

TP4 – PRACTICAL TEST: LA BOUILLIDE – QUESTION FORM – NORSK OVERSETTELSE

Vi har oversatt enkelte ord og begreper til norsk. Disse står i parentes og er uthevet i kursiv. Bruk både engelsk og norsk versjon i arbeidet ditt.

Below is a list of questions. Read all the instructions carefully and complete the answer section at the end of the file.

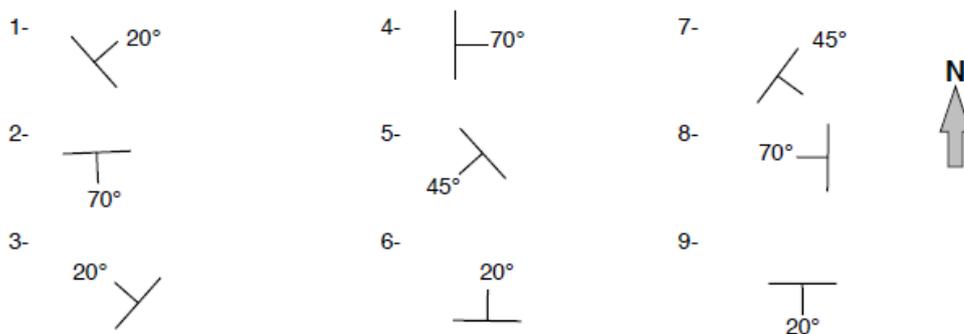
Question 1: The *outcrop (blotning) B* corresponds to (*samsvarer med*)... (one possible answer)

- 1- a sedimentary rock characterized by successive beds marking a **stratification**. (*lagdeling*)
- 2- a volcanic rock characterized by a **uniform** (*ensartet*) appearance and having **scattered** (*spredde*) minerals (around 1 mm).
- 3- a plutonic rock with a massive appearance consisting solely of **cohesive** (*sammenhengende*) minerals (3-6 mm).
- 4- a metamorphic rock whose major deformation is revealed by its **schistosity**. (*skiffrighet*)

Question 2: The rock forming outcrop B... (several possible answers)

- 1- is a succession of limestone beds.
- 2- is a succession of limestone and clay beds.
- 3- shows non-crystallized silica **nodules** (*boller*) called flint.
- 4- is a magmatic rock.
- 5- is **intersected** (*gjennomskåret*) by a horizontal intrusion of basalt.
- 6- is a schist.

Question 3: From the structural symbols below, choose the one that best matches your measurements on the outcrop B: (one possible answer)



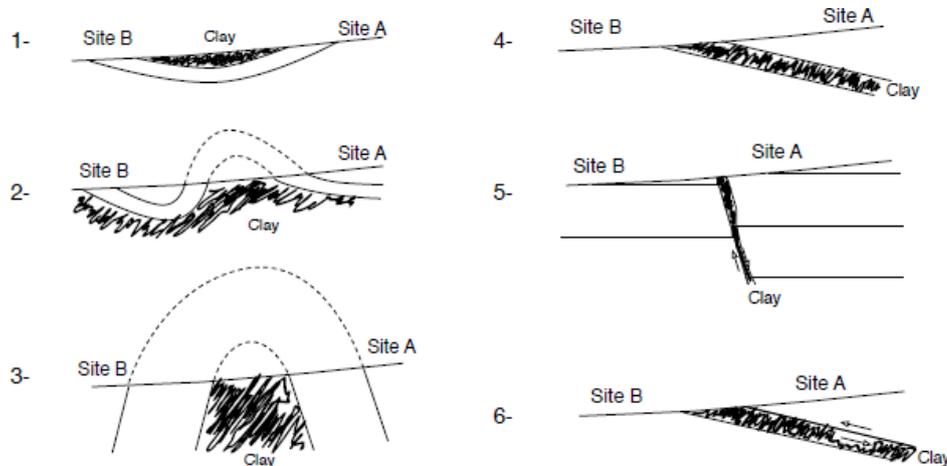
Question 4: The rock presented on outcrop A... (several answers possible)

- 1- is identical to that of outcrop B.
- 2- is different from that of outcrop B.
- 3- shows flint nodules in contrast to outcrop B.
- 4- contains igneous intrusions.

Question 5: Site A has been identified as a *brittle (sprø)* deformation zone. Select the description that matches your observations. (one answer only)

- 1- The dips (*helningen*) in the layers between site A and site B are different by more than 10 degrees.
- 2- Several changes in lithology are observed at a nearby altitude.
- 3- The presence of cargneule is observed at site B.
- 4- The rock at the site is **fractured (oppsprukket)**, it is a breccia.
- 5- The rock has other indications of brittle deformation.
- 6- **Fracture planes (sprekkeplan)** are visible and can be seen as indications of relative movement of the rock blocks.

Question 6: Among the diagrams below, indicate the one that best corresponds to your observations. (Only one answer possible)



Question 7: The presence of clay is noted on the surface. Its initial position *deduced (utledet)* from the field observation indicates that... (several answers possible)

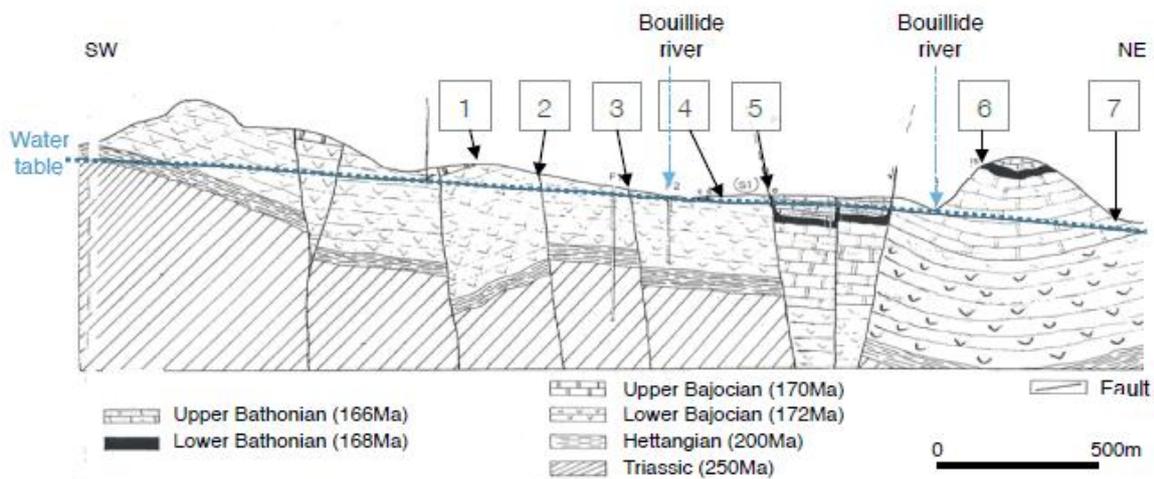
- 1- the rocks of the Bathonian (167 Ma)(geologisk periode) are an **unconfined (uavgrenset)** aquifer that allows a river to form.
- 2- the rocks of the Bajocian (171 Ma)(geologisk periode) are an unconfined aquifer that allows a river to form.
- 3- the significant folding of the layers allows the creation of reservoirs made **watertight (vanntett)** by the presence of clay.
- 4- the underlaying clay along the fault indicates that there is a layer of underground clay.

Question 8: Fill in the table with the values measured at site C. (see answer sheet)

Question 9: At site C, the map indicates the presence of a *spring (kilde)*. Choose the correct statement for the scenario:

- 1- The spring is at the same level as the river. The waters mix in the bed of the river.
- 2- The spring is at a higher level than the river. The spring flows into the river.
- 3- The spring is at a lower level than the river. It does not act as a source. The river water **partially (delvis)** escapes from its bed.

Question 10: On the answer sheet, mark the positions of the 4 sites (*stedene*) where you made your measurements and observations using the cross section below. (numbers can be used multiple times, once or not at all.)



Question 11: Using the data from the site and the cross section above, select the best hypothesis to explain the difference in the level of the river along its course through the park.

- 1- The presence of a fault allows the water to escape or reappear at **random (tilfeldig)** along the course of the Bouillide.
- 2- The folding of the area raises the base of the aquifer, which brings the water out of the ground.
- 3- A collapse basin has retained a layer of shallow clay at the level of Bouillide Park. The water emerges from underground when it reaches this layer.