

# **Etricourt-Manancourt (Somme, France): A Reference Loess Sequence and Archaeological Site for the Last 350 ka**

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Magali Barré, Romain Giros, Michel Lamothe, Elie Dabrowski

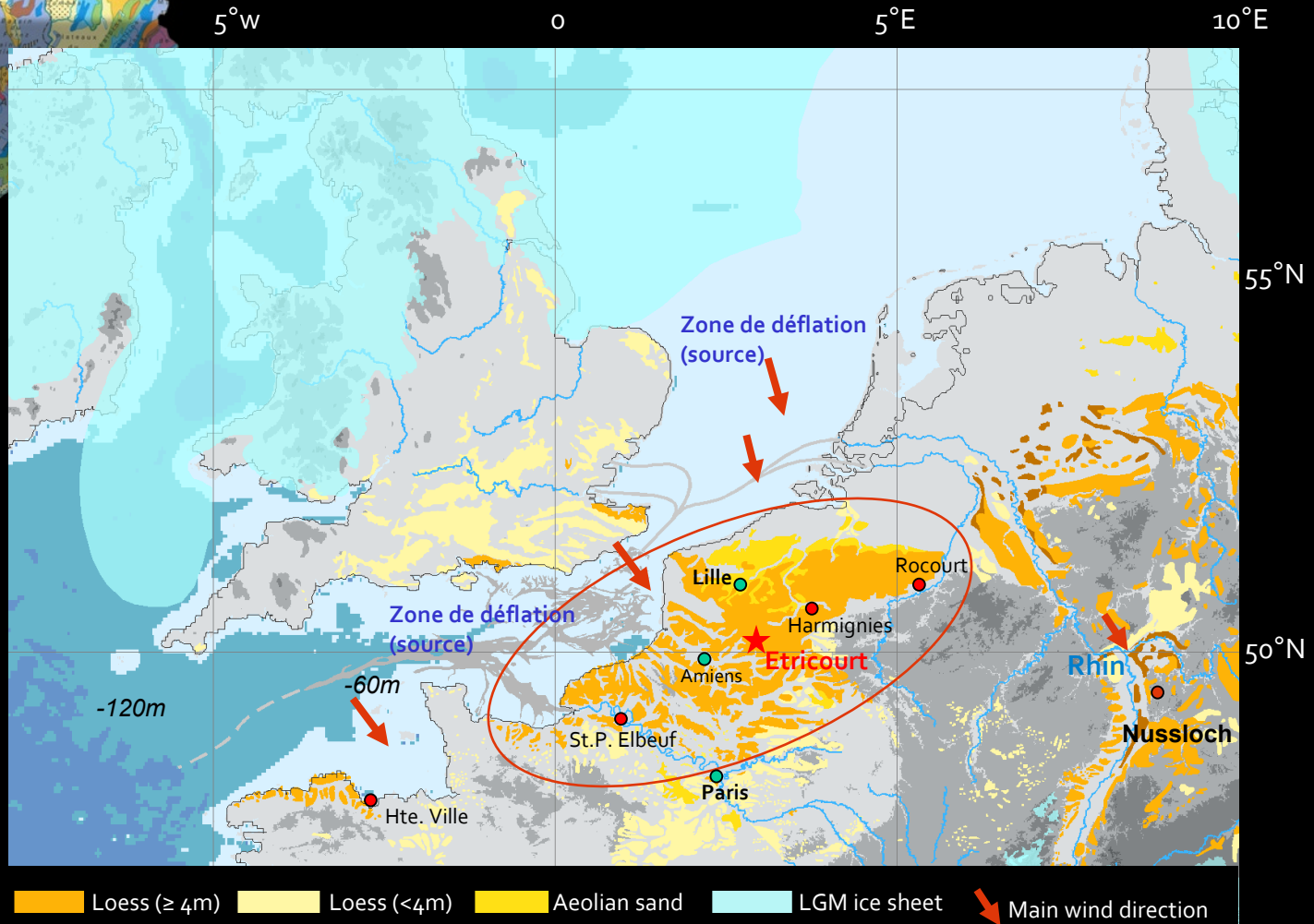


@david\_herisson



*Workshop Loess and Archaeology  
RWTH Aachen University, Germany, 27-29 November 2019*

# Regional geological context



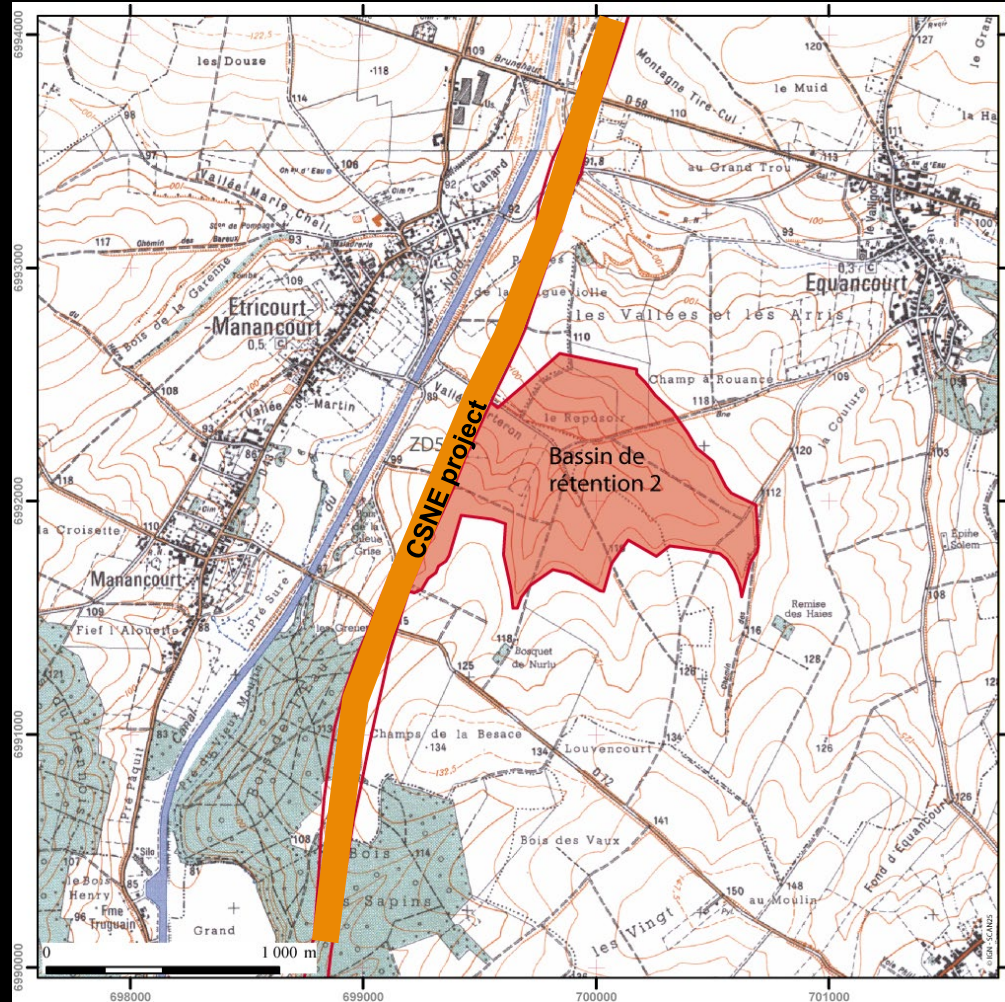
In progress: loess after Hasse *et al.*, 2009 & Antoine *et al.*, 2003, modified; ice sheets after Elhers & Gibbard, 2011

# Geographic location of Etricourt-Manancourt

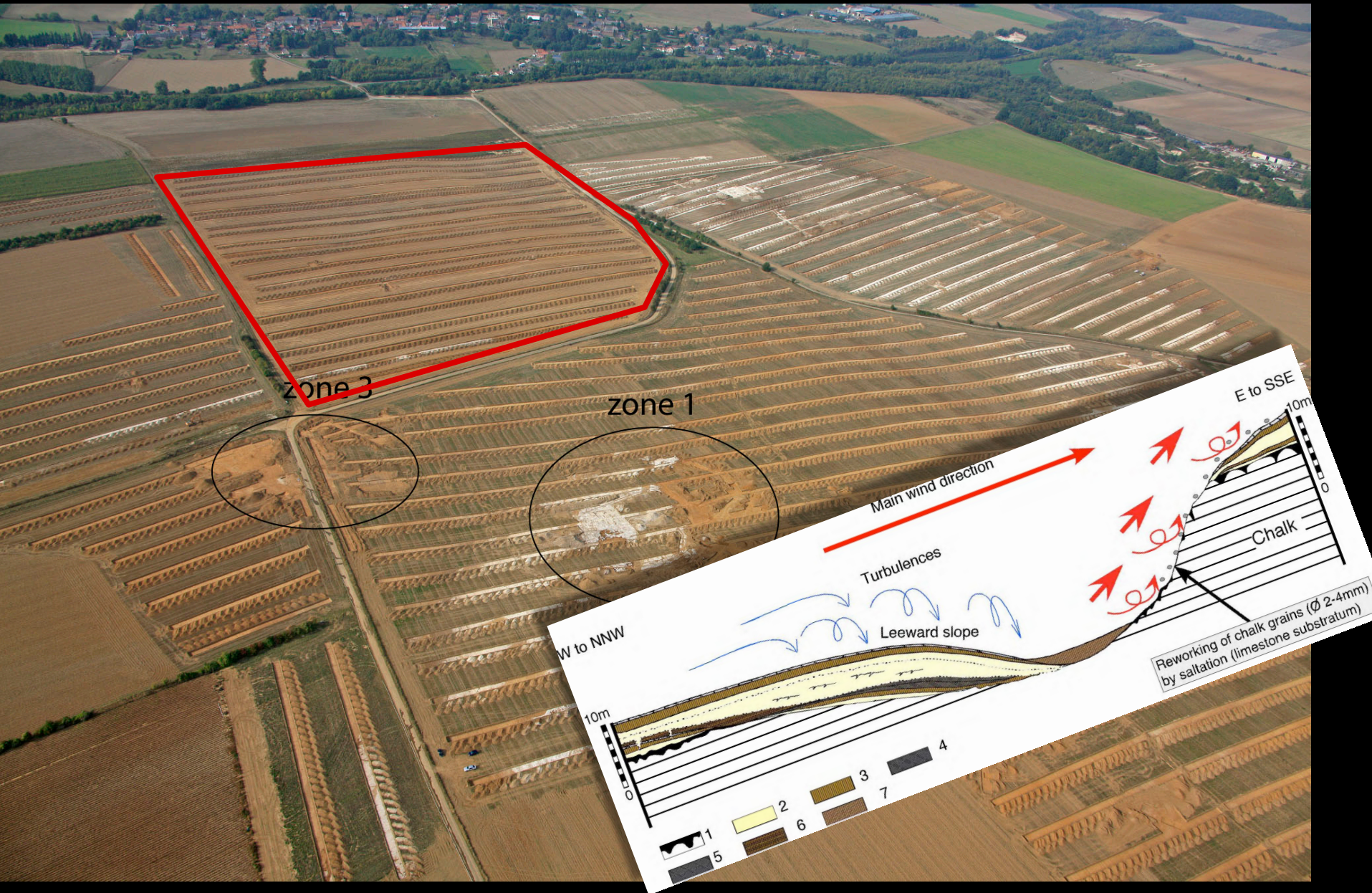
## Canal SNE project layout



## Retention basin layout at Etricourt



# Intervention zone and diagnostic results

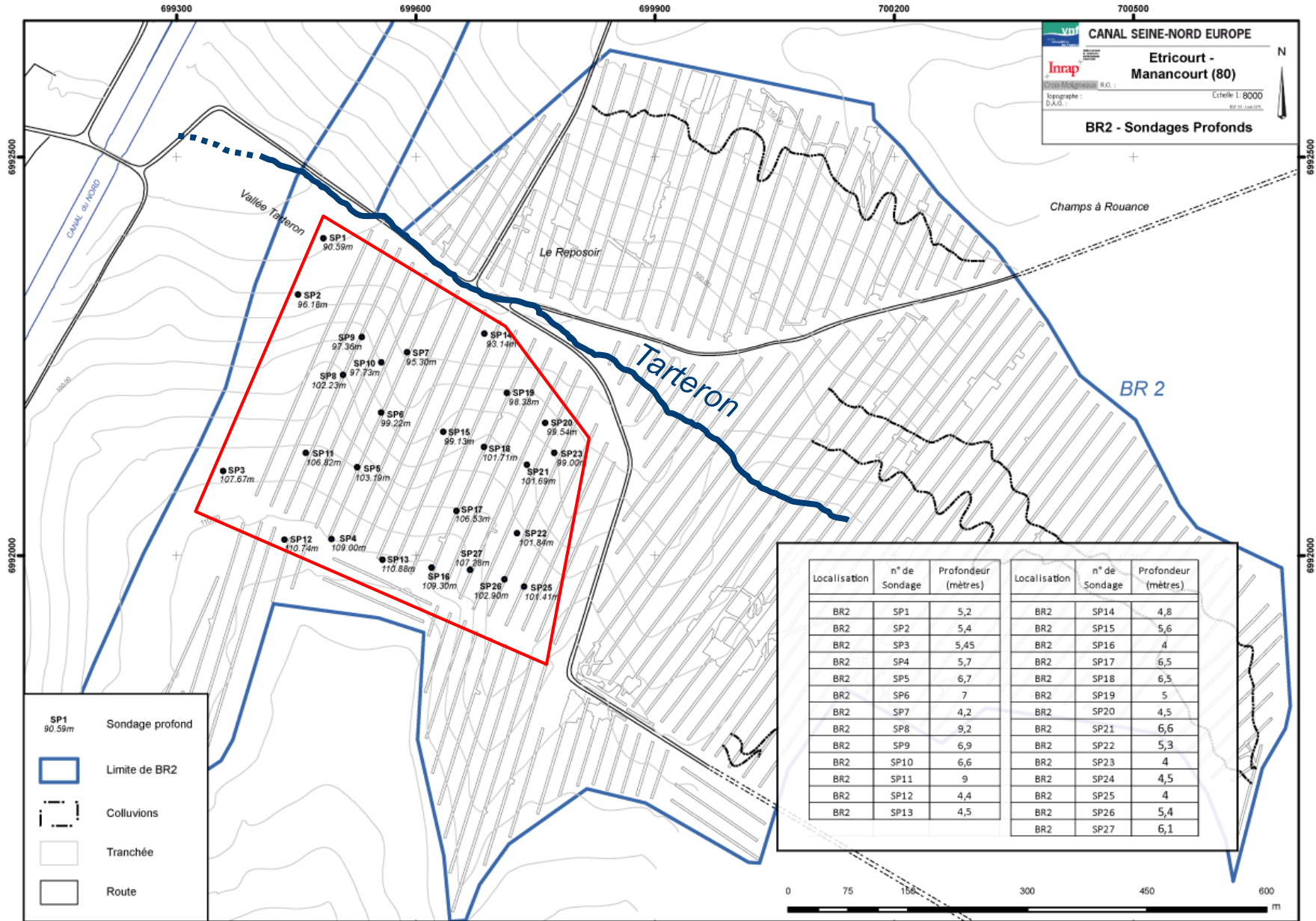


# Intervention zone and diagnostic results

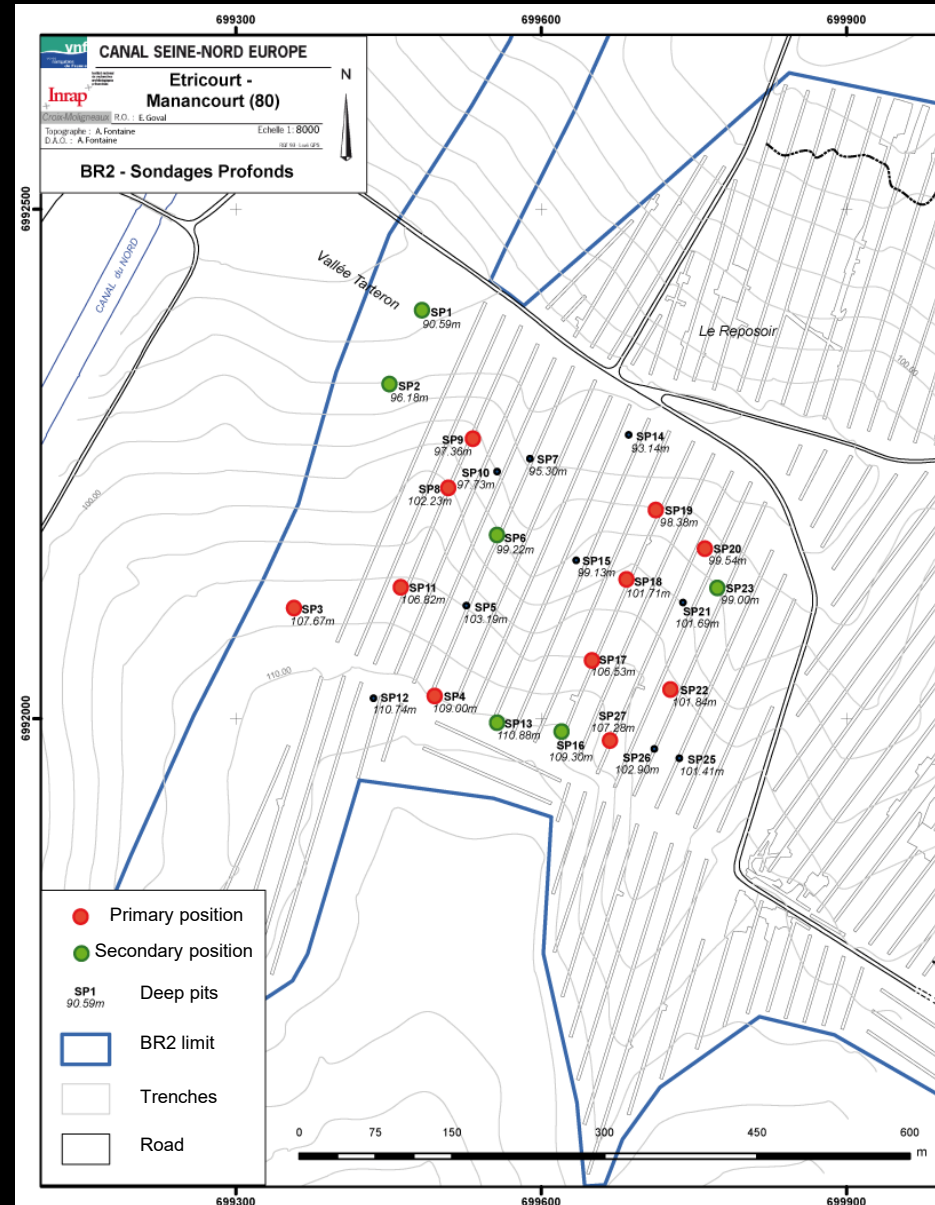
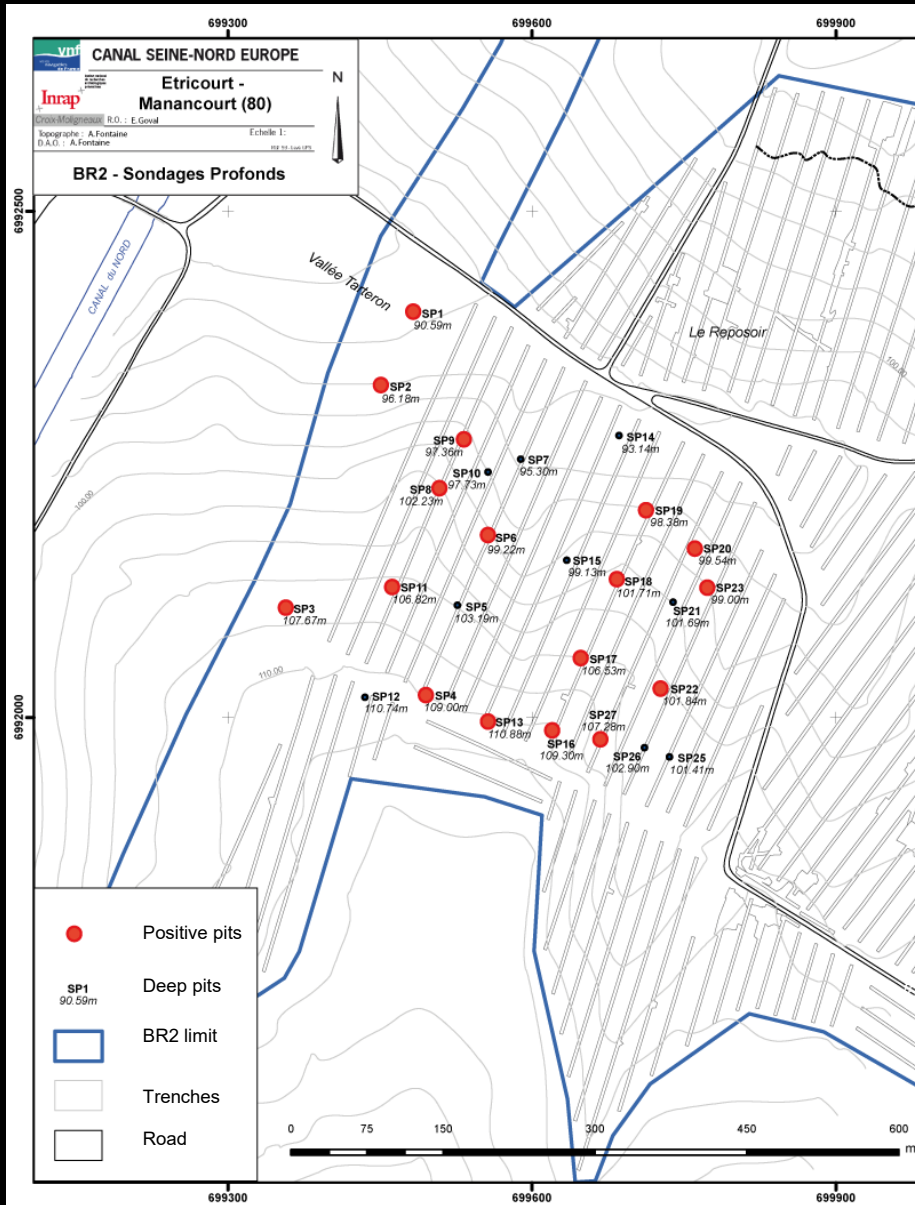
Diagnostic by E. Goval 2010



27 deep pits until 9m on 170 000 m<sup>2</sup>

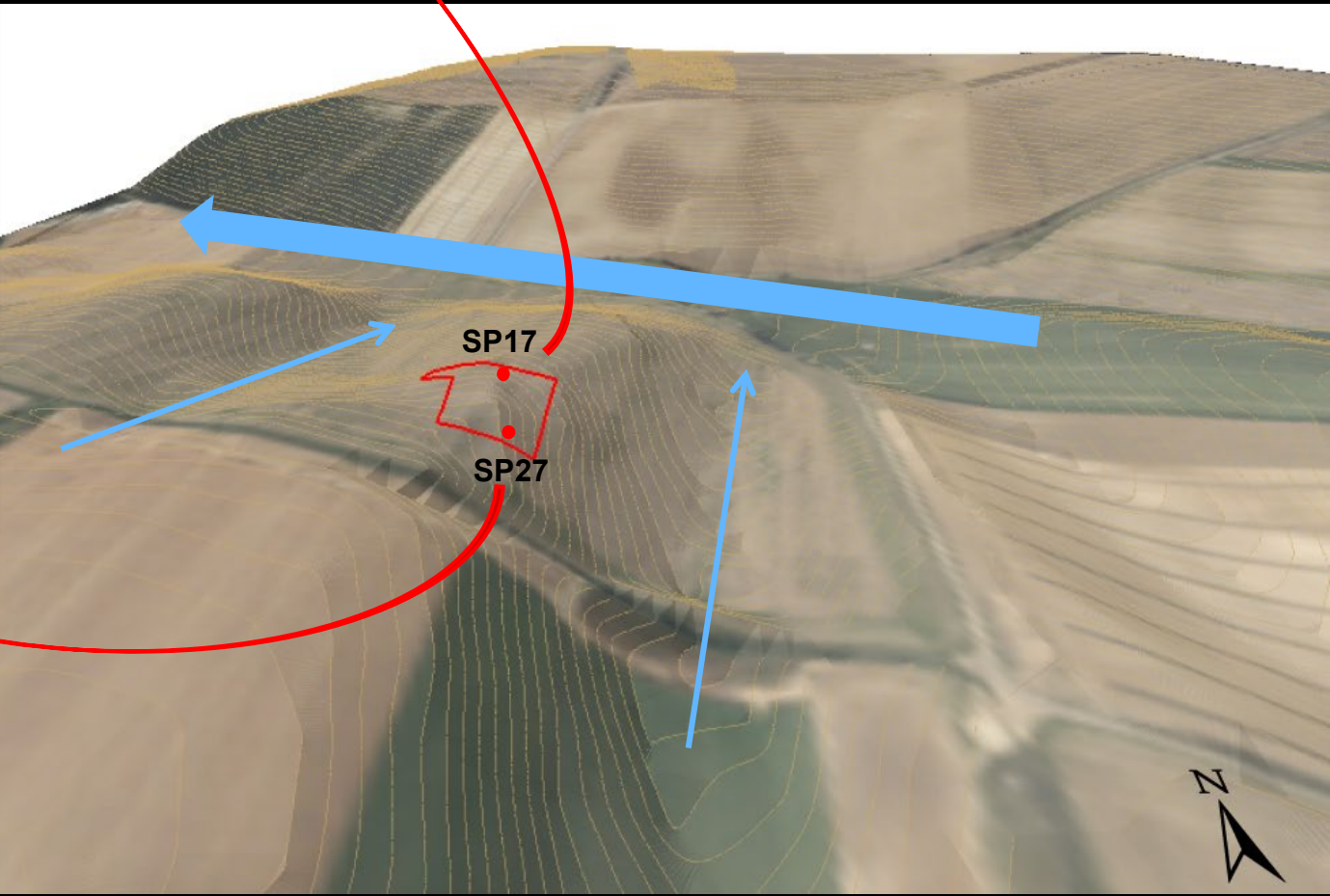
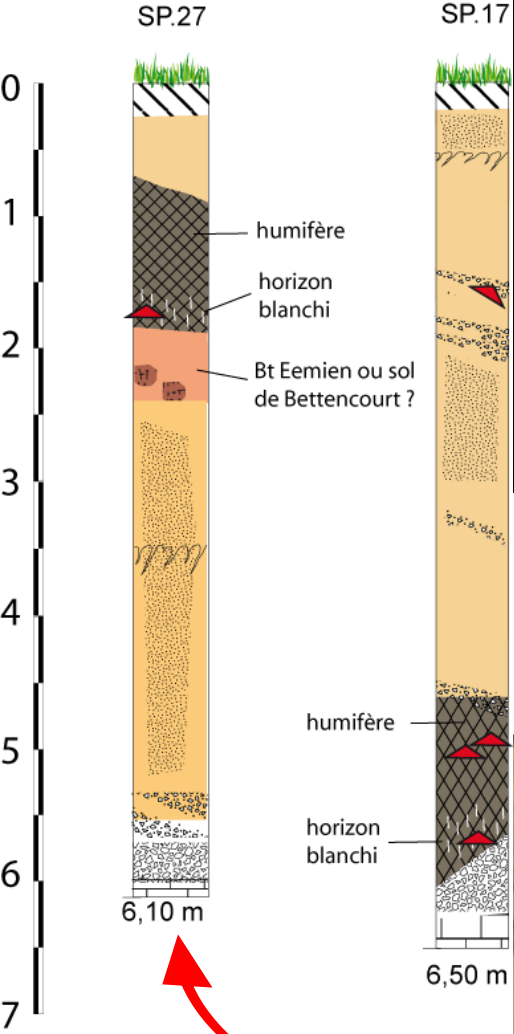


# Intervention zone and diagnostic results



10 negative deep pits – 17 positive deep pits → 11 DP primary position – 6 DP secondary position

# Topographic and geomorphologic context



# Some numbers:

# The excavation

2012

Six months

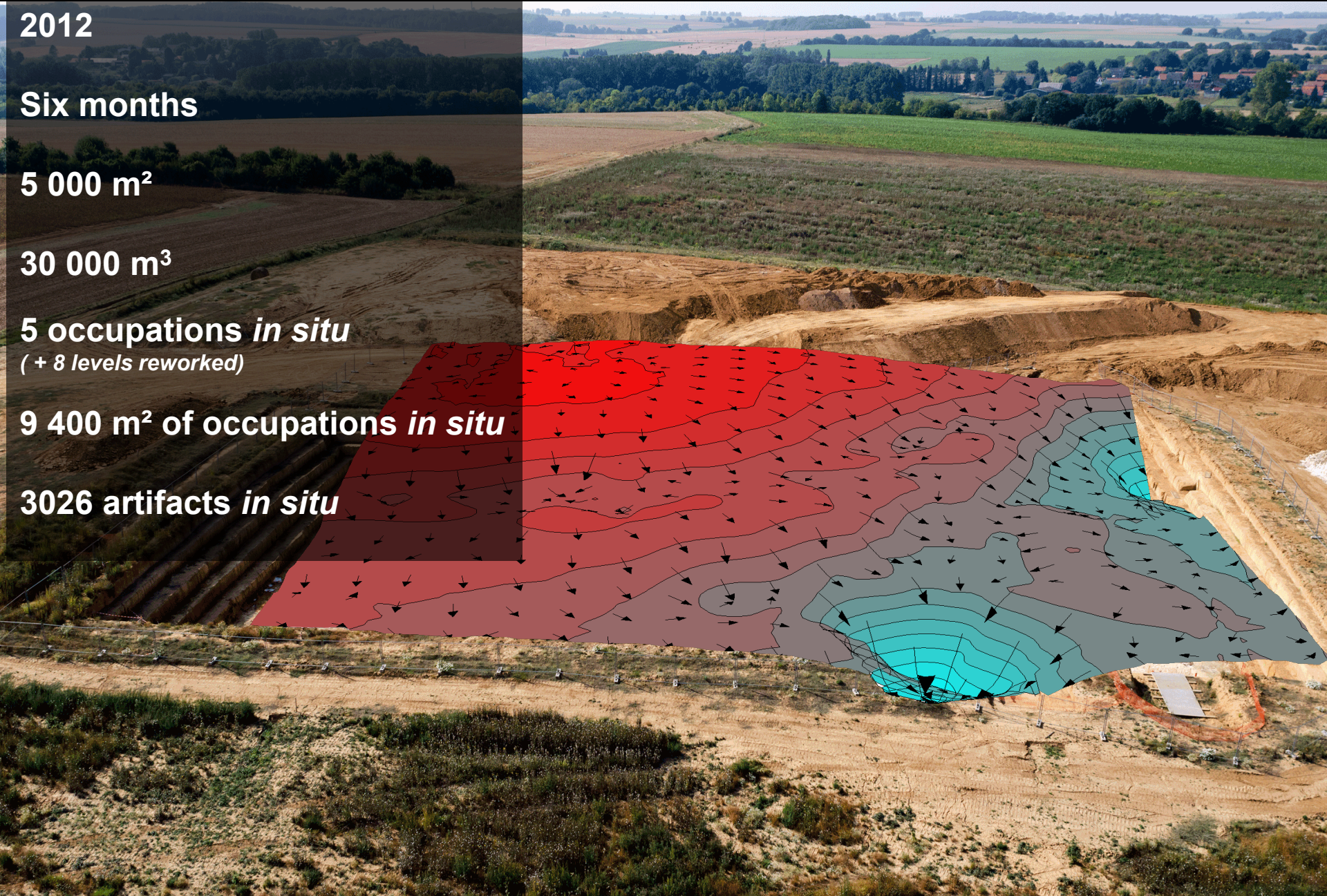
5 000 m<sup>2</sup>

30 000 m<sup>3</sup>

5 occupations *in situ*  
(+ 8 levels reworked)

9 400 m<sup>2</sup> of occupations *in situ*

3026 artifacts *in situ*





# The excavation



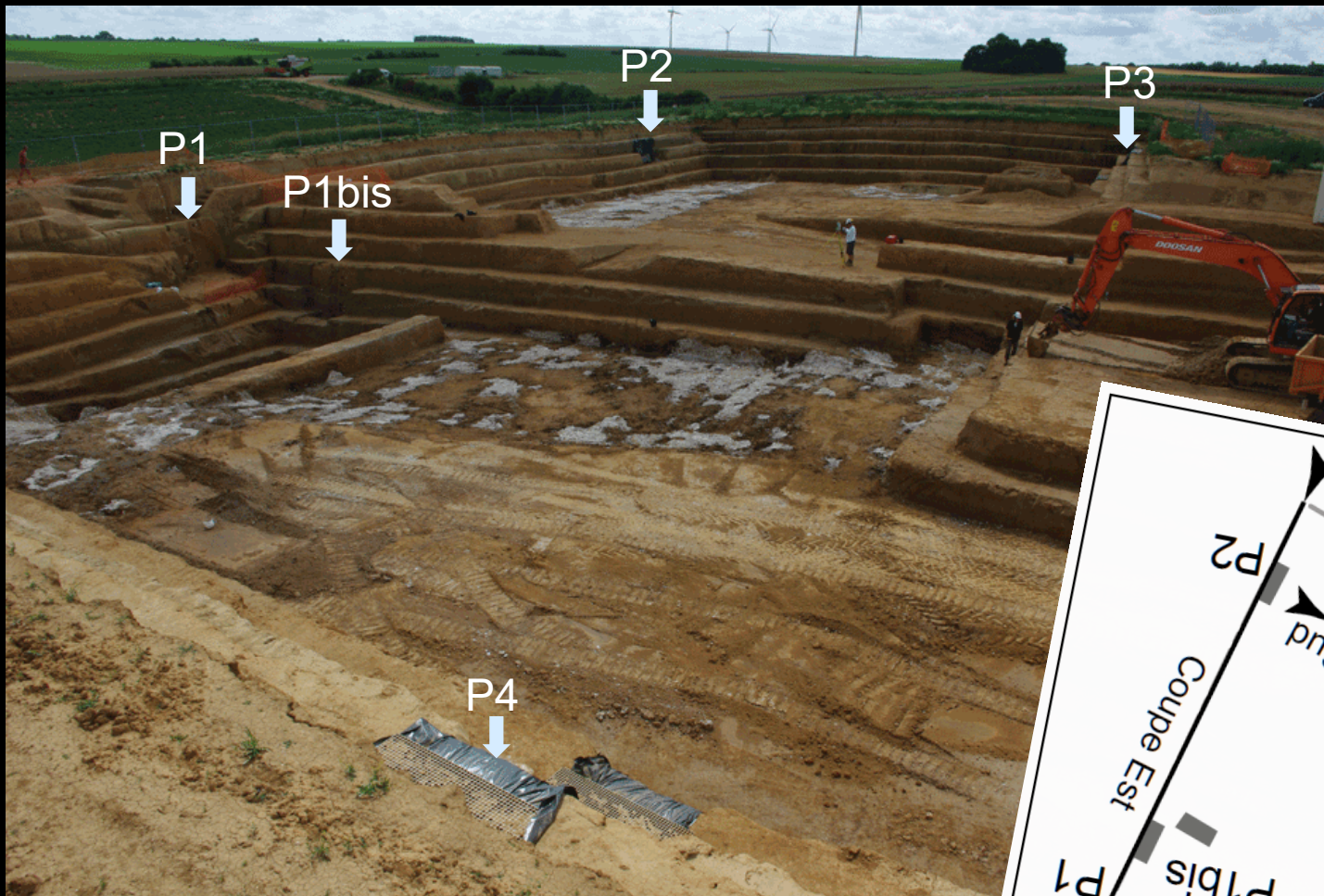
# An exceptional stratigraphy






# An exceptional stratigraphy



# A reliable chronostratigraphical approach based on the sequential analysis



-  Coupe
-  Profil de référence
-  Emprise de la fouille

# A reliable chronostratigraphical approach based on the sequential analysis

**Continuous column with  
high resolution (1 sample / 5 cm)  
=> 380 samples on 12 m**

- ✓ Sedimentology
- ✓ Magnetic susceptibility
- ✓ COT (CHN, NF ISO 10694)
- ✓ Micromorphology (110 blocks)
- ✓ Loess mineralogy



## Dating on sediment

- ✓ IRSL
- ✓ OSL (VSL, TTOSL ?...to be done)



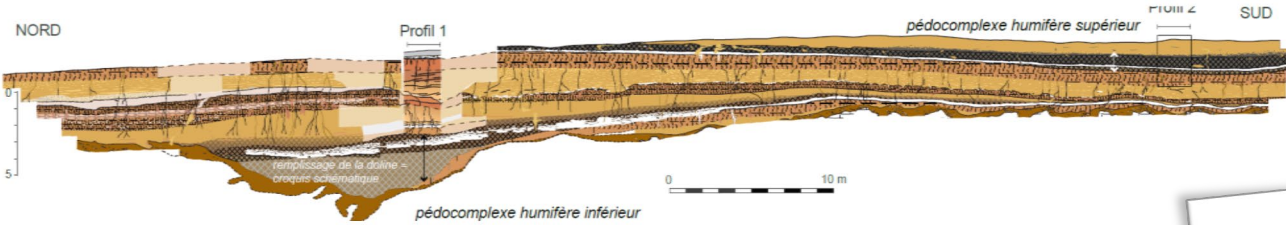
## Dating on artifact

- ✓ TL on burnt flint

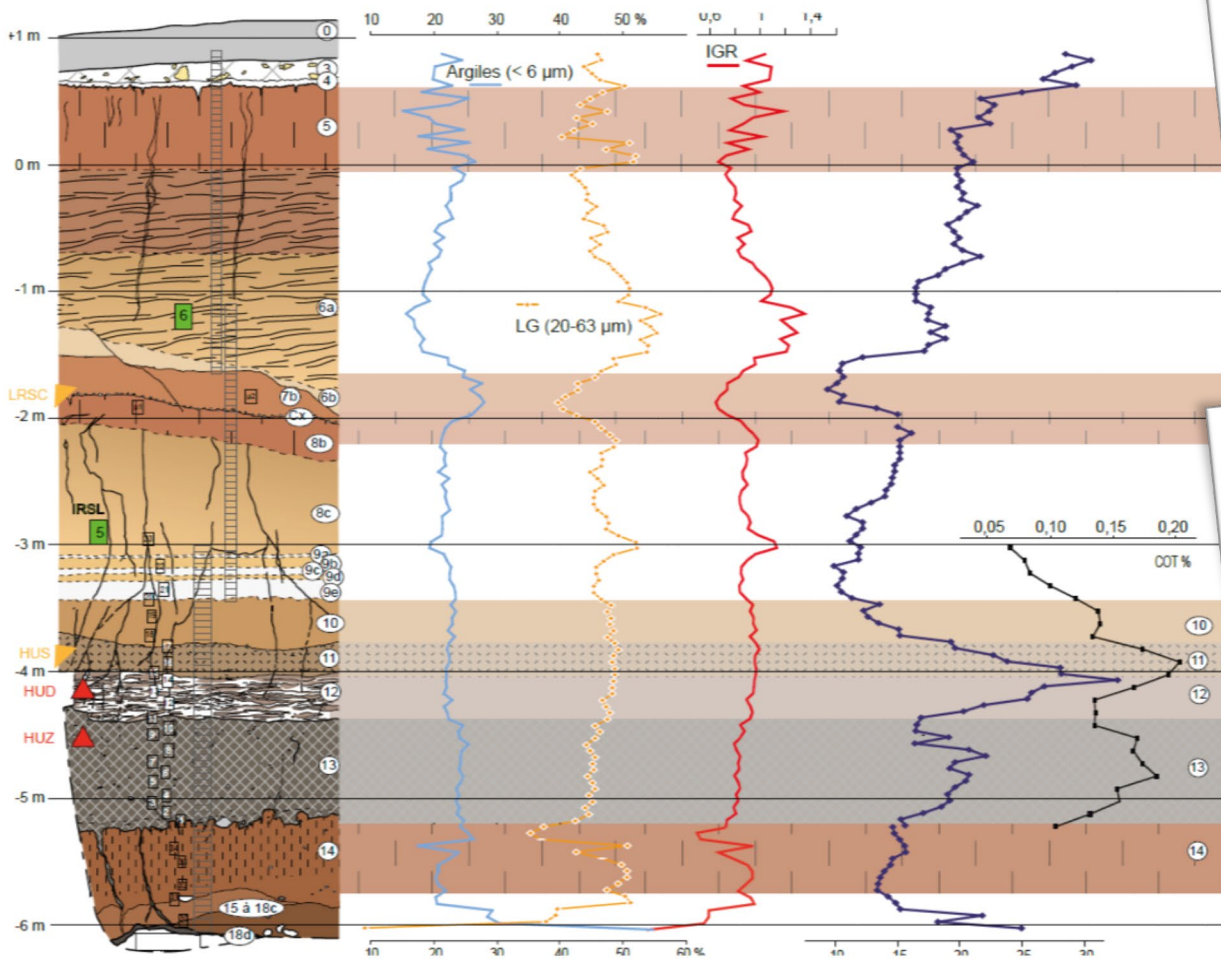


# A reliable chronostratigraphical approach based on the sequential analysis

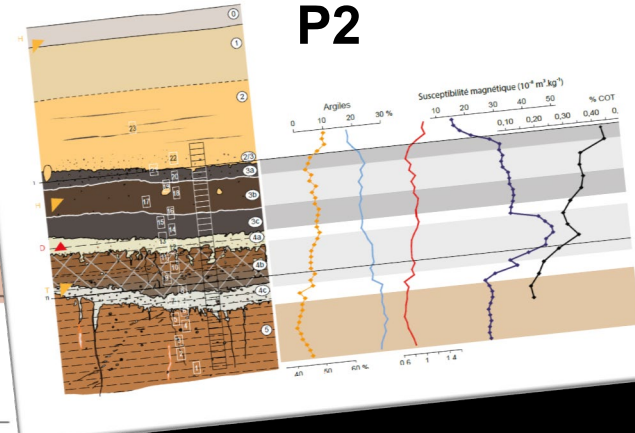
Coutard *et al.*, 2018,  
Quaternaire



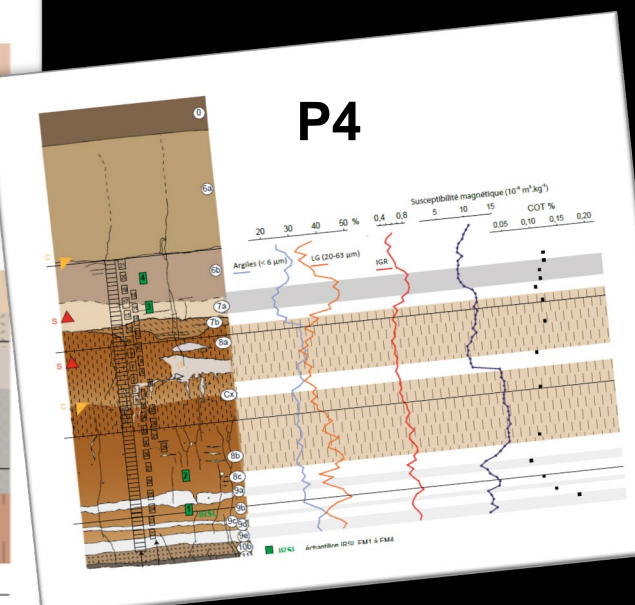
## P1 + P1bis



## P2



## P4



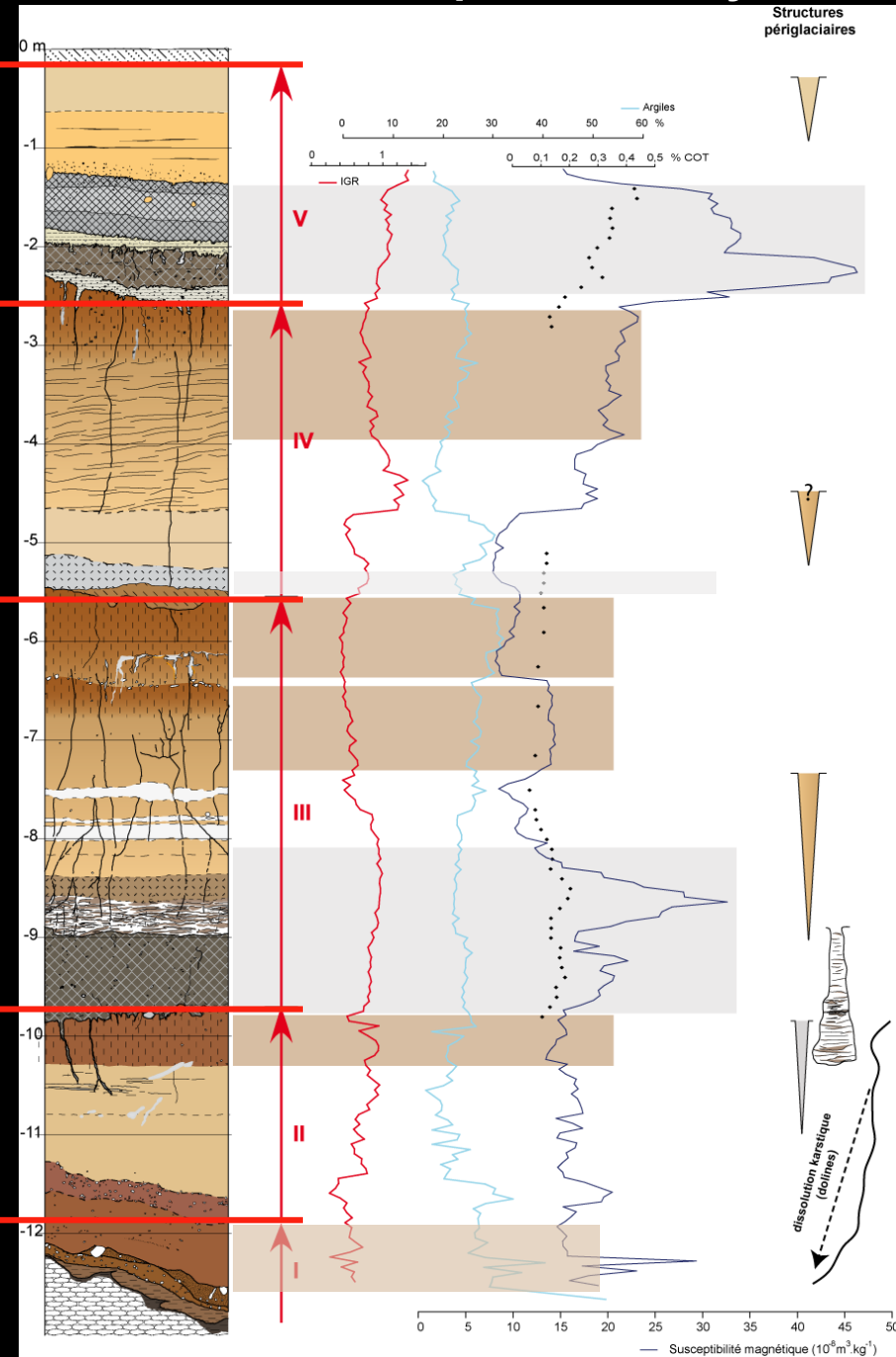
# A reliable chronostratigraphical approach based on the sequential analysis

**5 stacked  
glacial-interglacial  
cycles**

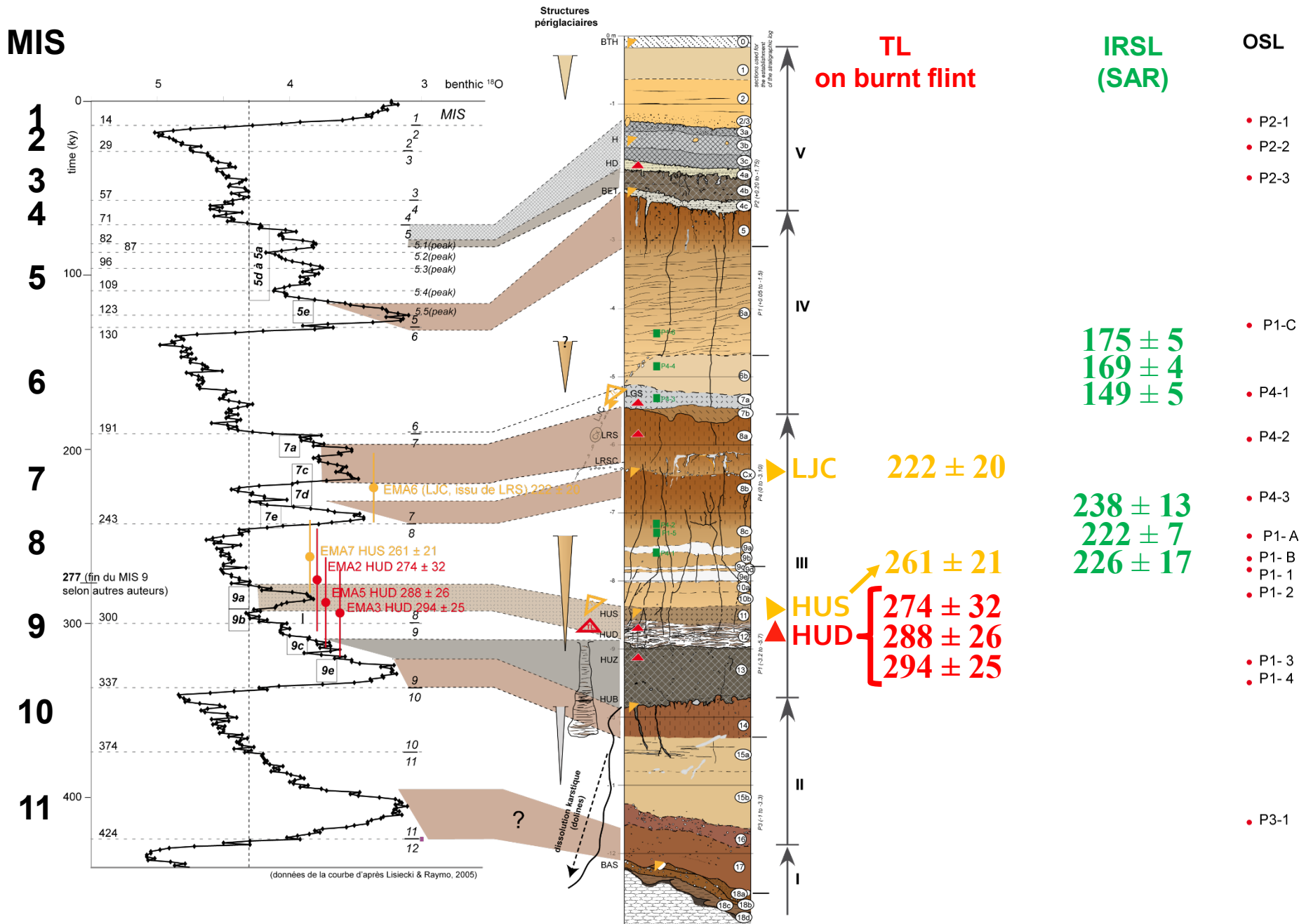
**P2**

**P4**

**P1bis**

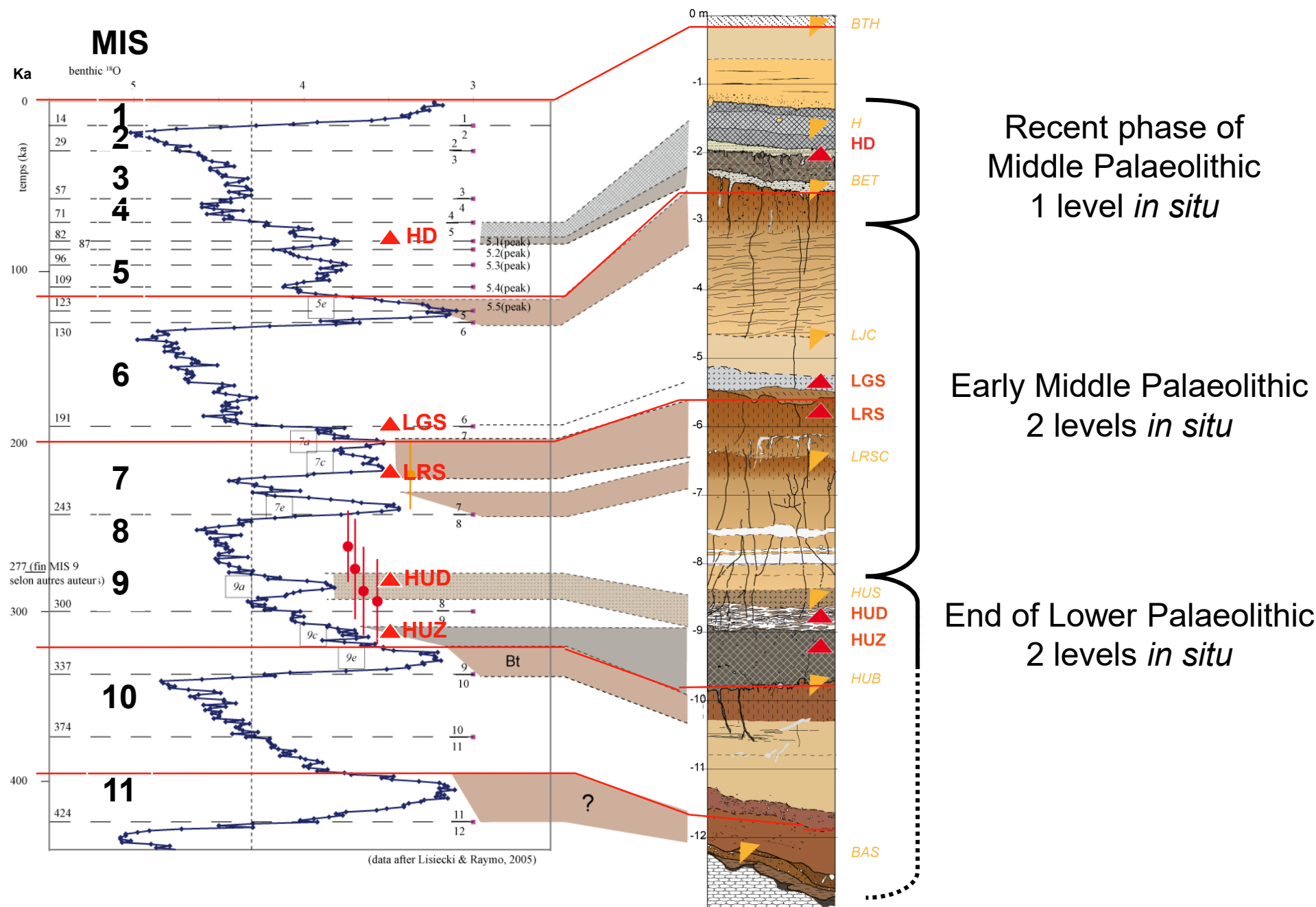


# A reliable chronostratigraphical approach based on the sequential analysis

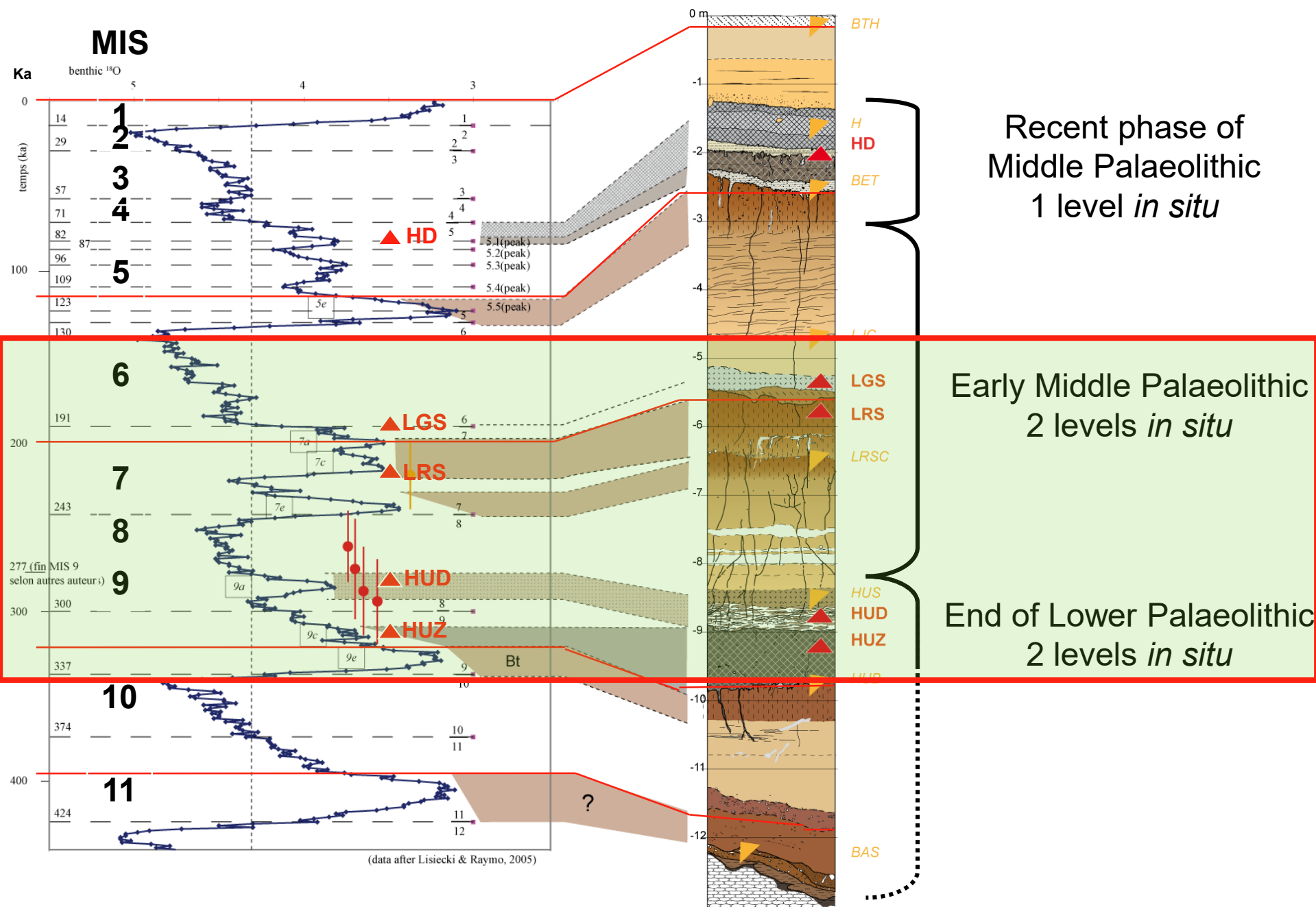




# Chronostratigraphic position of human occupations



# Chronostratigraphic position of human occupations



MIS 4-2 Niv. archéo

# Characteristics of saalian human occupations Distribution

5 HD ▲

6

LGS ▲

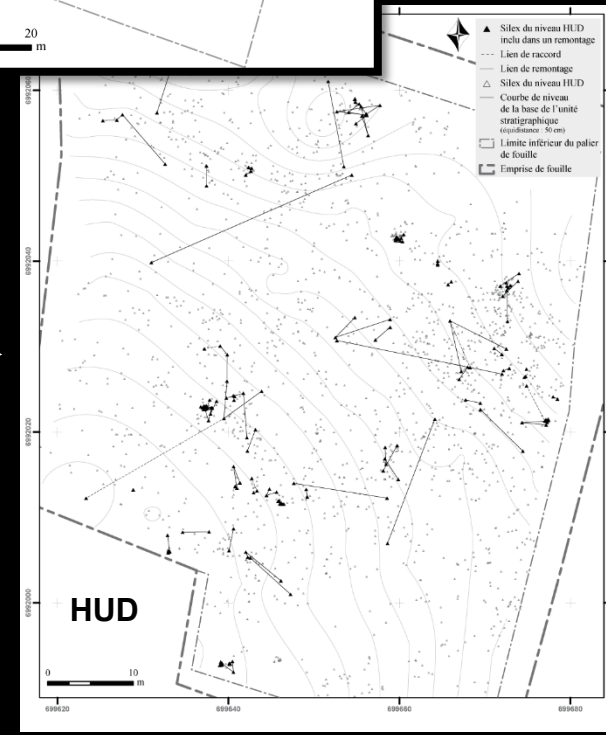
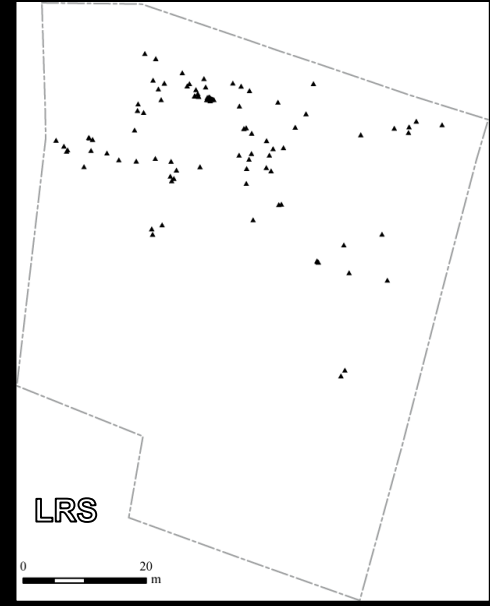
7 LRS ▲

8

HUD ▲

9 HUZ ▲

	Area	Artifacts	Refittings
6	1 500 m <sup>2</sup>	74	
7	2 100 m <sup>2</sup>	141	6 refittings 20 artifacts
8	4 300 m <sup>2</sup>	2 402	56 refittings 229 artifacts
9	400 m <sup>2</sup>	190	7 refittings 23 artifacts

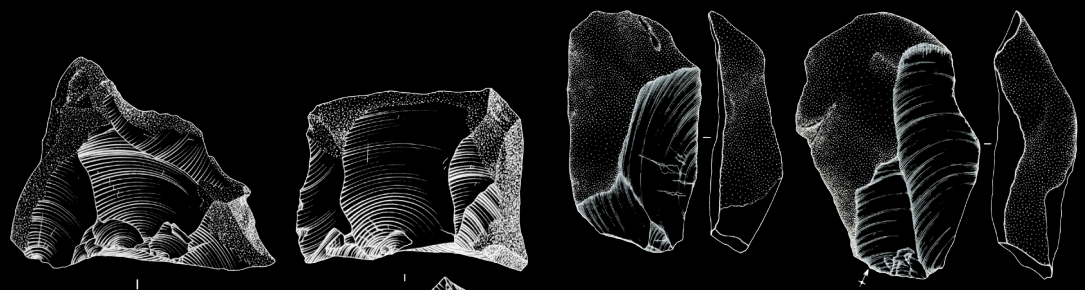


MIS 4-2 Niv. archéo

# Characteristics of saalian human occupations

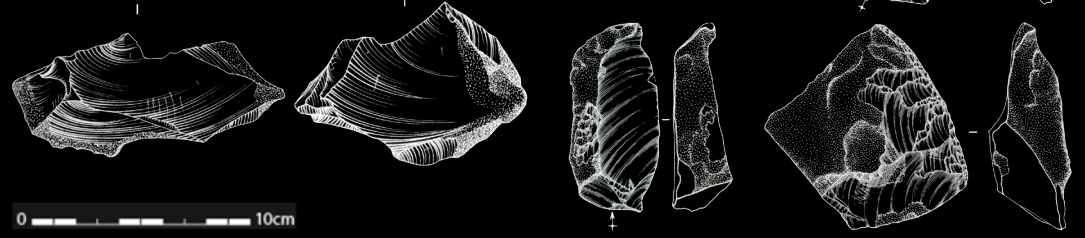
5 HD ▲

Cortical back knives



6

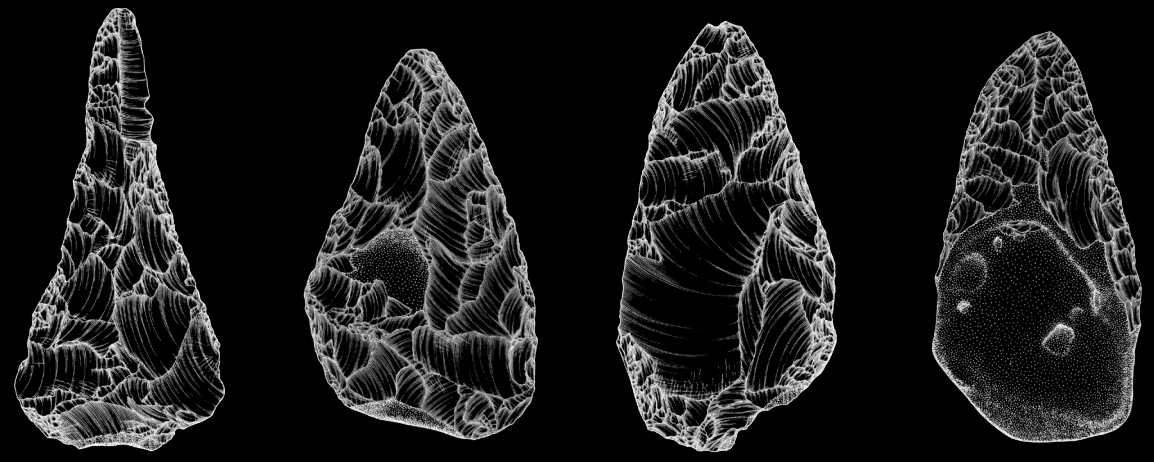
Short secant unipolar sequences



0 10cm

7 LRS ▲

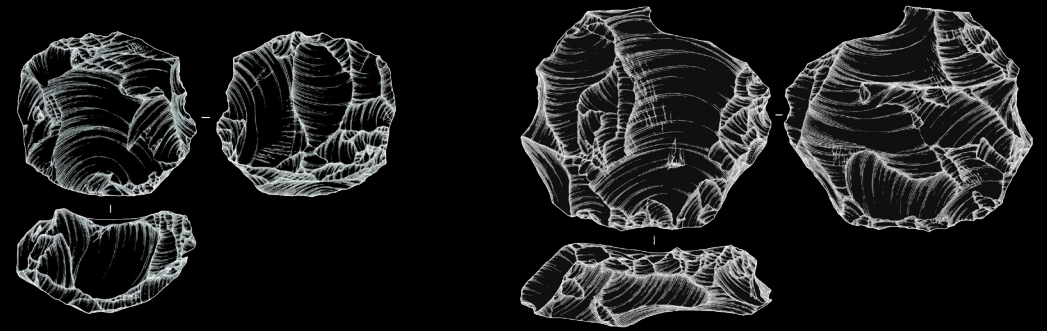
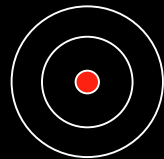
Bifacial shaping



8

9 HUD ▲ HUZ ▲

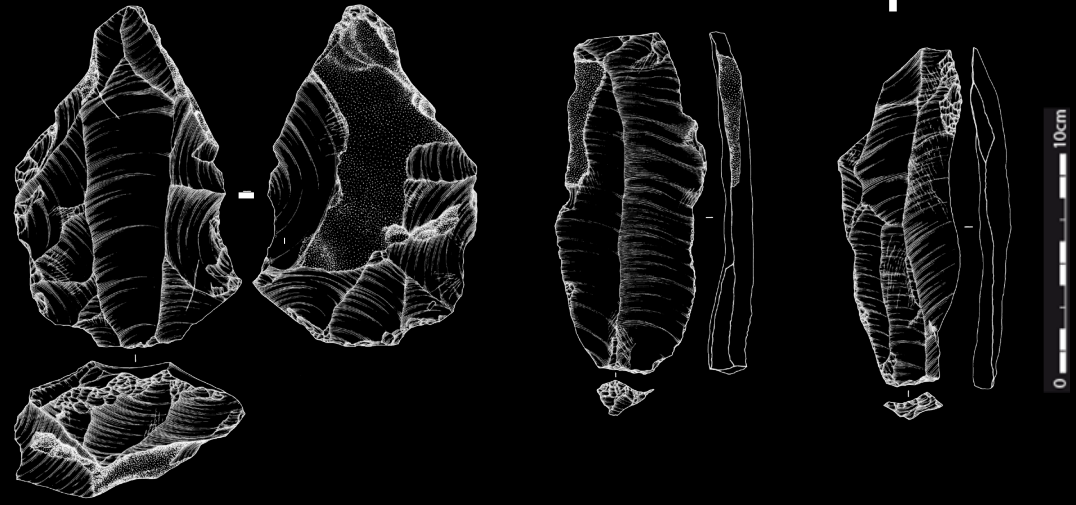
Levallois



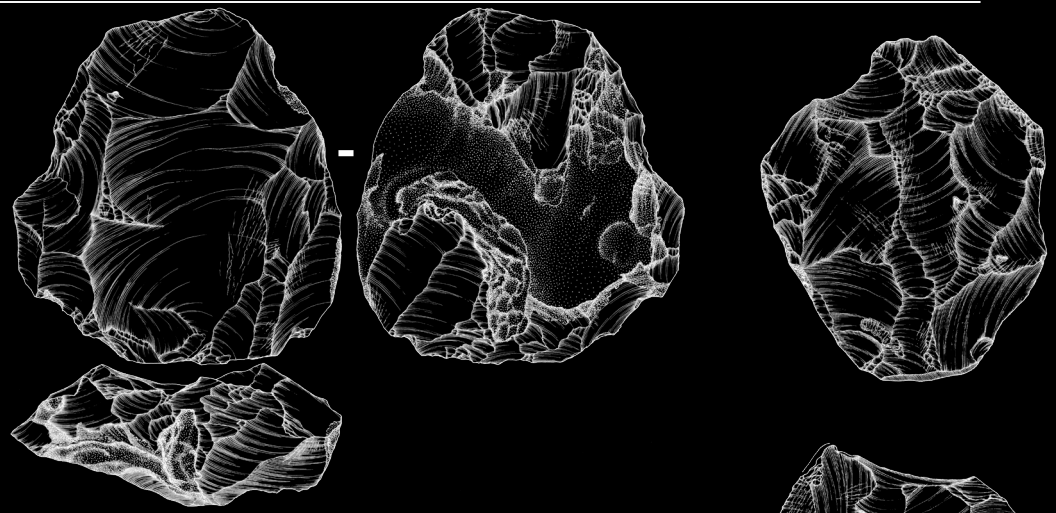
# Characteristics of saalian human occupations



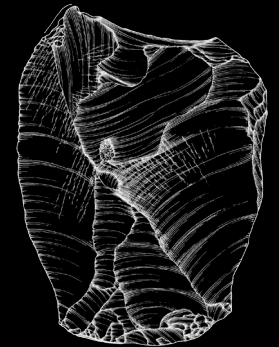
Elongated  
Levallois  
flakes



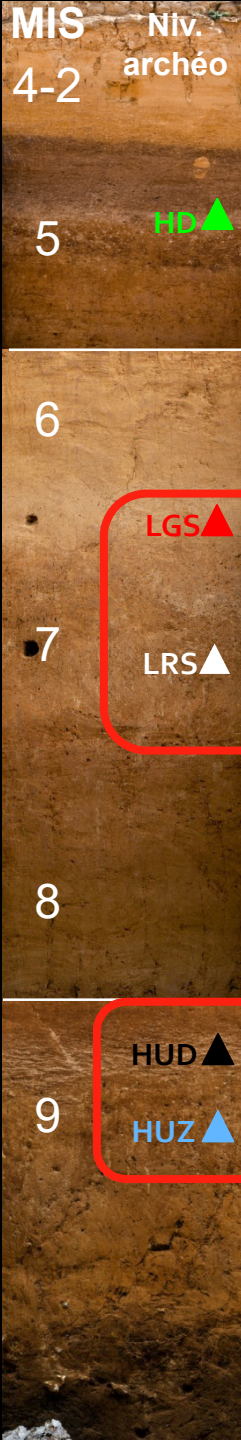
Levallois  
preferential  
flakes



Levallois  
points



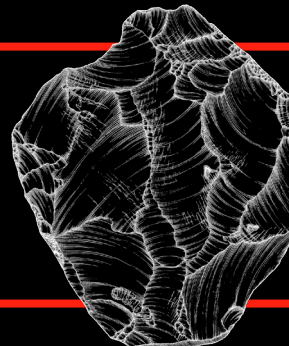
# Characteristics of saalian human occupations



No human occupations preserved



Elongated  
Levallois  
flakes

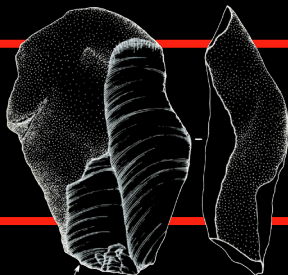


Preferential  
Levallois  
flakes

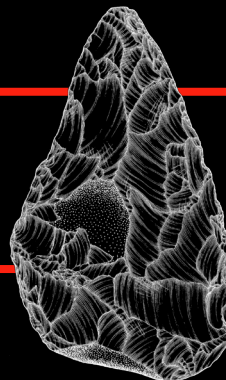


Levallois  
point

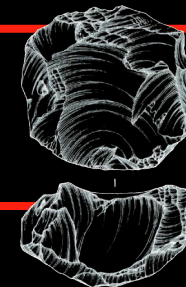
No human occupations preserved



Short secant  
unipolar  
sequences



Bifacial  
shaping

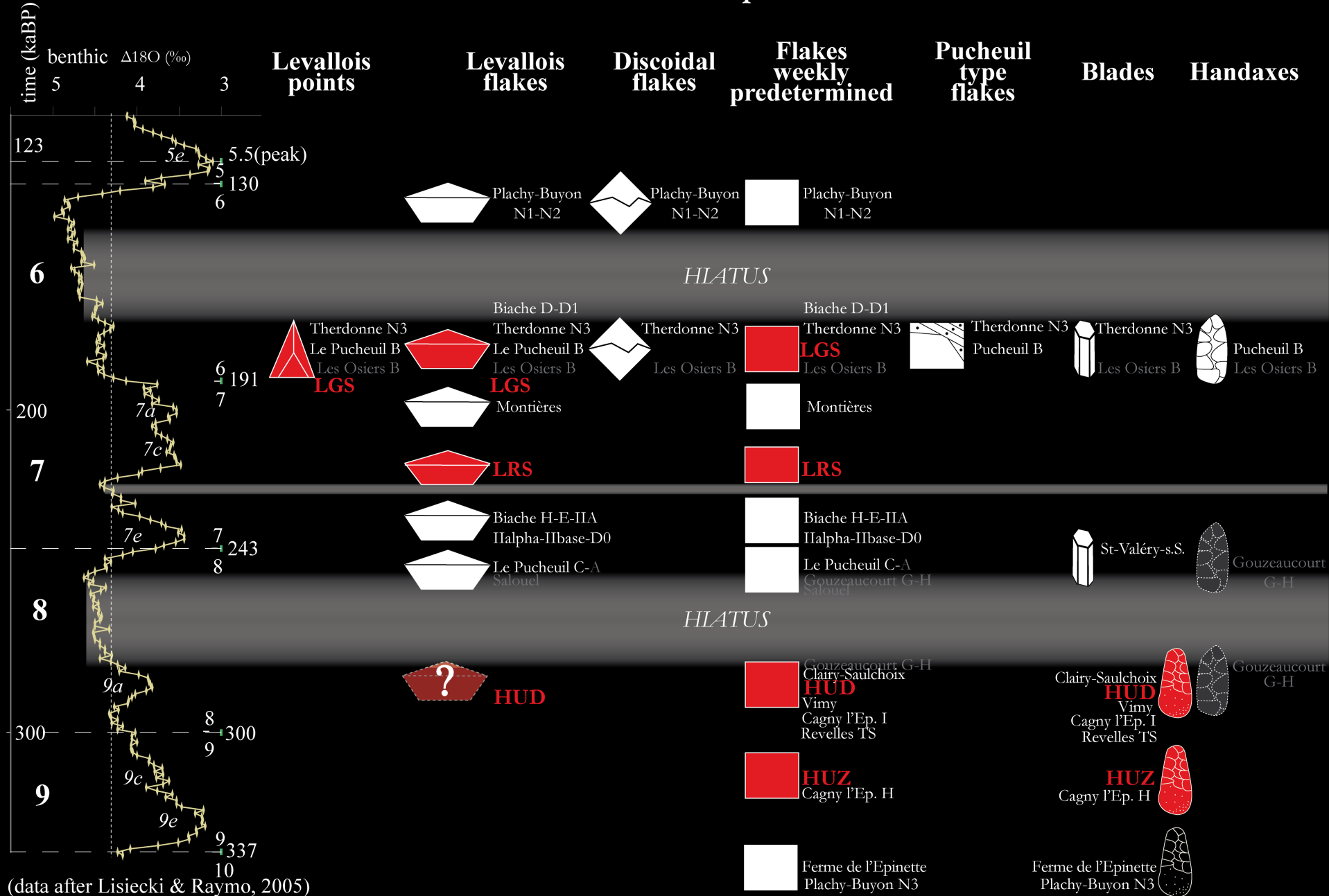


Levallois

# Saalian human occupations in Northern France

Hérisson, Locht, 2014, modified

## Chaînes opératoires



# To conclude

- ✓ Etricourt-Manancourt shows for the first time in northern France a continuous stratigraphic record with a high resolution for the four last glacial-interglacial cycles on 12 meters of deposit
- ✓ At Etricourt-Manancourt, we discovered four human occupations well-preserved on very large area, rarely explored for the end of the Lower Palaeolithic and the Early Middle Palaeolithic

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A new key-site for the end of Lower Palaeolithic and the onset of Middle Palaeolithic at Etricourt-Manancourt (Somme, France)

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LA SÉQUENCE LOESSIQUE PLÉISTOCÈNE MOYEN À SUPÉRIEUR  
D'ÉTRICOURT-MANANCOURT (PICARDIE, FRANCE) :  
UN ENREGISTREMENT PÉDO-SÉDIMENTAIRE DE RÉFÉRENCE  
POUR LES DERNIERS 350 KA

■  
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Sanda BALESCU<sup>5</sup>, Laurence FORGET BRISSON<sup>6</sup>, Paolo SPAGNA<sup>7</sup>, Nick DEBENHAM<sup>8</sup>,  
Magali BARRÉ<sup>6</sup>, Yoann CHANTREAU<sup>9</sup>, Romain GIROS<sup>2</sup> & Michel LAMOTHE<sup>6</sup>

Hérisson *et al.*, 2016, Quat. Int.

Coutard *et al.*, 2018, Quaternaire





*Thank you to the team*

*Thank you for your attention*



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