

ST IV - La carte géologique

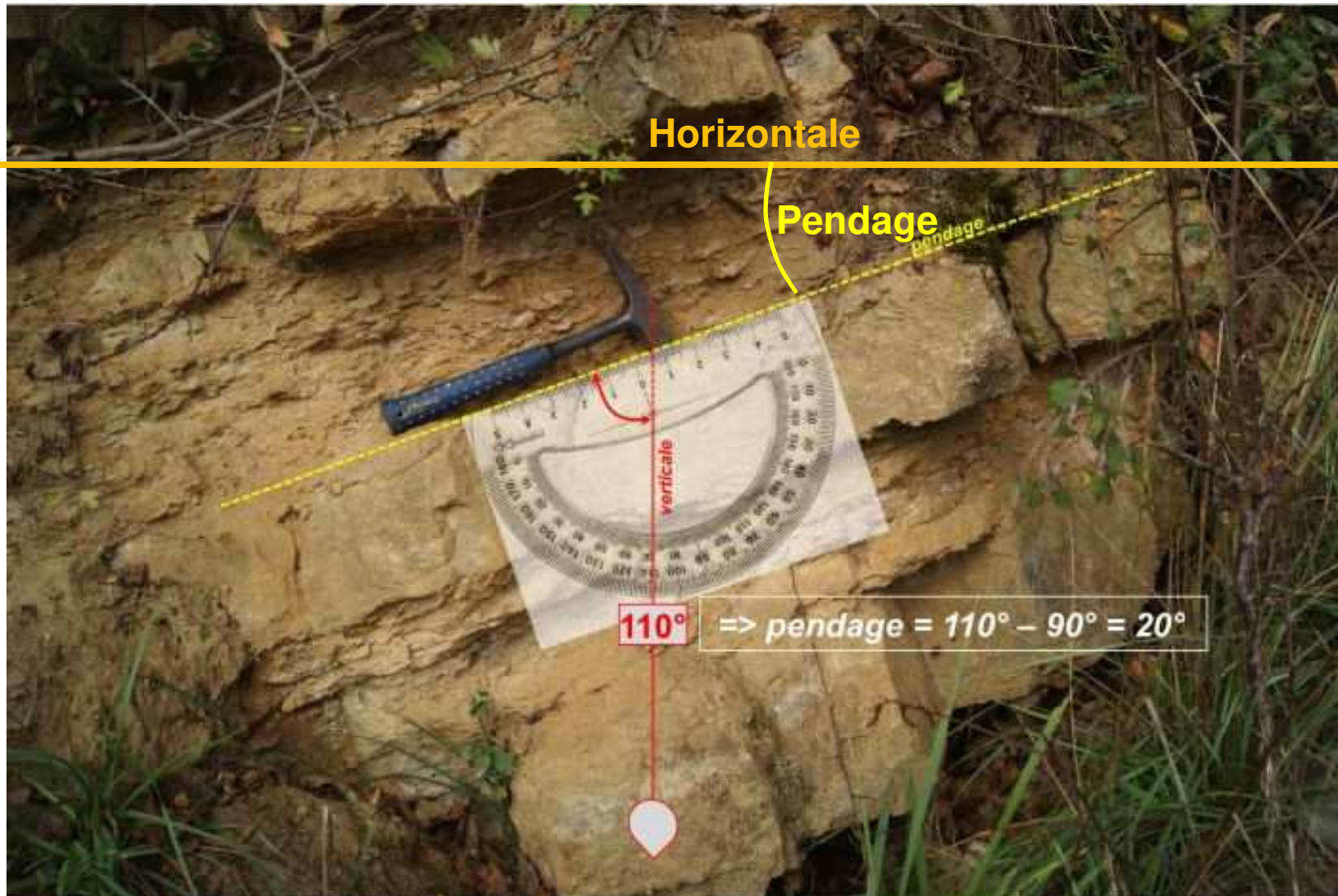
TP2 : cartes géologiques en région
plissée et faillée

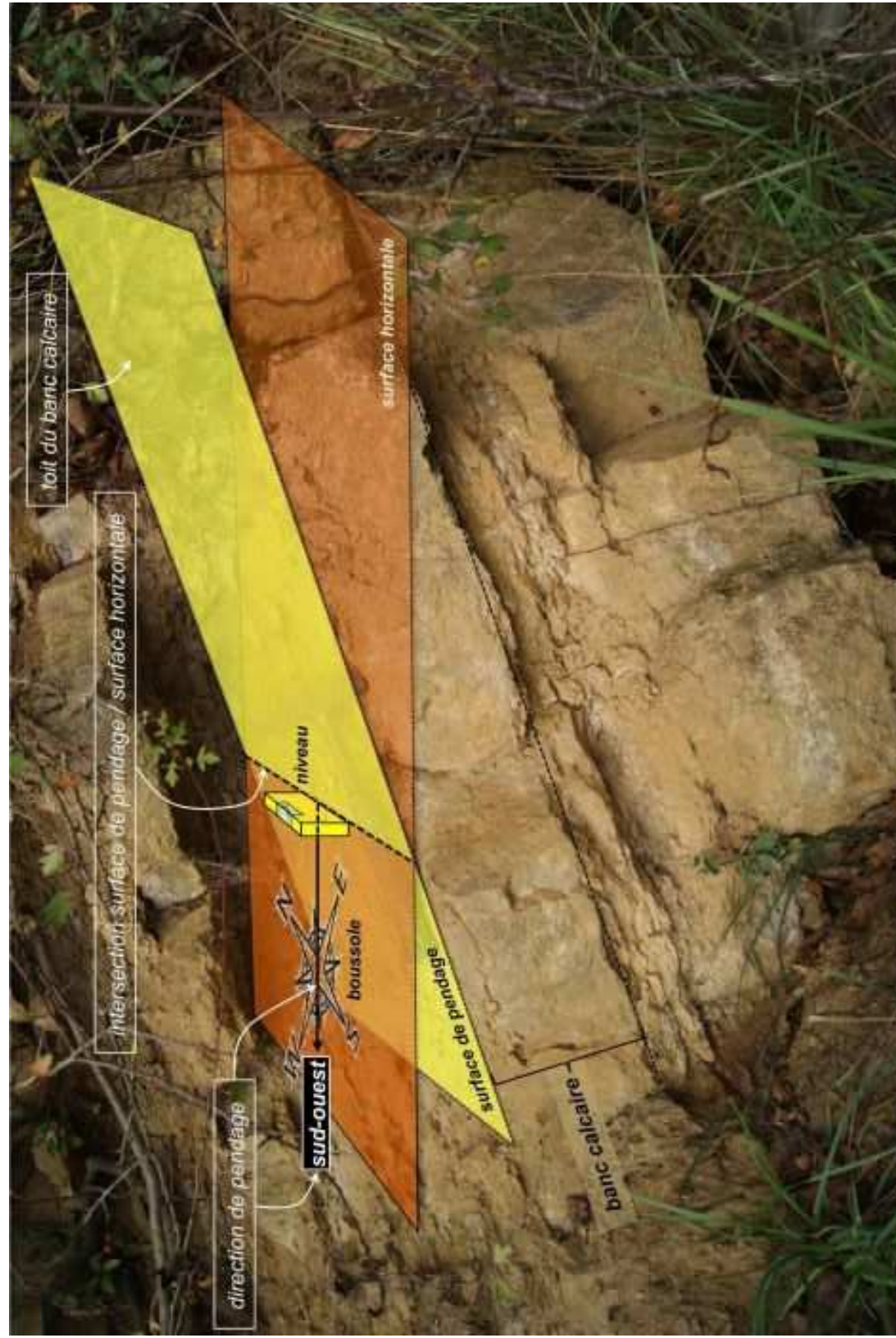
Horizontale

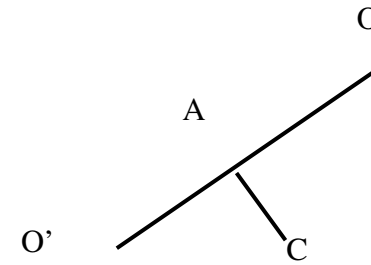
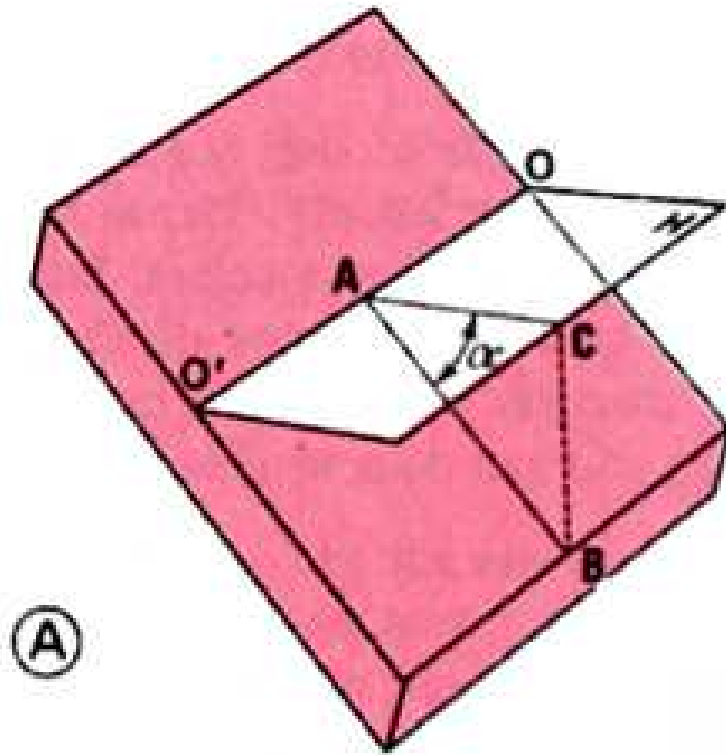
Pendage

110°

=> pendage = $110^\circ - 90^\circ = 20^\circ$







Signes de pendage

$\vdash_{60}$

$\vdash$

Pendage incliné de la stratification

$\vdash$

$\vdash$

Pendage vertical

$\vdash$

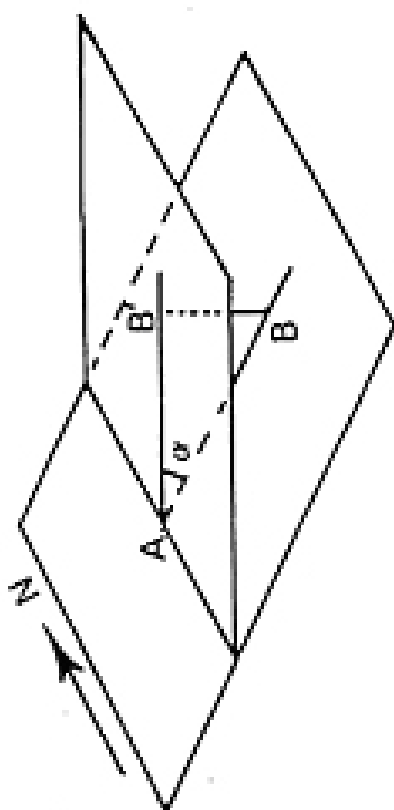
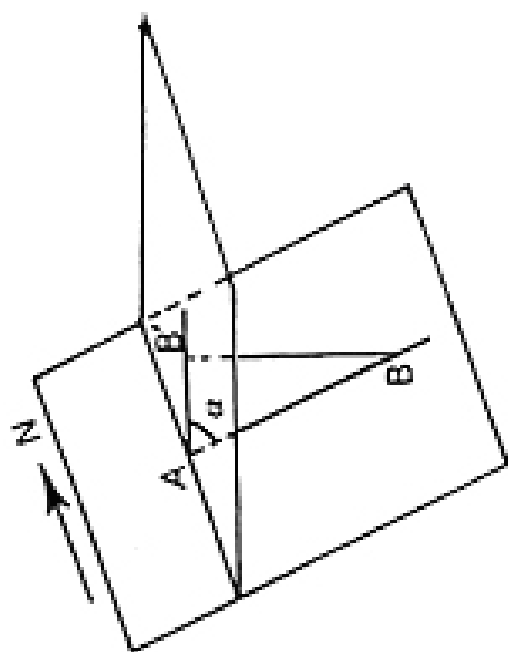
Pendage horizontal

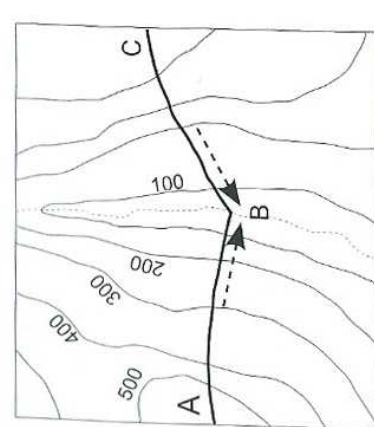
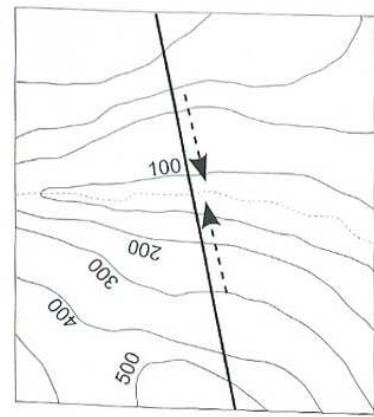
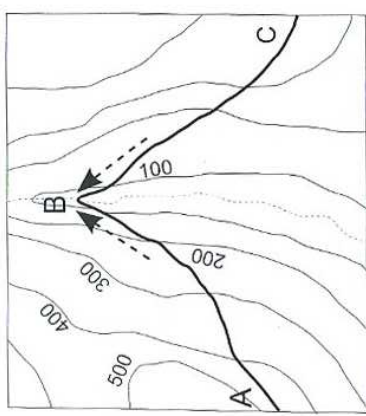
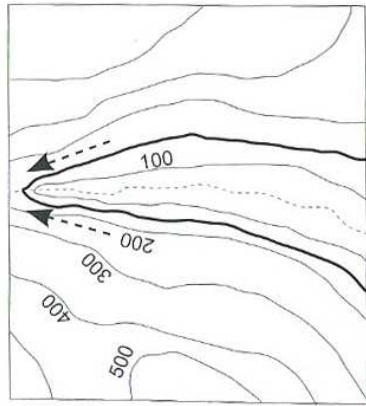
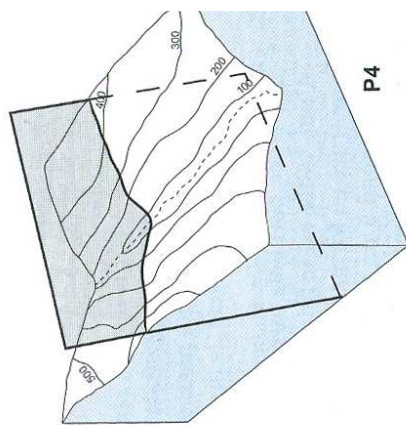
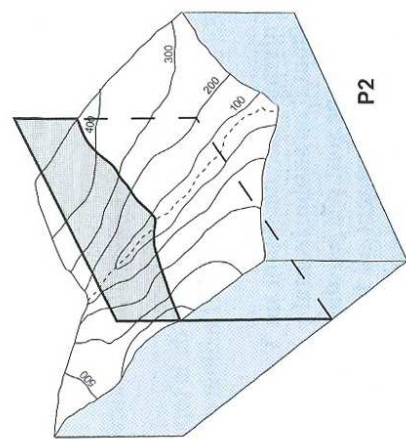
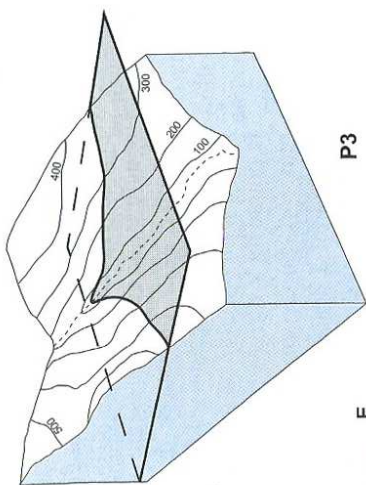
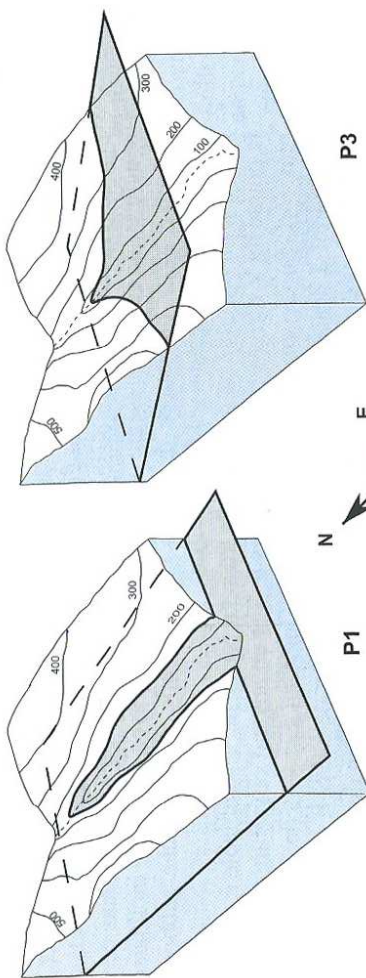
$\vdash_{35}$

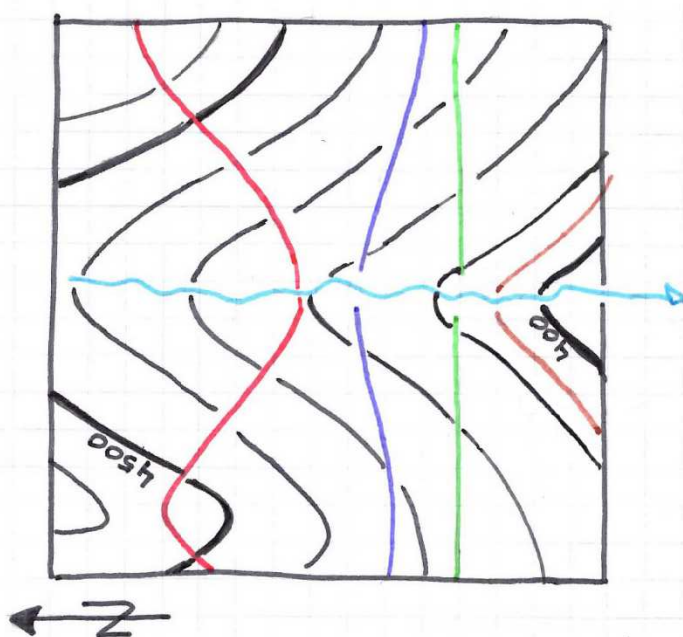
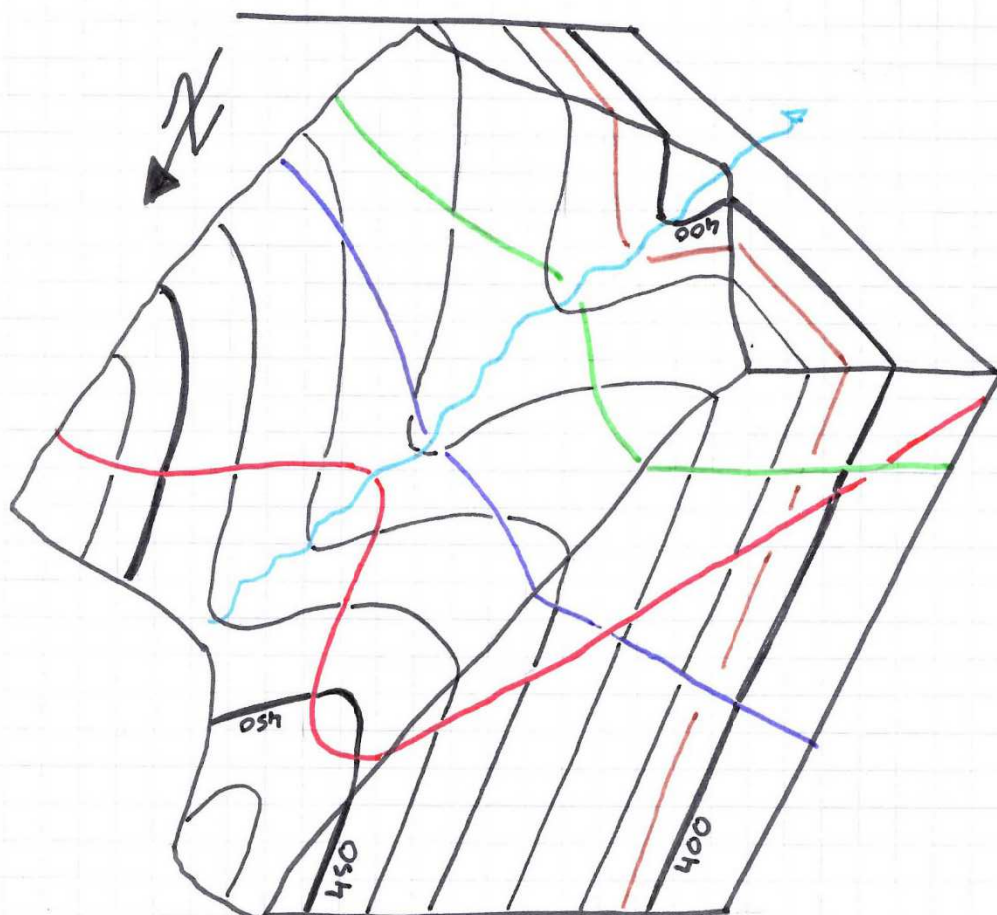
Pendage de série renversée

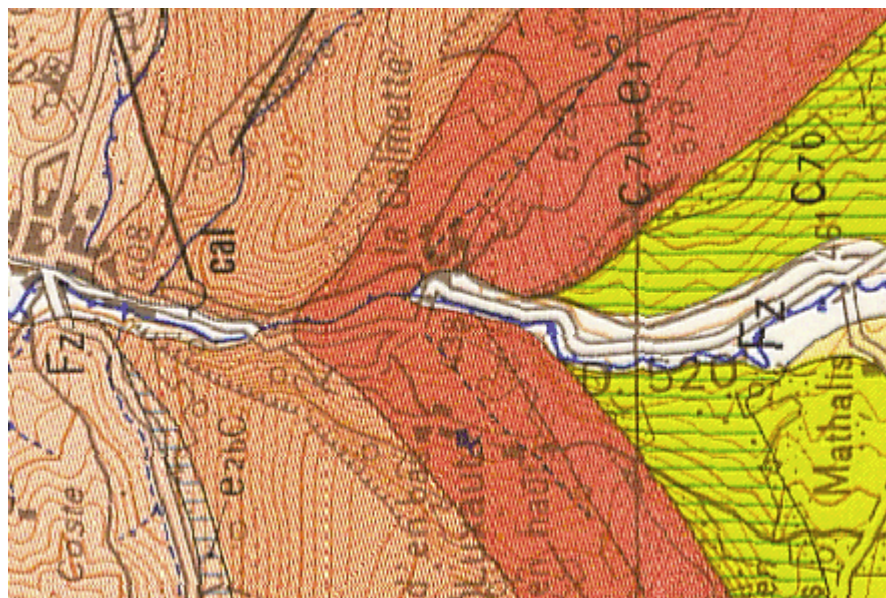
$\vdash$

Schistosité métamorphique

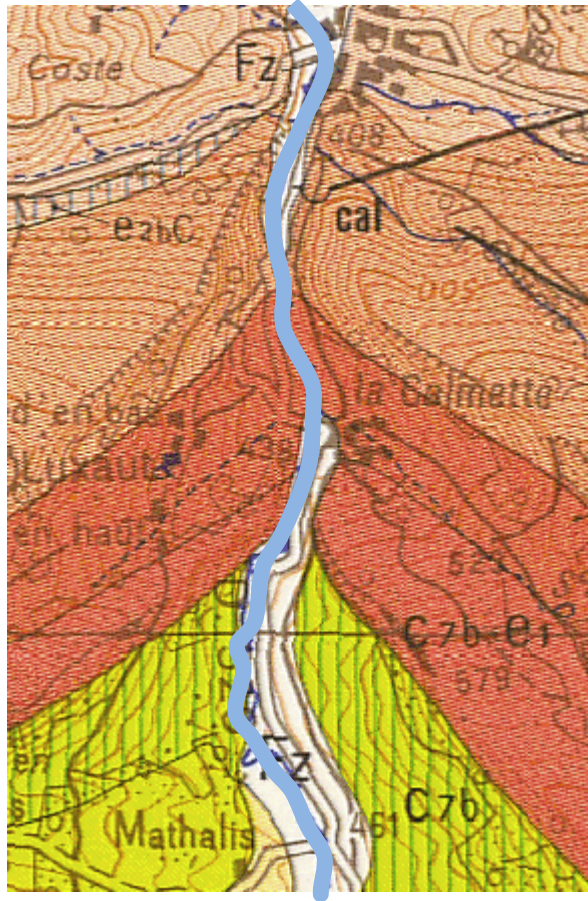




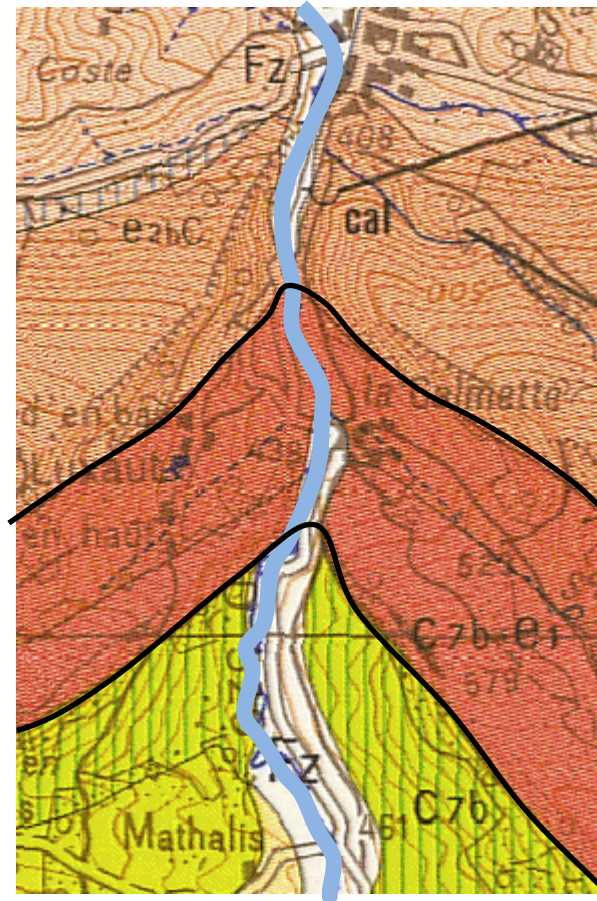




Rivière => vallée



Rivière => vallée



**Contours
géologiques
entre 2 strates**

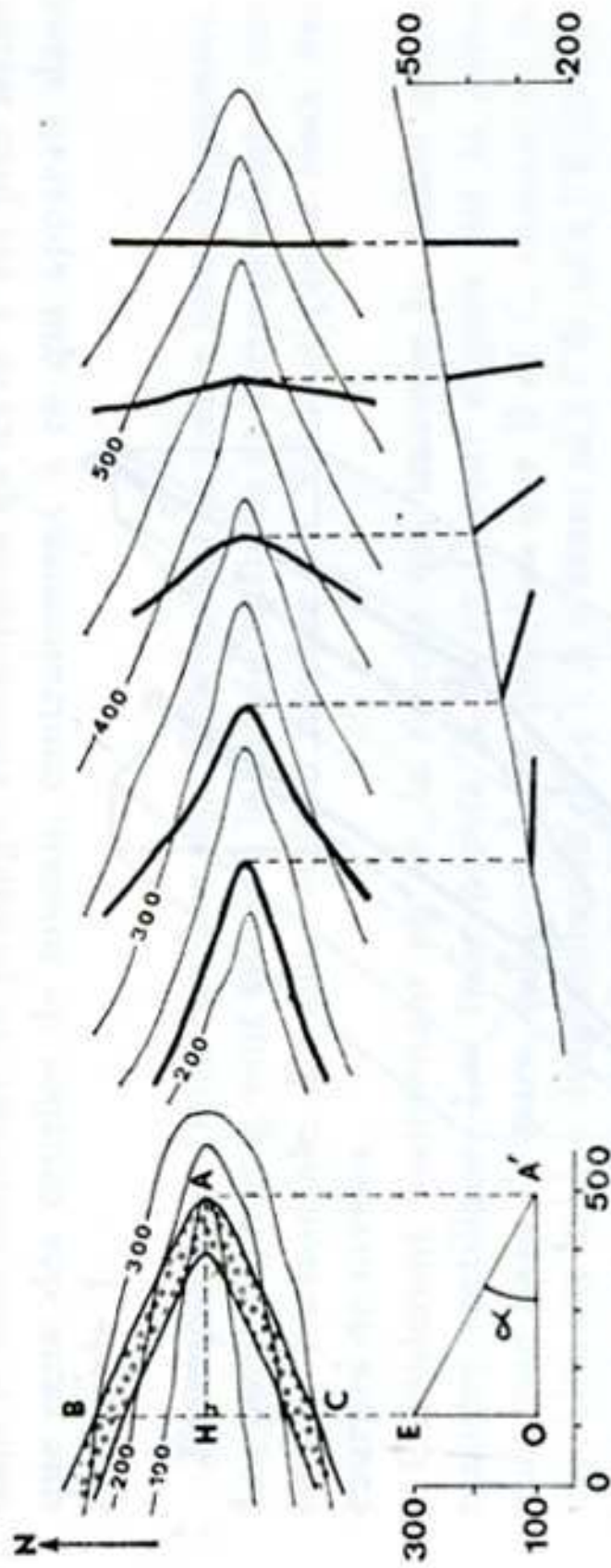
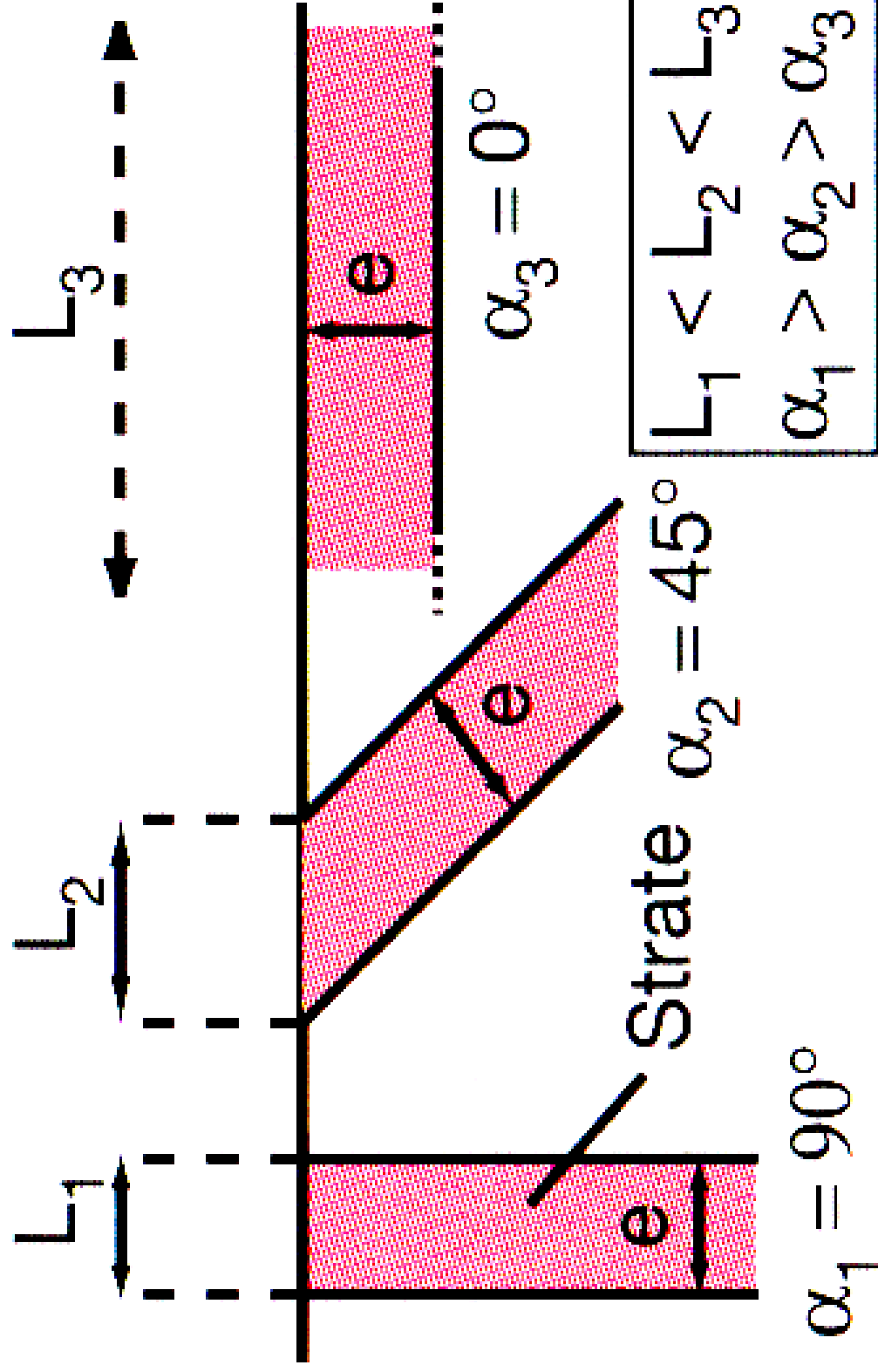


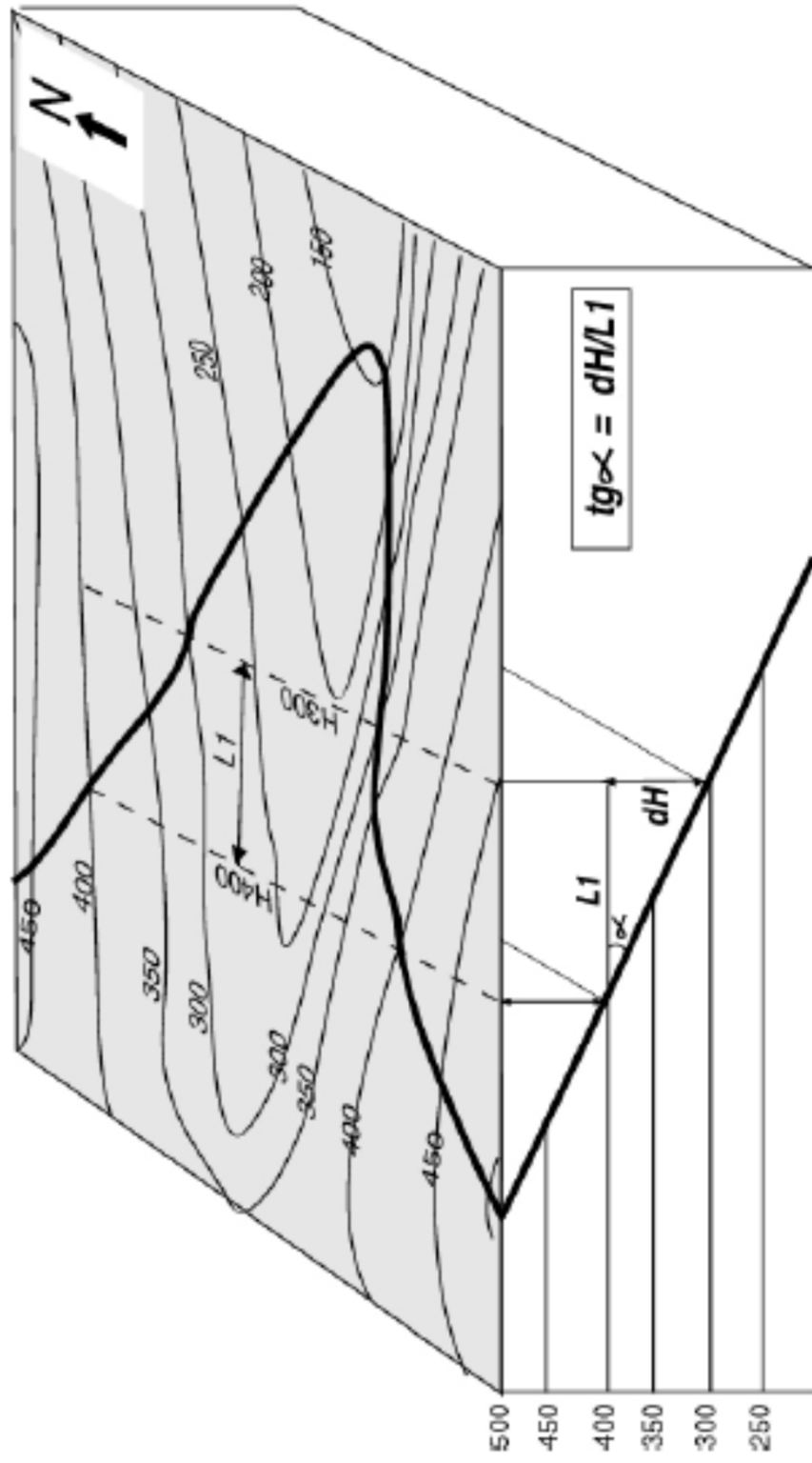
Fig. 37. — DÉTERMINATION QUANTITATIVE DU PENDAGE
(CAS DE L'INTERSECTION AVEC UNE VALLÉE).

A gauche — Détermination graphique de α . Par le calcul on a :

$$\operatorname{tg} \alpha = \frac{EO}{OA'} \simeq \frac{200}{400} = \frac{1}{2}, \alpha = 30^{\circ}.$$

A droite — Détermination approchée de la valeur du pendage. L'ouverture du V augmentant progressivement de gauche à droite, le pendage devient de plus en plus fort.

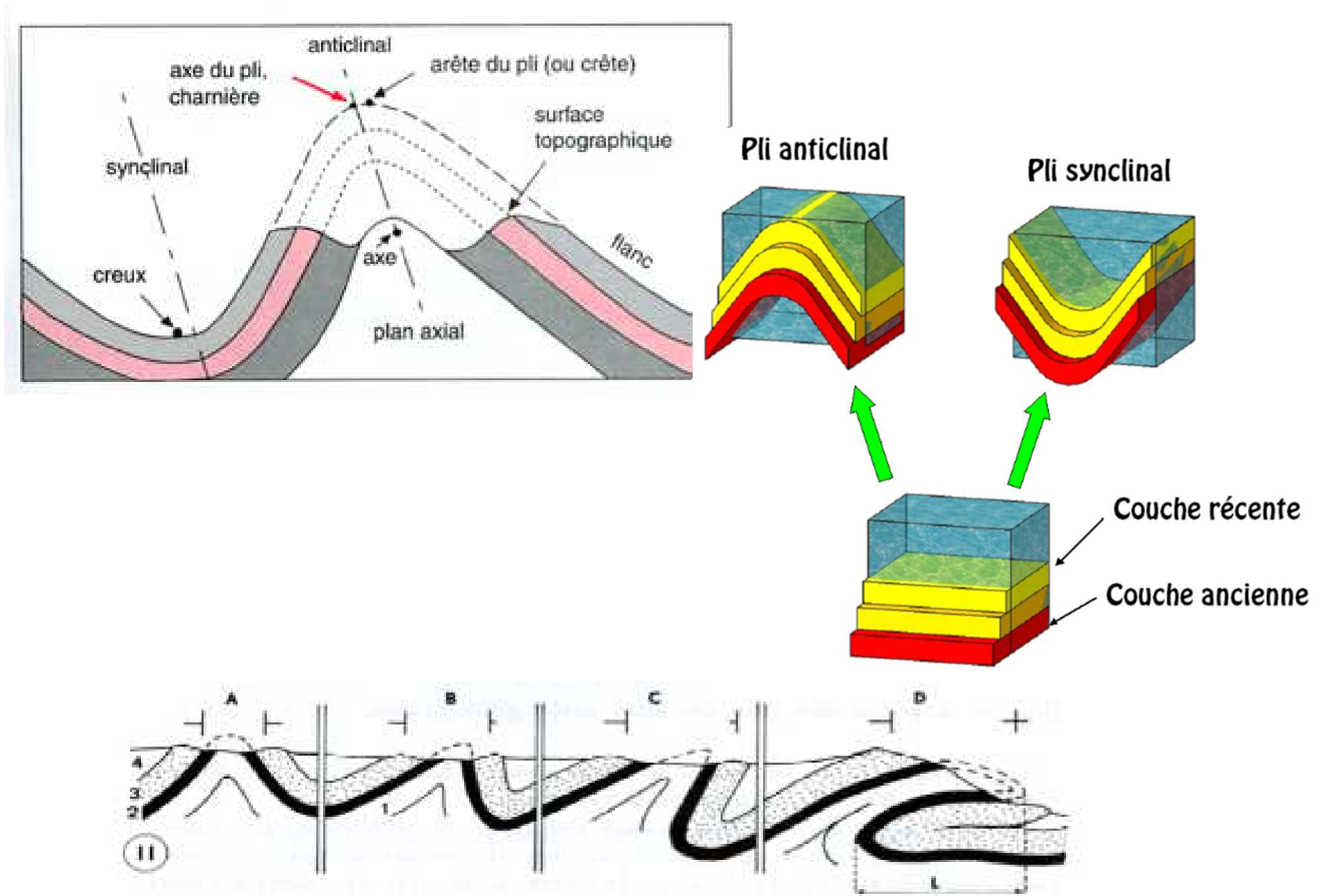


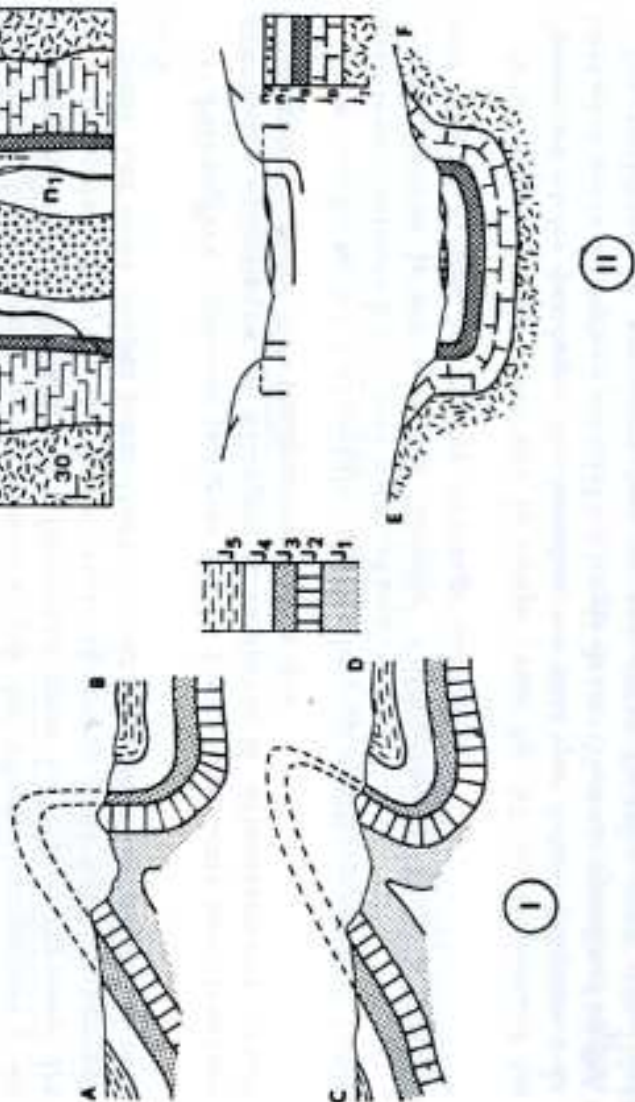
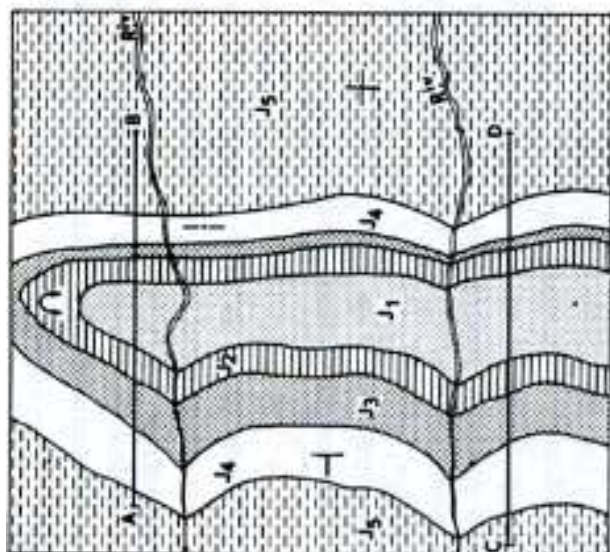
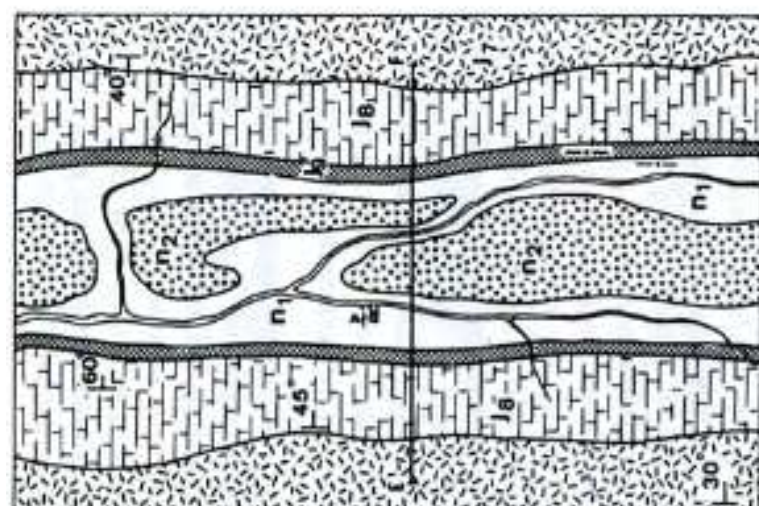






Identifier une structure plissée



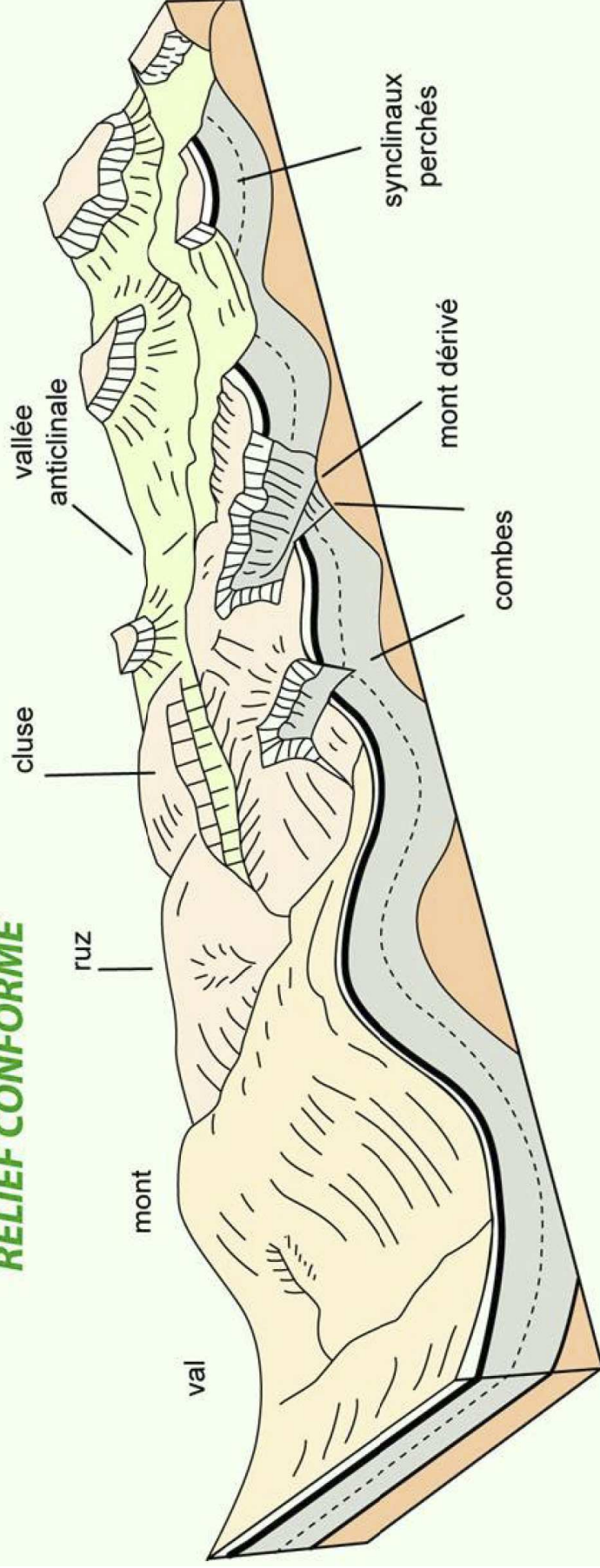


II

I

RELIEF INVERSE

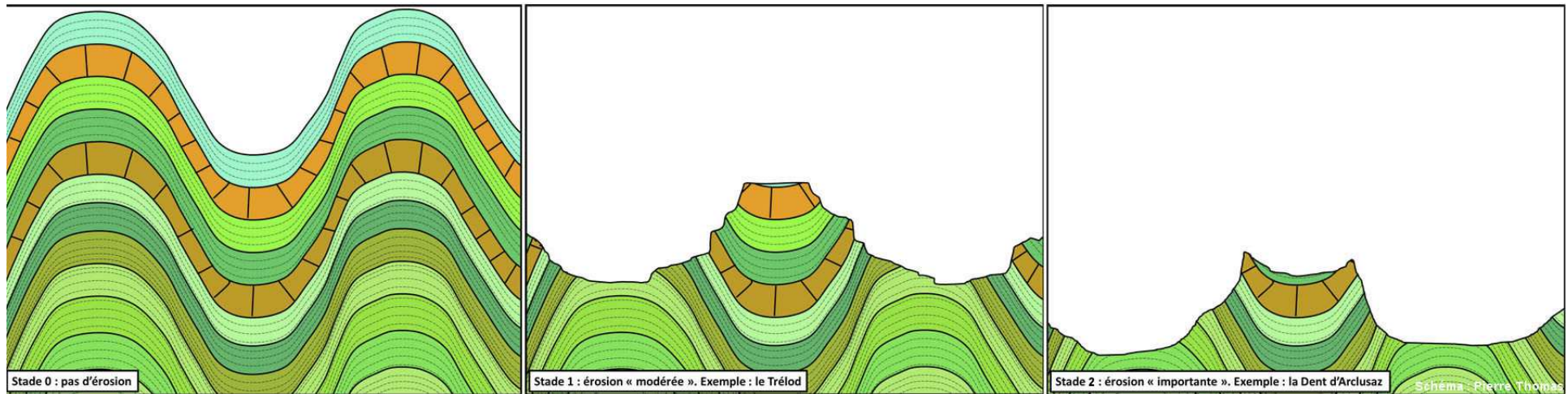
RELIEF CONFORME



Synclinal perché de l'Arclusaz (près de Chambéry)



Formation d'un synclinal perché

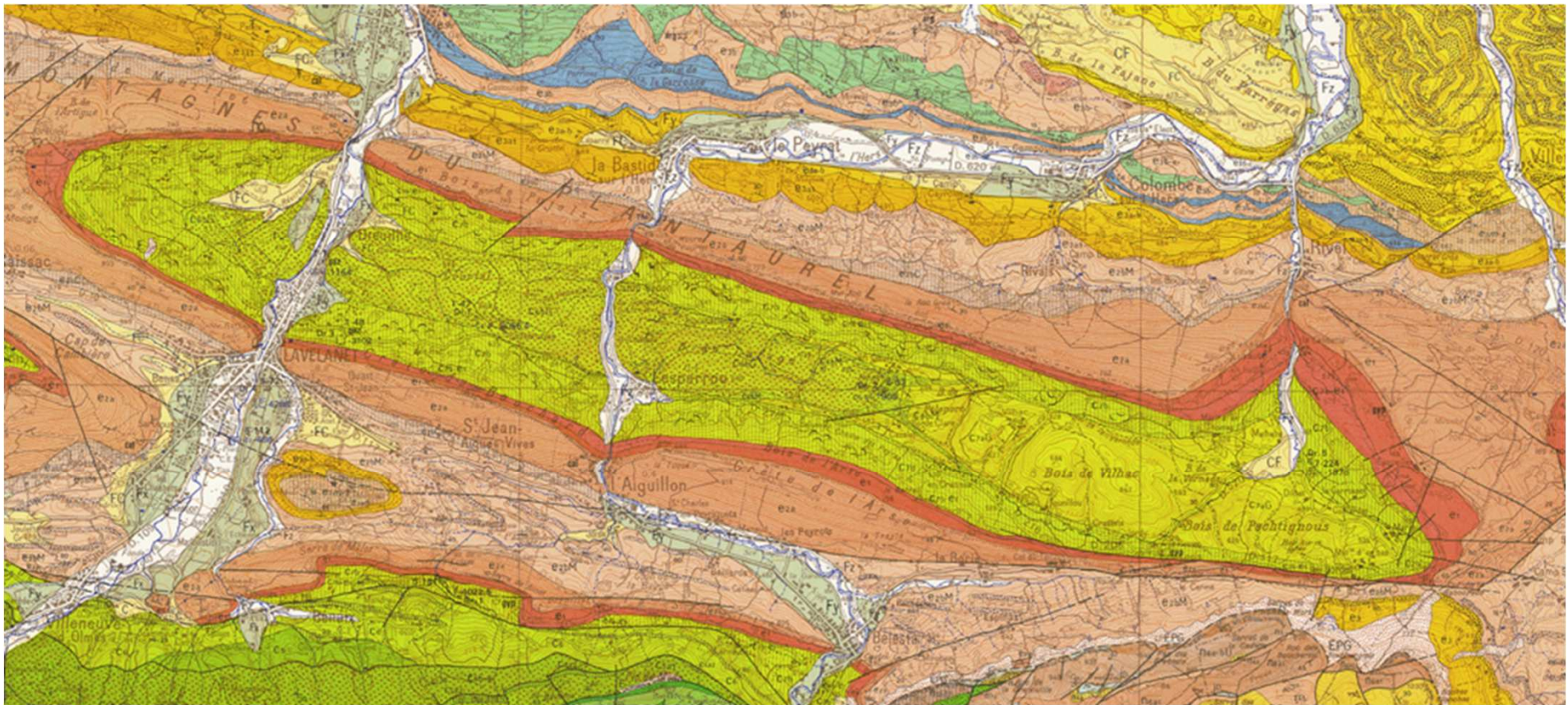


Au stade 0, on a supposé que la région était constituée d'un empilement de séries marneuses (représenté en vert et bleu) comprenant 2 barres calcaires (marron et orange, avec un figuré en moellon). La série a subi un plissement (supposé non accompagné d'érosion, ce qui est un cas très théorique) générant 2 anticlinaux encadrant un synclinal.

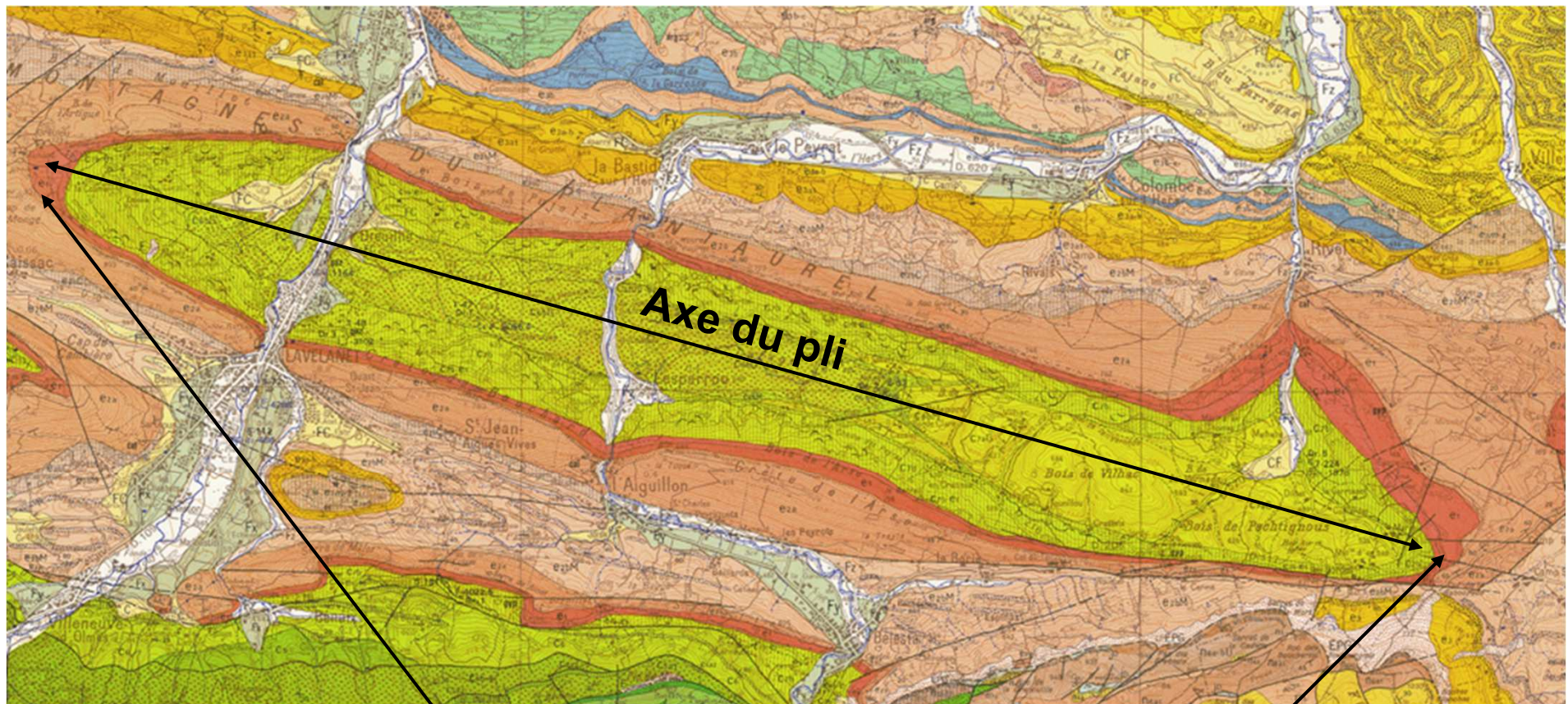
Au stade 1, l'érosion a "attaqué" les reliefs que constituaient les anticlinaux et a transformé les monts anticlinaux en vallées. Au centre du schéma, le synclinal, non érodé, se trouve mis en relief : c'est un synclinal perché. Dans ce schéma, nous avons supposé que les deux barres calcaires avaient été épargnées par l'érosion au niveau du synclinal. Le Trélod correspond à peu près à ce stade 1.

Au stade 2, l'érosion a continué et a complètement érodé la barre calcaire supérieure, et le synclinal perché est réduit à une seule barre calcaire. La Dent d'Arclusaz correspond à peu près à ce stade 2.

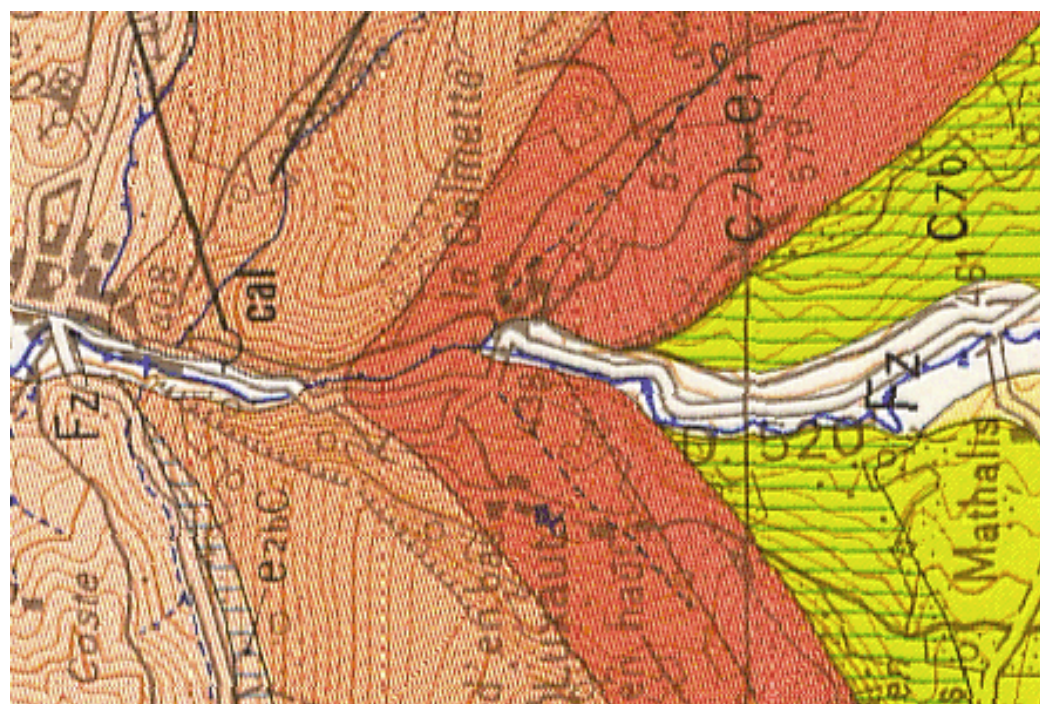
Etude de carte en région plissée : Lavelanet

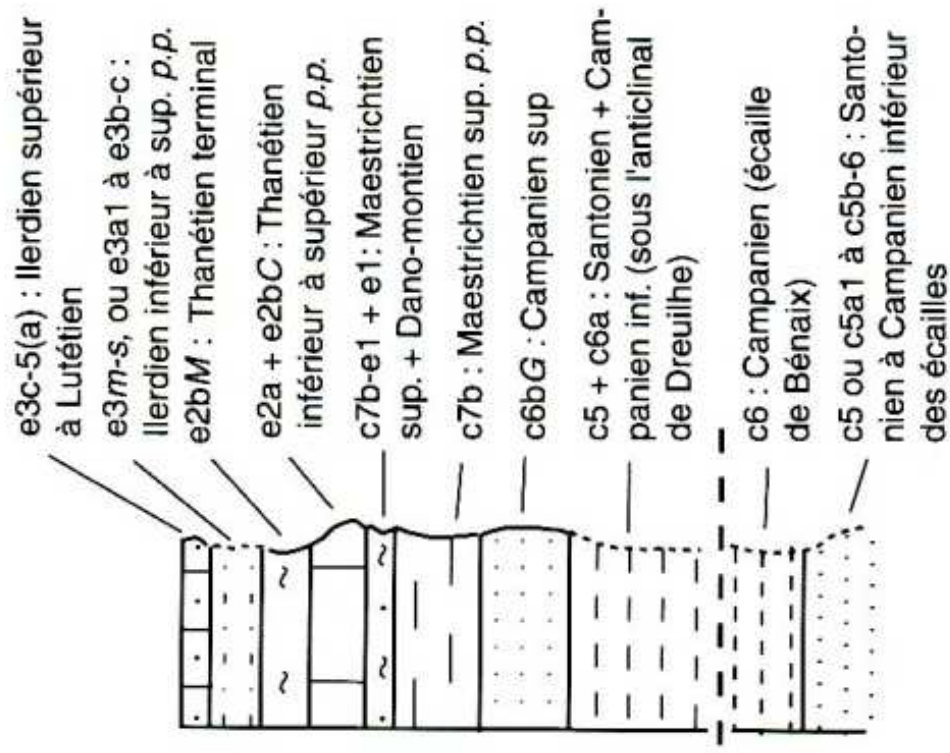


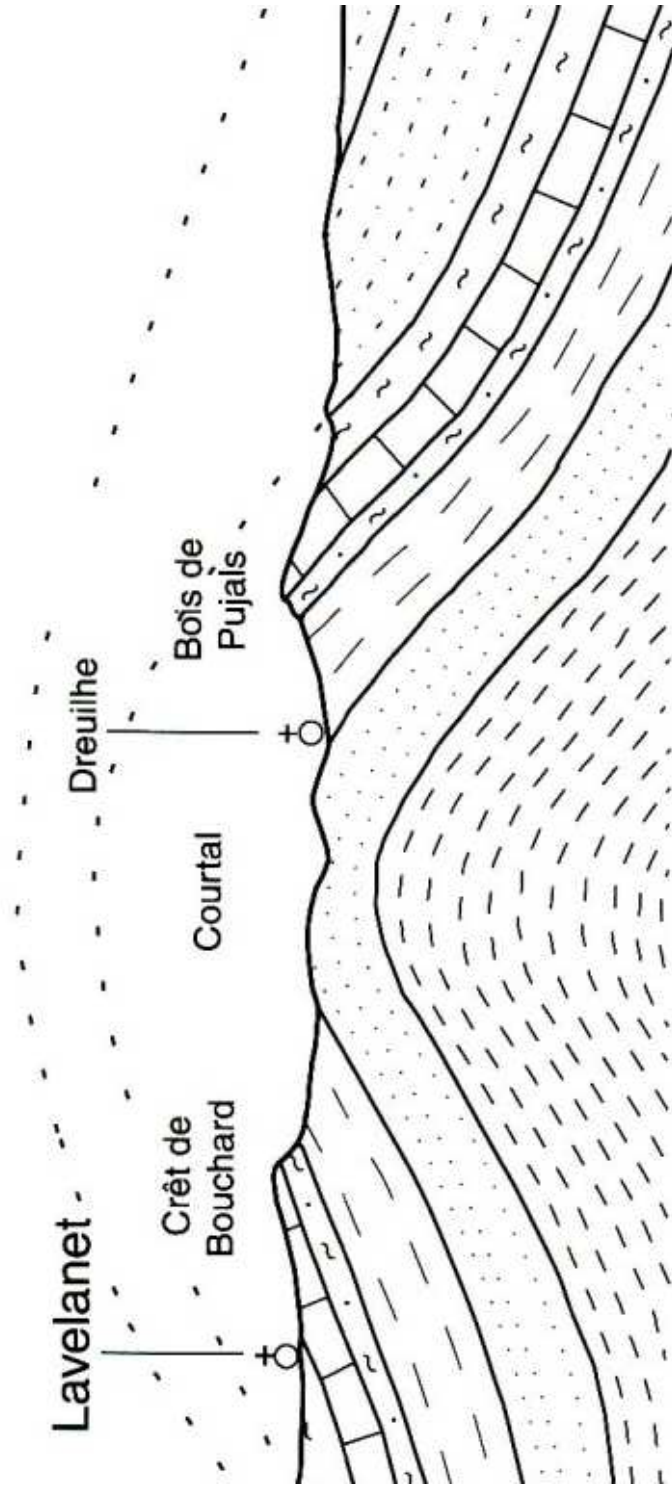
Etude de carte en région plissée : Lavelanet



Terminaisons du pli



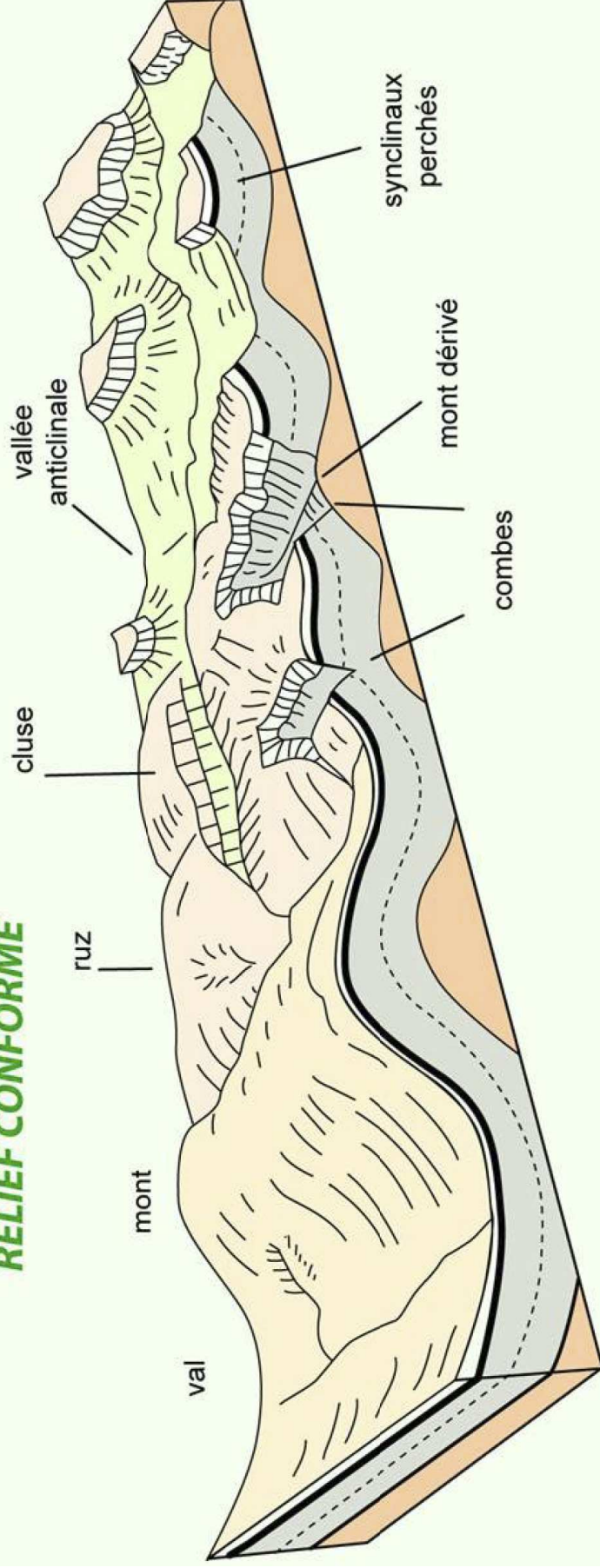




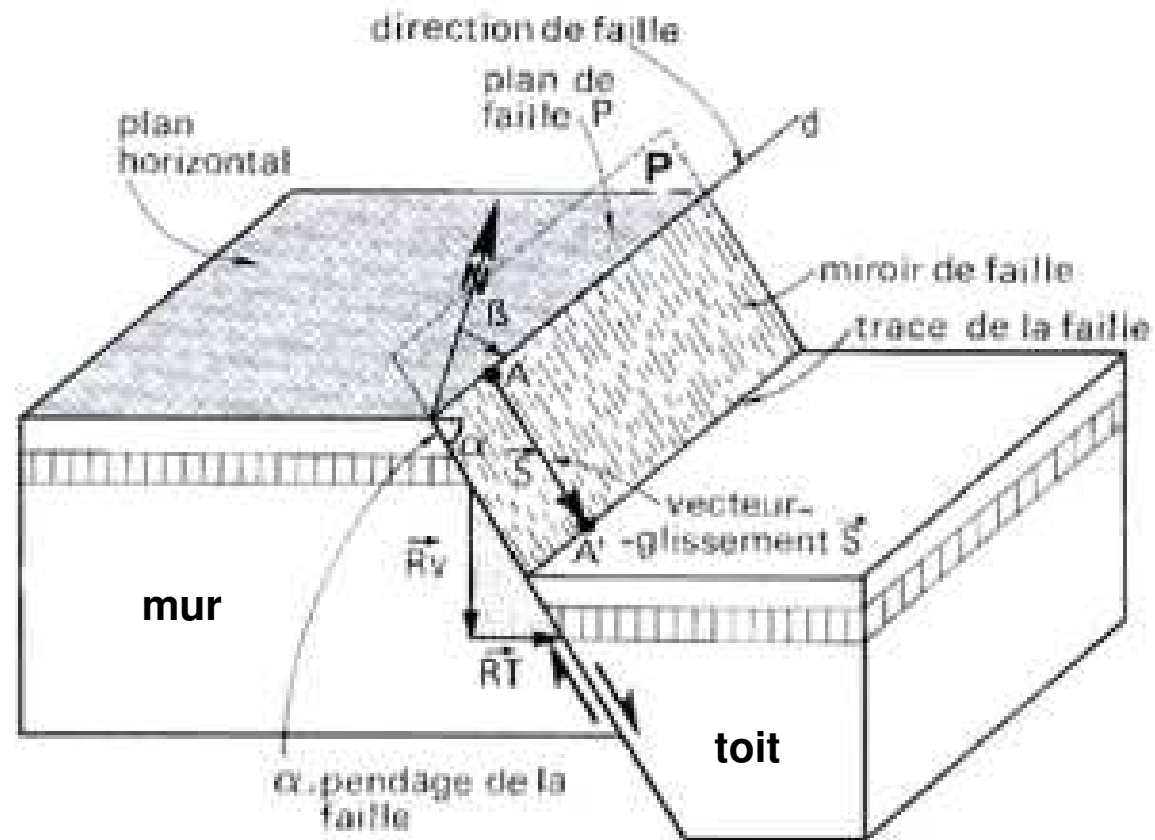


RELIEF INVERSE

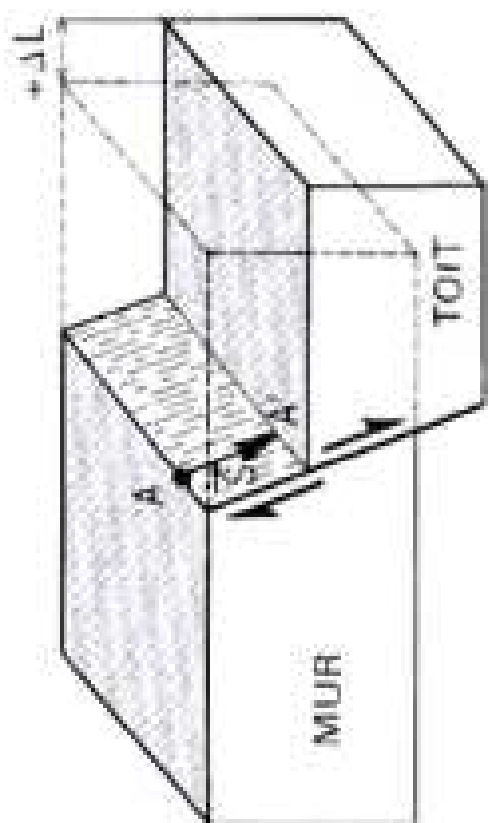
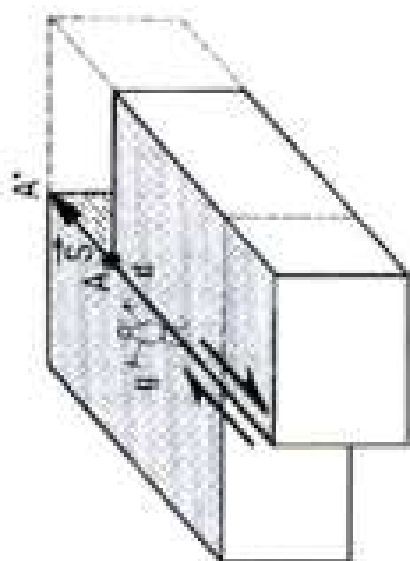
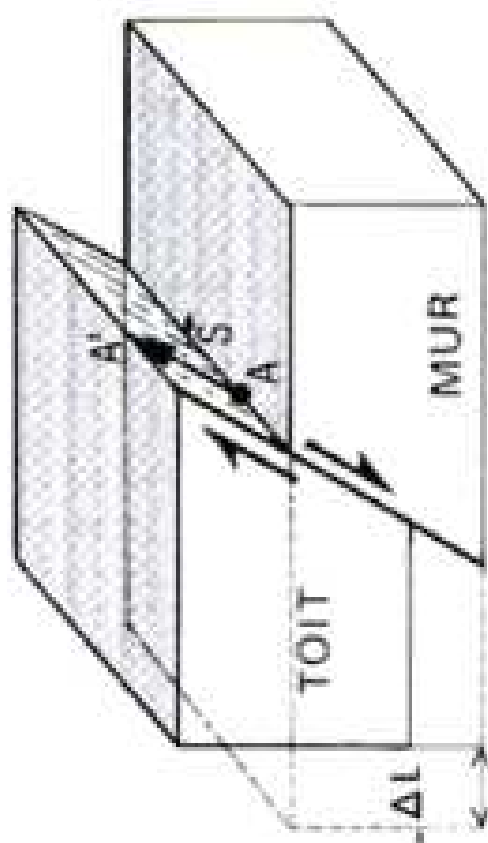
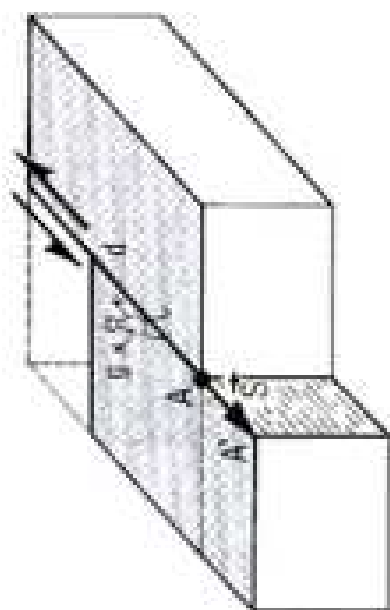
RELIEF CONFORME



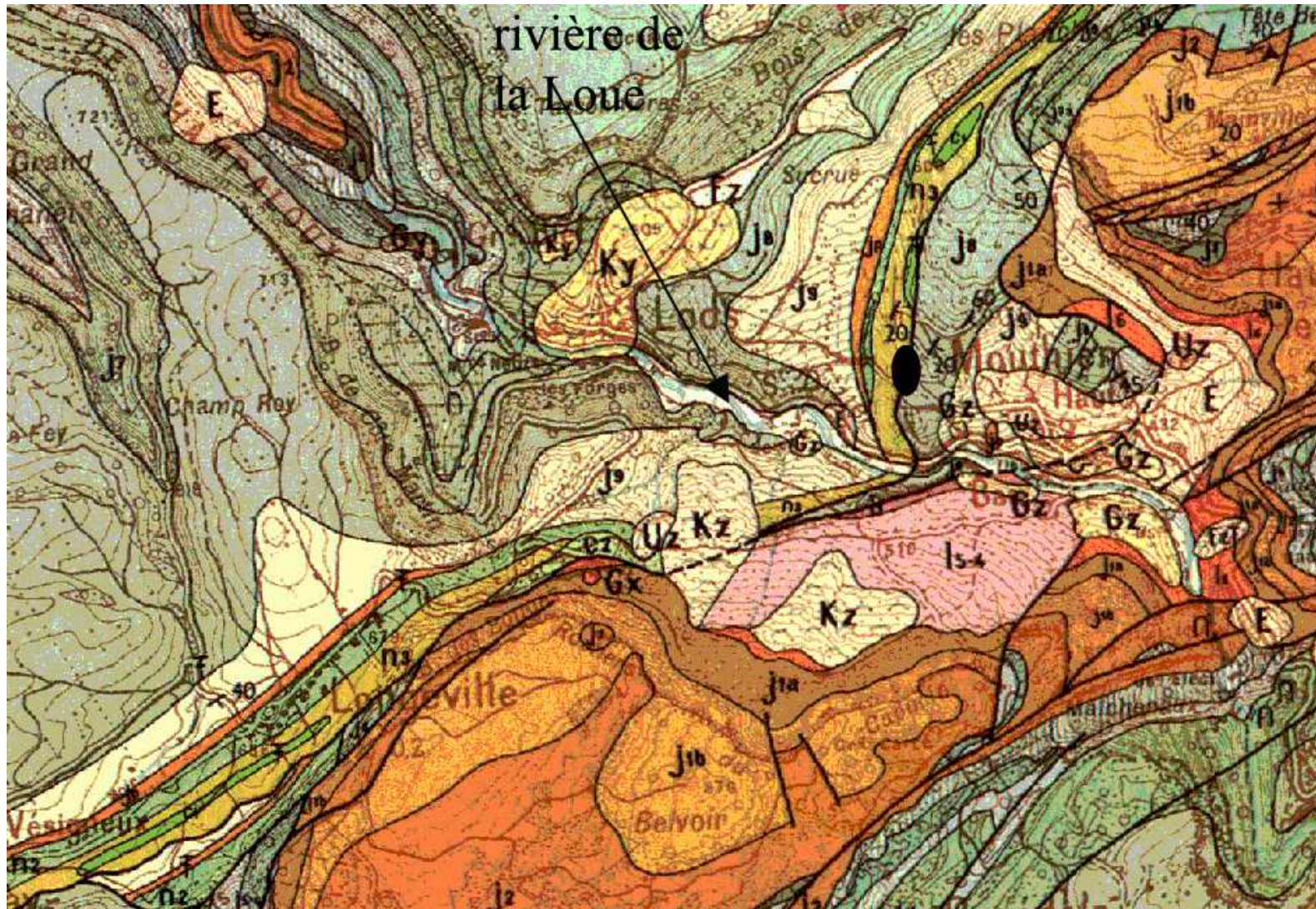
Déterminer la nature d'une faille



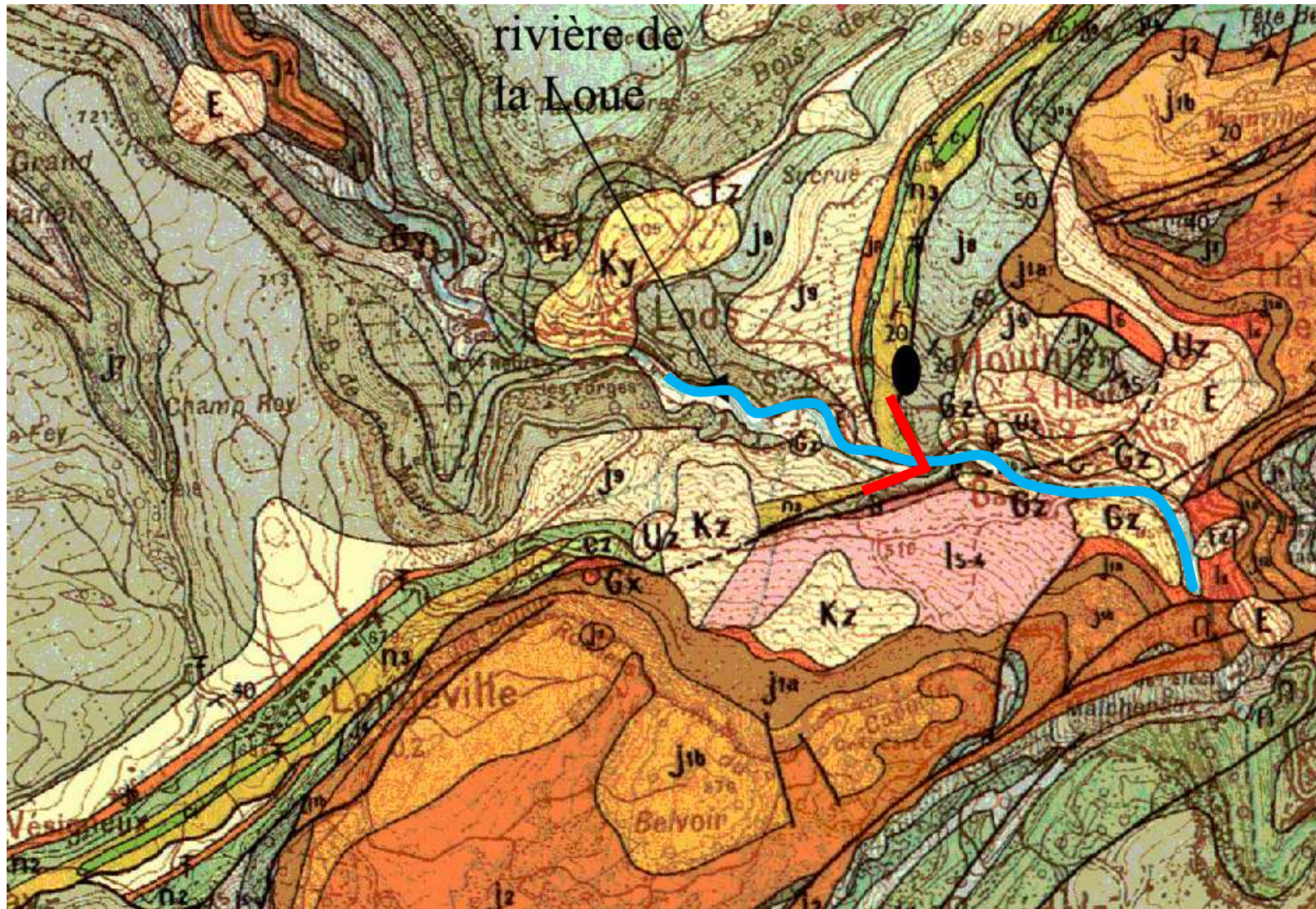
Nomenclature liée à une faille.



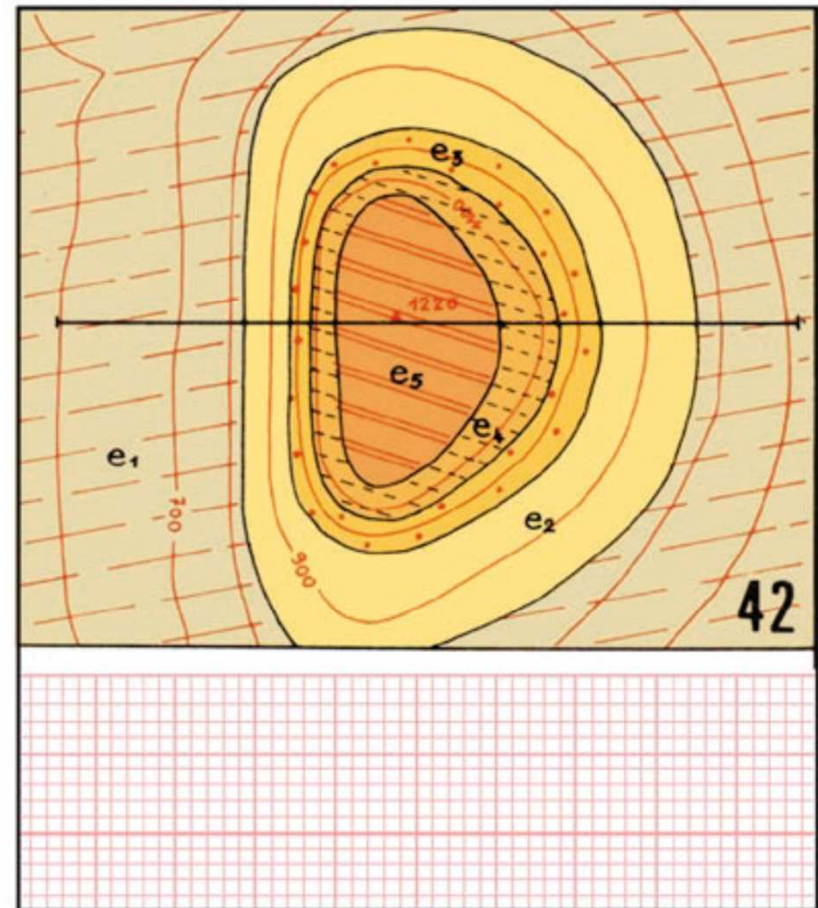
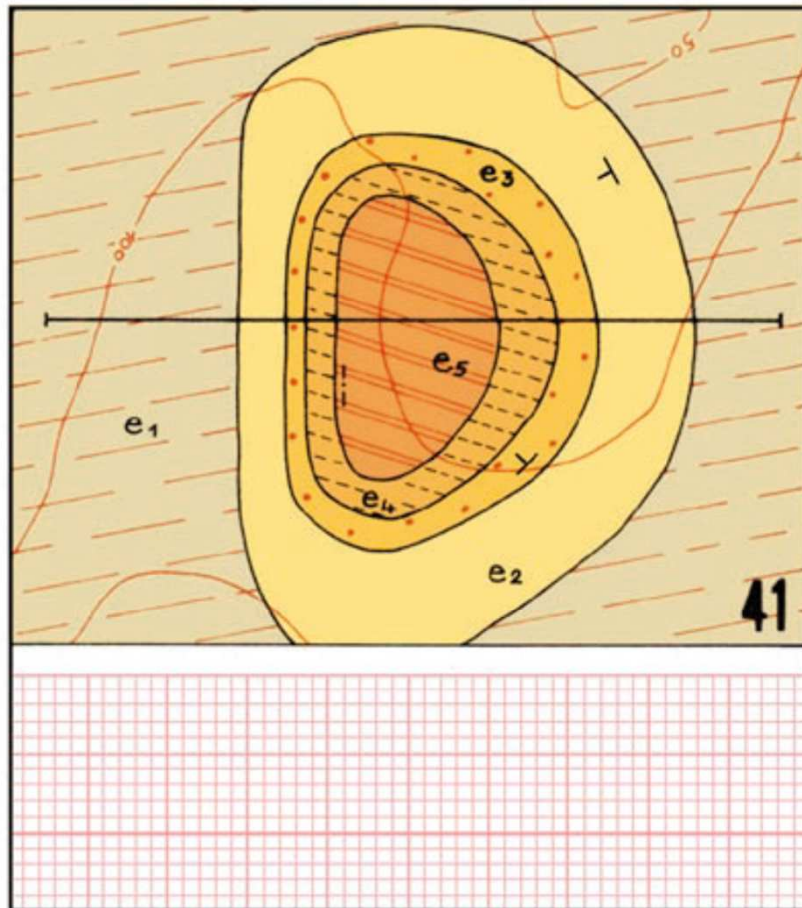
Etude de carte en région faillée : Ornans



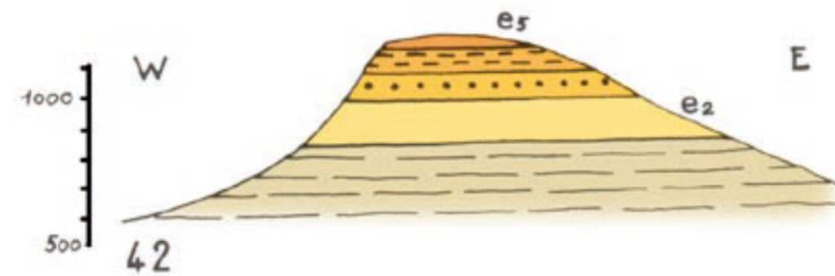
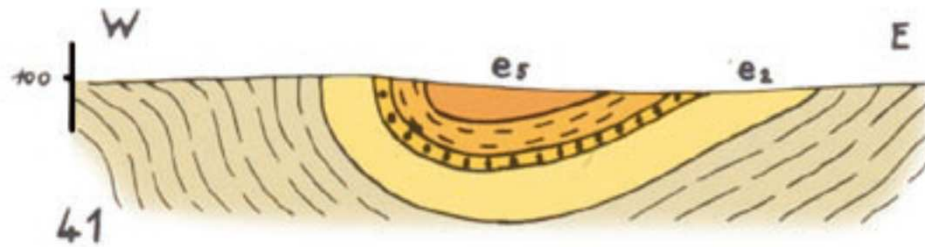
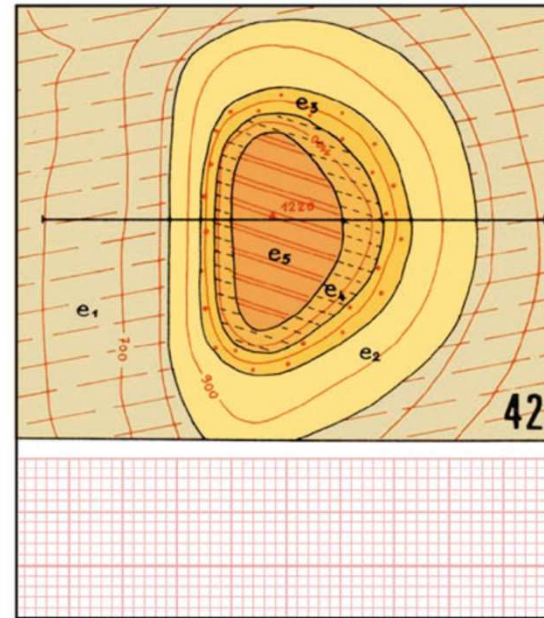
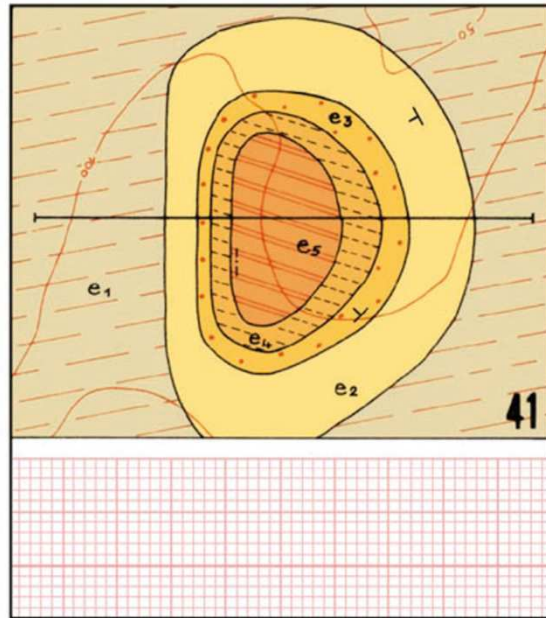
Etude de carte en région faillée : Ornans



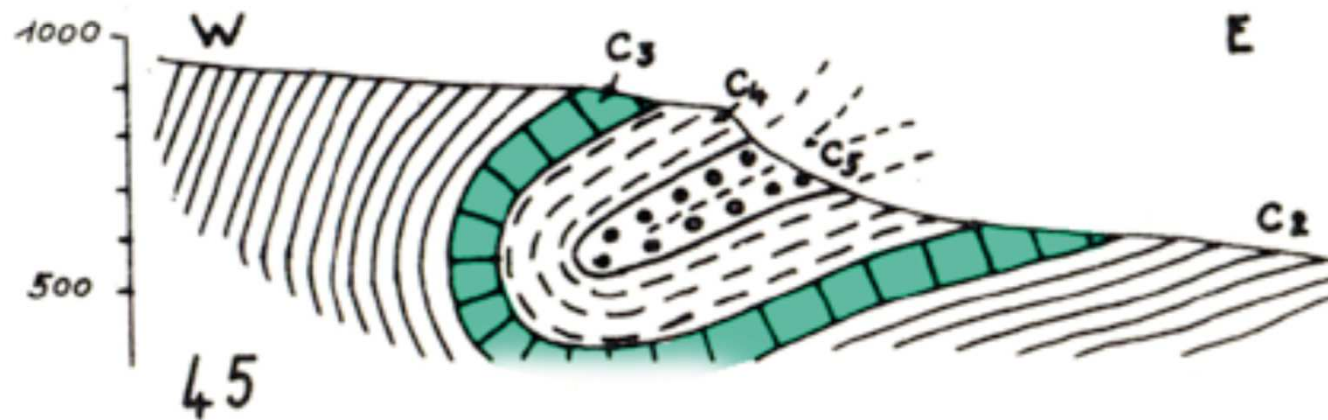
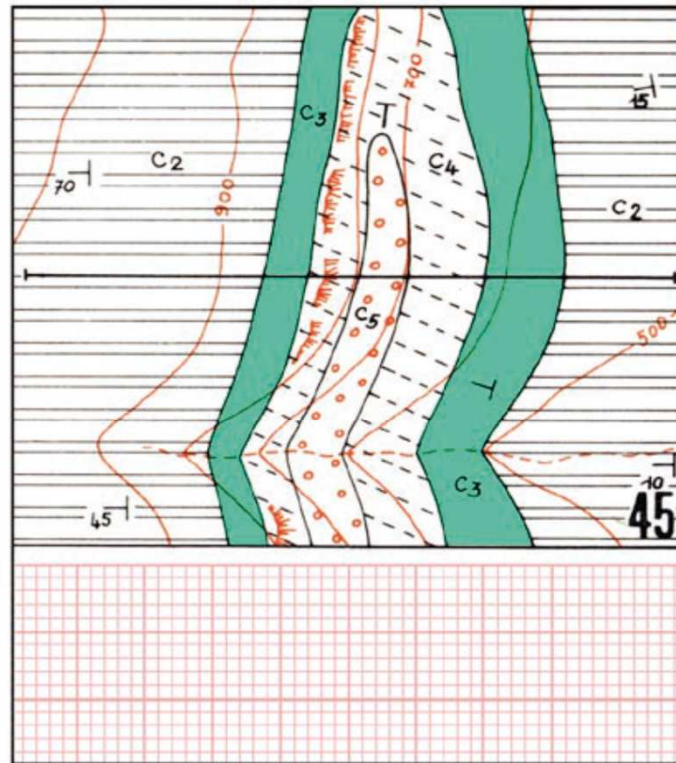
Exercices de cartographie



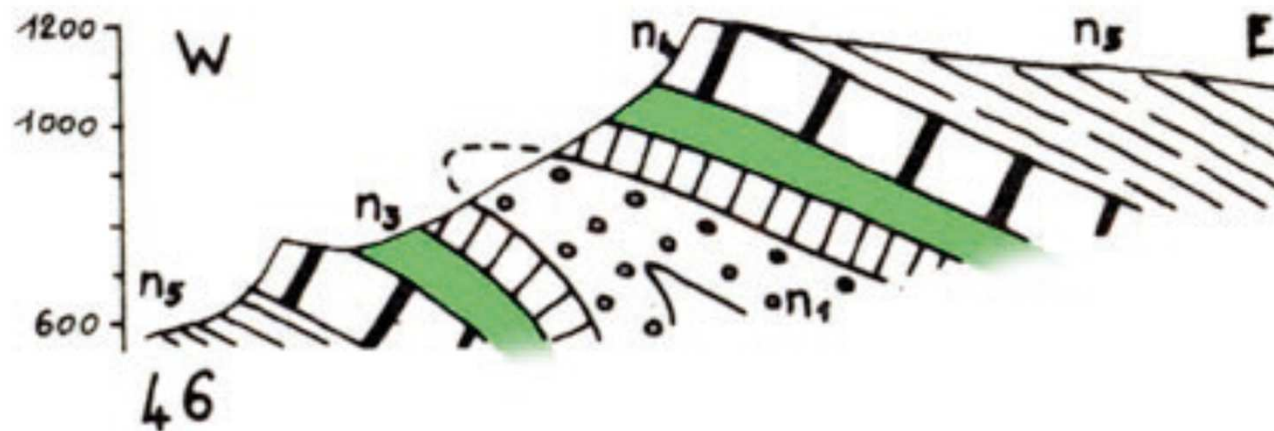
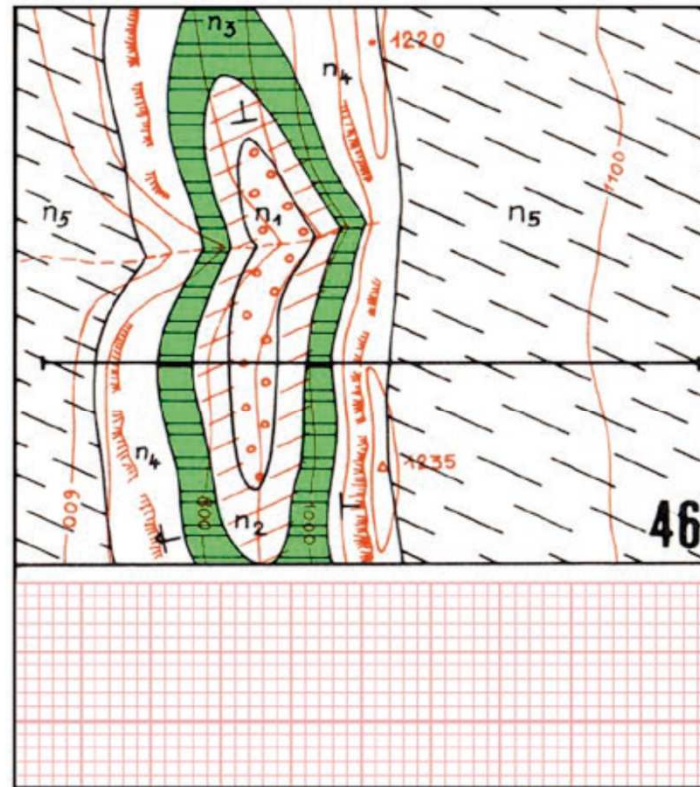
Exercices de cartographie



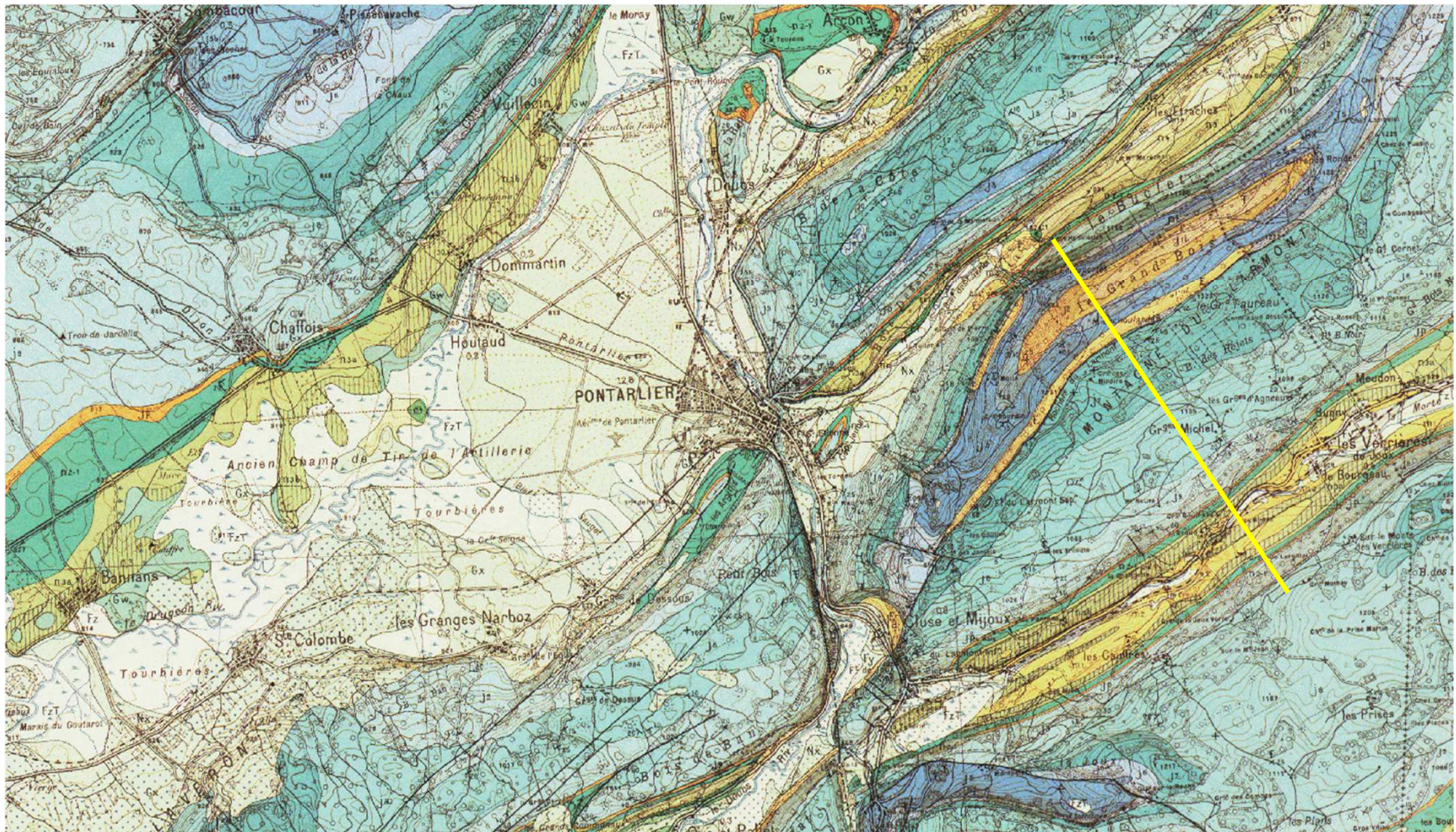
Exercices de cartographie

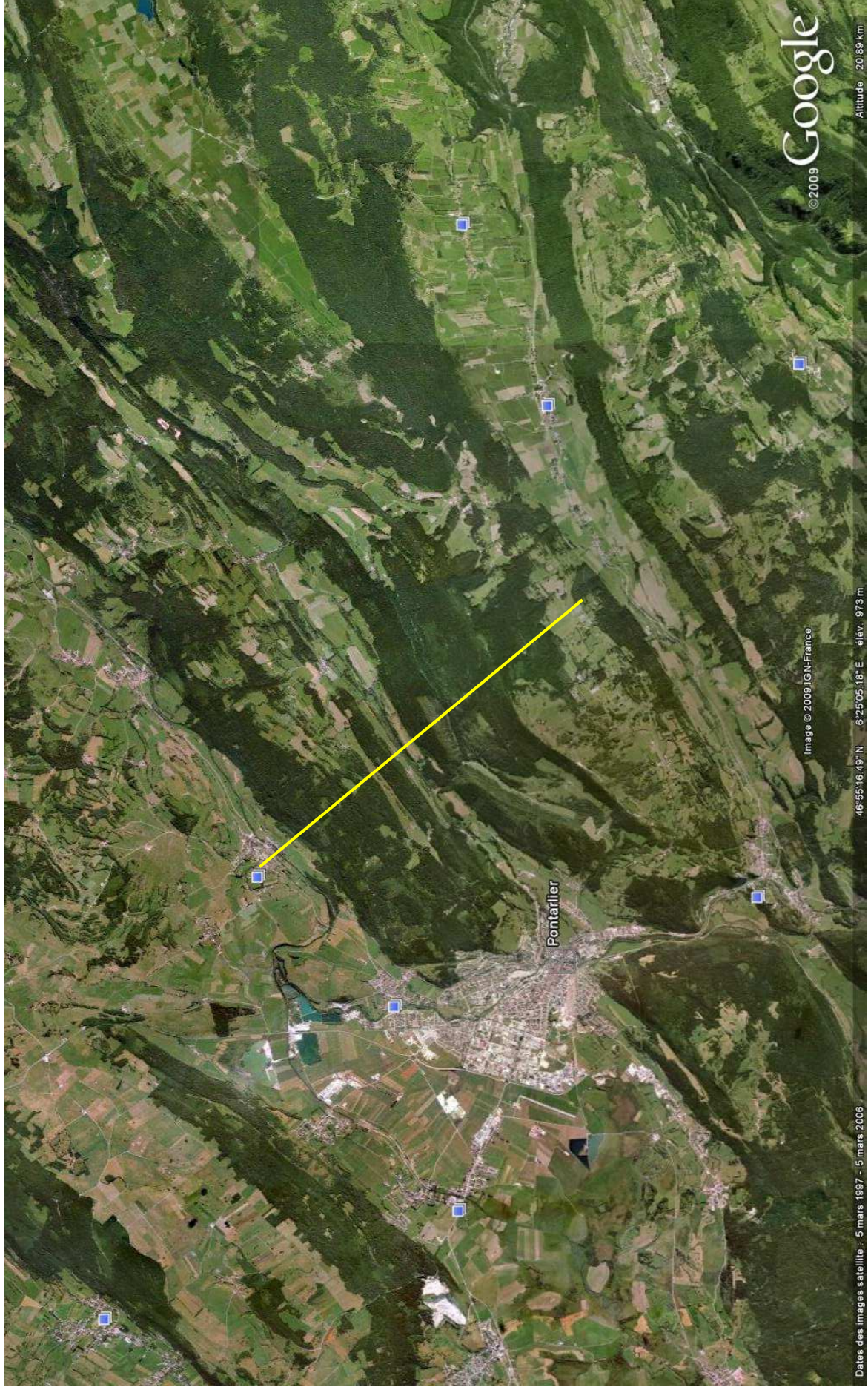


Exercices de cartographie



Etude de carte en région déformée : Pontarlier





Google
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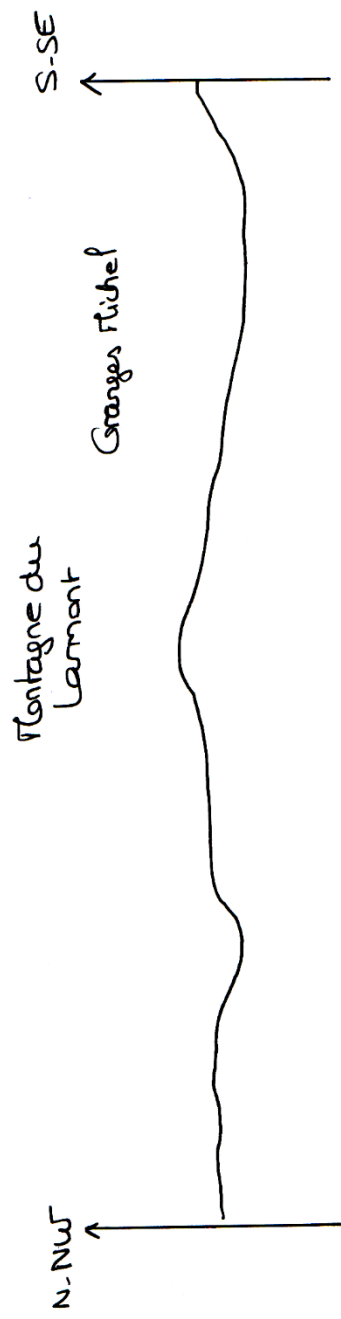
Altitude : 20.89 km

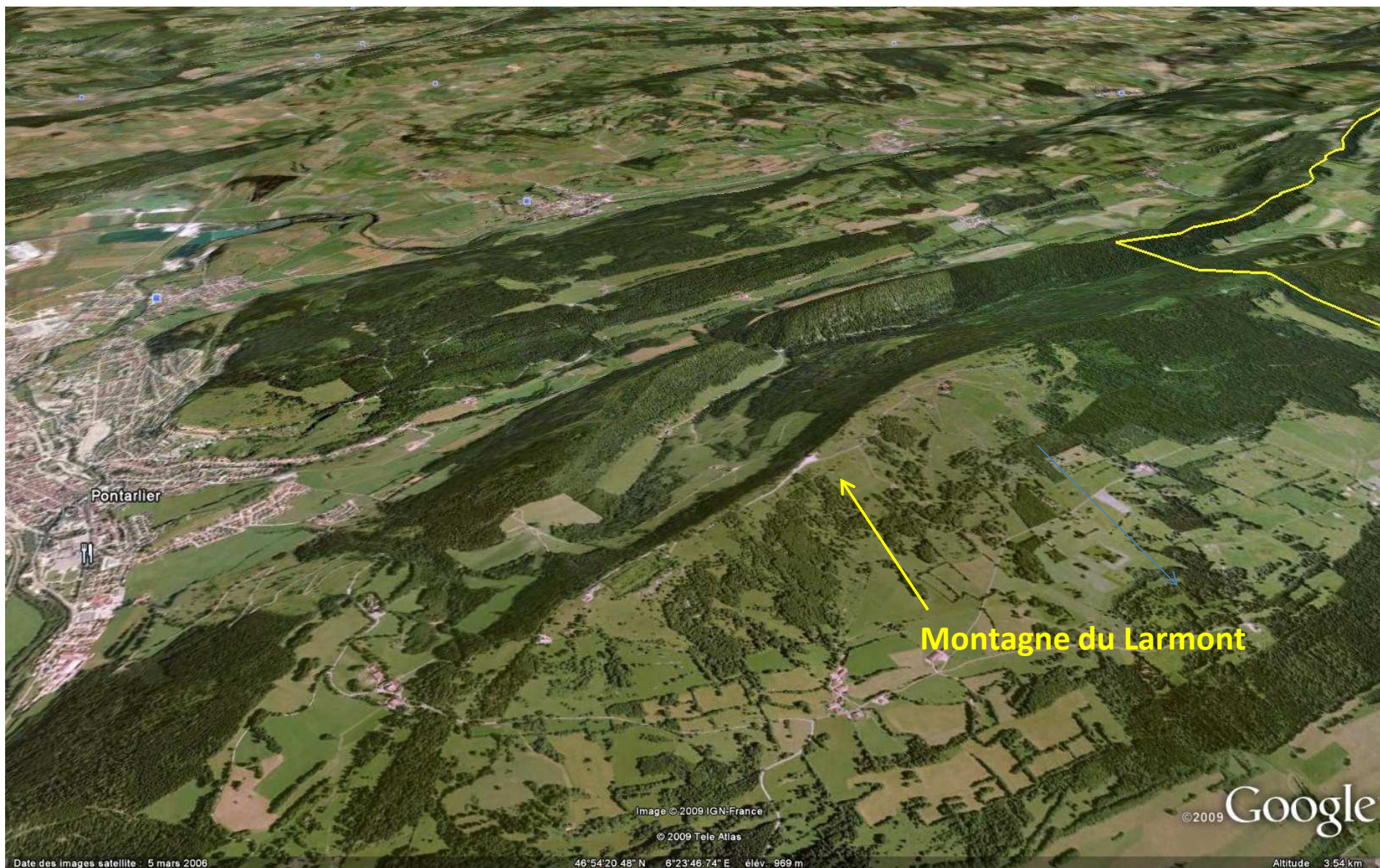
Image © 2005 | IGN-France

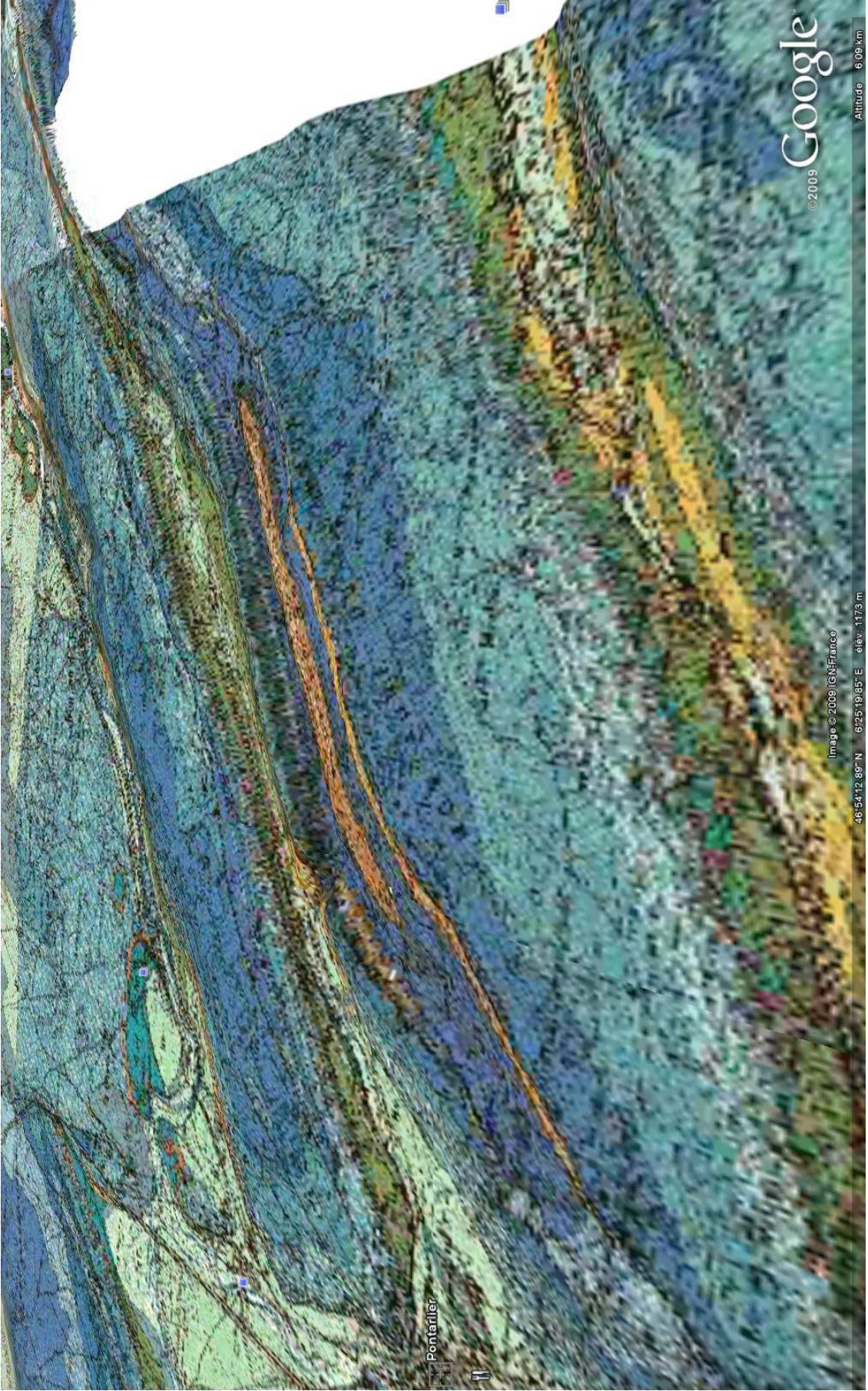
48°55'16.48"N - 8°25'05.18"E - elev. 973 m

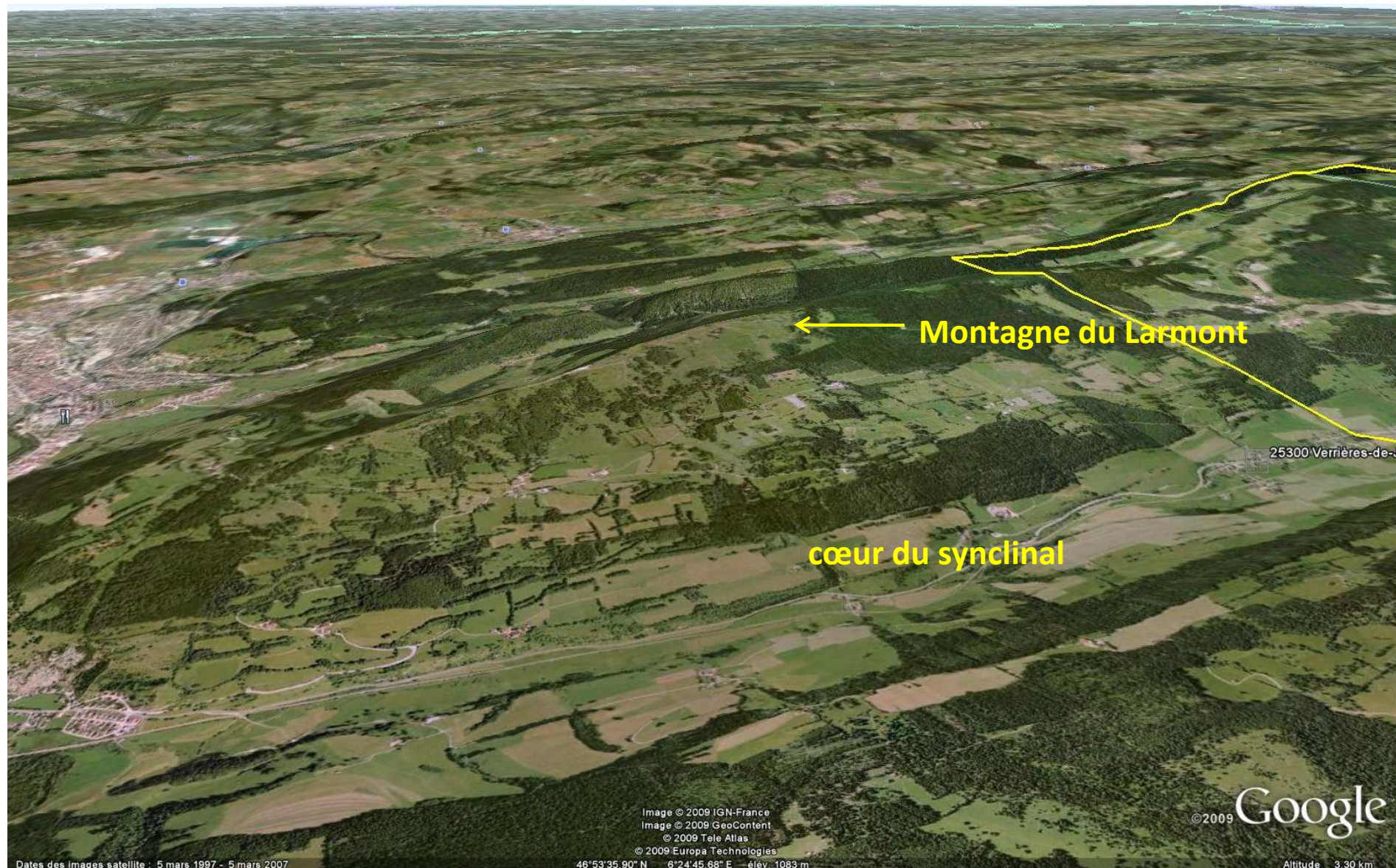
Dates des images satellite : 5 mars 1997 - 5 mars 2006

Pontarlier









← Montagne du Larmont

cœur du synclinal

25300 Verrières-de-Jo

©2009 Google

Image © 2009 IGN-France
Image © 2009 GeoContent
© 2009 Tele Atlas
© 2009 Europa Technologies
Dates des images satellite : 5 mars 1997 - 5 mars 2007
46°53'35.90" N 6°24'45.68" E - élév. 1083 m

Altitude 3.30 km

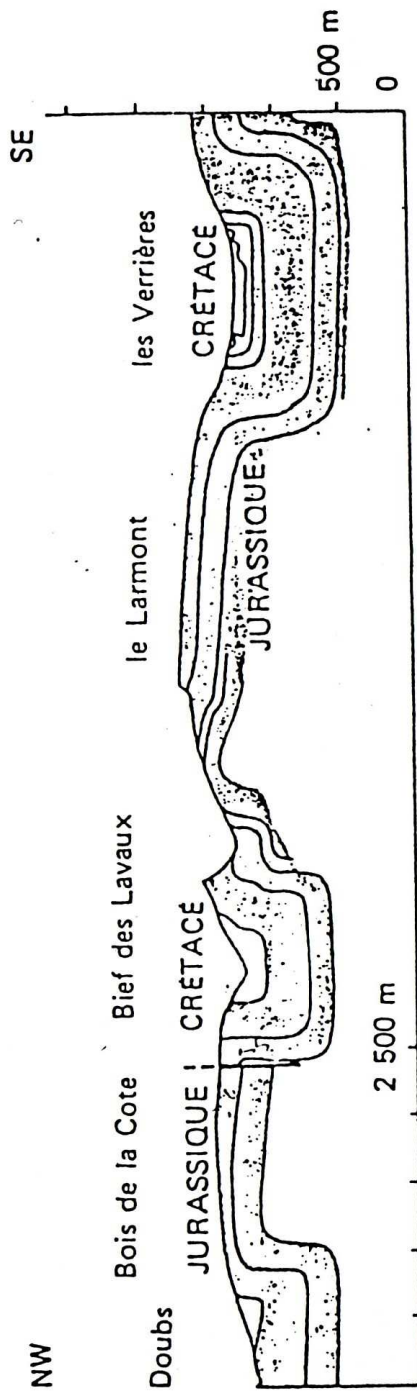
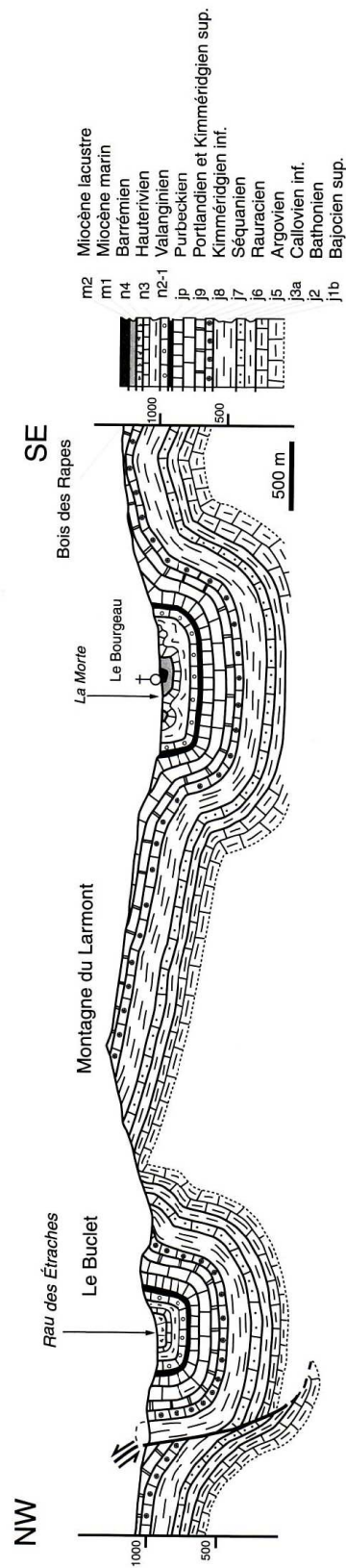
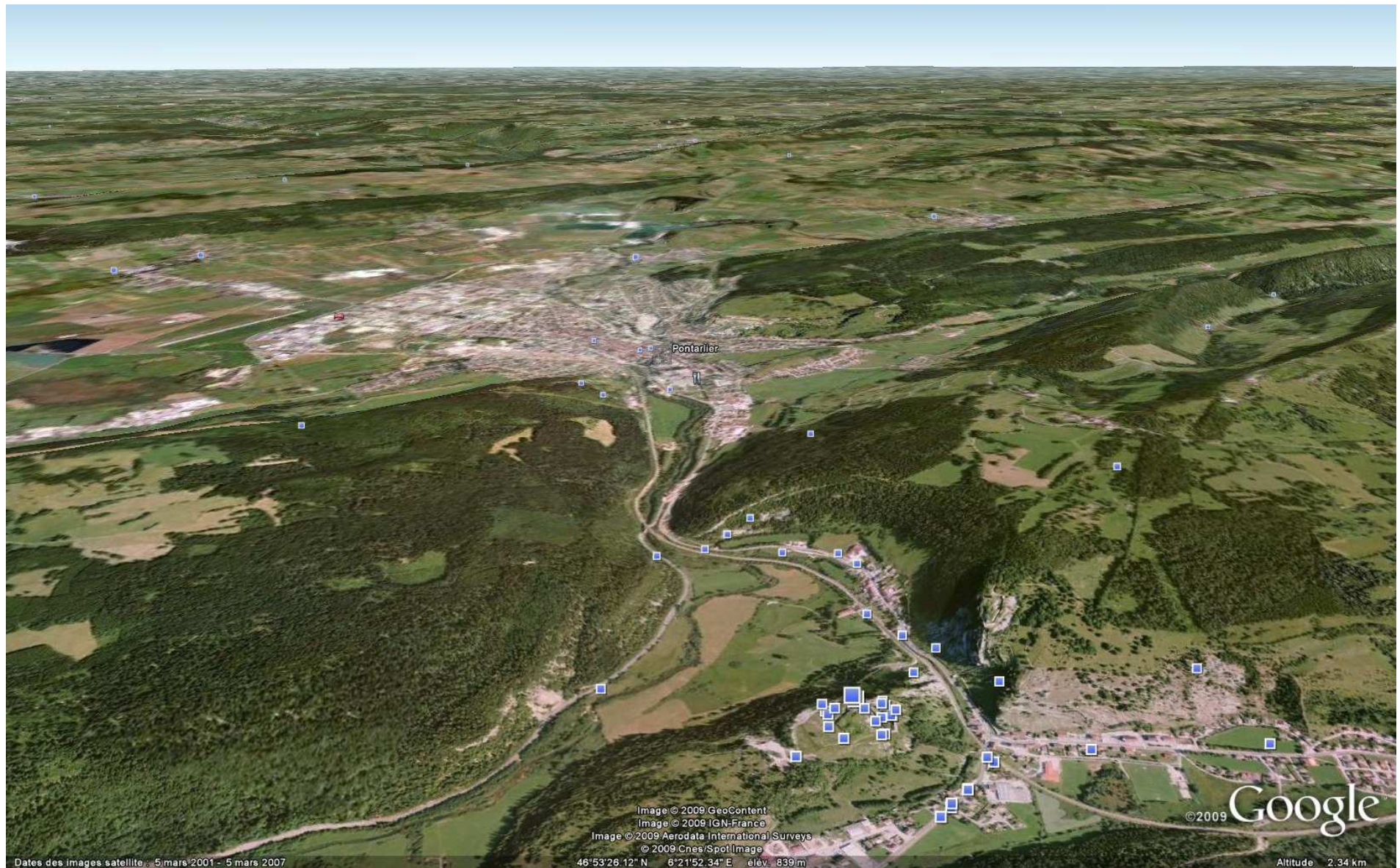


Fig. 17.12. Coupe schématique du Jura à l'Est de Pontarlier. On notera les synclinaux coiffés du Bief des Lavaux et des Verrières et l'anticlinal coiffé du Larmont.



Accident de Pontarlier



Accident de Pontarlier

