limonite* remains in the cavity resulting when a sulphide grain is oxidized.

BP Before Present, by convention taken as 1950.

Brachiopoda/brachiopods A phylum of solitary, bilaterally symmetrical, unsegmented marine invertebrates with a *bivalved shell* and a complex feeding apparatus (the *lophophore*). Range *Cambrian-Recent*.

brachyanticline An elongate *periclinal dome* with varying axial *plunge*.

brachydont Descriptive of a tooth with low, short crowns and well-developed roots with narrow canals.

brachysyncline An elongate *periclinal basin* with varying axial *plunge*.

Bradydonti An order of subclass *Elasmobranchii*, class *Chondrichthyes*, super-class *Pisces*; sharks with powerful crushing teeth for eating hard-shelled prey. Range end *Devonian-Permian*.

Bragg Law A law controlling X-ray diffraction. $n\lambda = 2d_{hkl}\sin\theta$, where n is an integer, λ the X-ray wavelength, d_{hkl} the spacing of the (hkl) planes of the crystal and 2θ the angle between the incident and diffracted X-ray beams.

braid A multithread channel formed, for example, by the meltwater flow from a glacier in a sandur.

braid bar An accumulation of sediment causing flow to divide, eventually forming an island at most flow states.

braided river/stream A river/stream that divides and rejoins around bars of a width similar to the channel width and with a sinuosity of 1-1.3.

braidplain A gently sloping, extensive region covered by braid bars and channels.

brammalite A variety of illite in which sodium is the inter-layer cation.

branch line The location in an imbricate fault system where a fault forks and displacement is transferred to another fault.

Branchiopoda/branchiopods A class of subphylum *Crustacea*, phylum *Arthropoda*; small, bivalved animals enveloped by a carapace. Range L. *Devonian-Recent*.

braunite $((Mn_2O_3)_3MnSiO_3)$ A massive ore mineral of manganese.

bravoite $((Ni,Fe)S_2)$ A rare nickel ore mineral.

brazilian emerald A green gem variety of *tourmaline*.

brazilian peridot *Tourmaline* or *chrysoberyl* with the green colour of *peridot*.

brazilian ruby A red *tourmaline* or pink *topaz*.

brazilian topaz A clear blue variety of *topaz* valued as a gem.

brazilianite $(NaAl_3(PO_4)_2(OH)_4)$ A rare yellow/green gem found in *pegmatites*.

breached anticline An *anticline* whose core has been eroded so that the fold limbs form *scarp*s.

breaching thrust A *thrust fault* that offsets an existing, structurally higher fault or fold structure.

bread-crust bomb A volcanic bomb with a cracked outer crust and vesicular interior.

break-back thrust A reverse fault in a piggyback thrust system that forms in an existing thrust structure rather than nearer to the foreland.

break-point bar A permanently submerged coastal bar formed near the shore when steep, high energy waves break, depositing sediment onshore on the seaward side of the break point and offshore landward of it.

breaker A wave that enters shallow water and increases in height until it breaks.

breaker zone The beach zone in which wave energy is dispersed by breaking.

breast The face of a mine working.

breccia A *rudite* with angular clasts.

breccio-conglomerate A *rudite* intermediate between *breccia* and *conglomerate*, i.e. with approximately equal numbers of angular and rounded clasts.