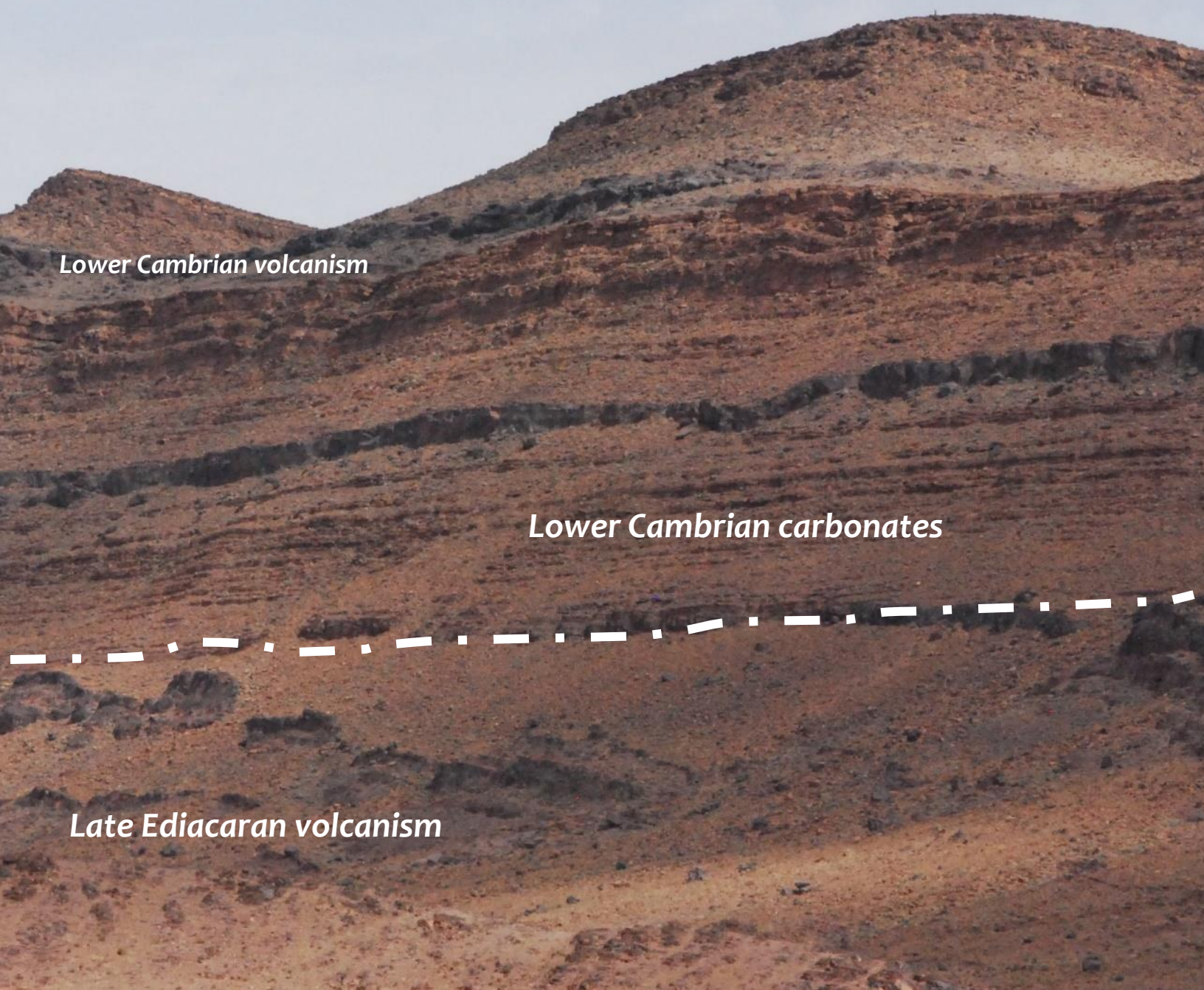
FACULTE DES SCIENCES BEN M'SICK
UNIVERSITÉ HASSAN II DE CASABLANCA

IGCP project 683: Pre-Atlantic Geological Connections Among Northwest Africa, Iberia and Eastern North America

Moroccan Field Trip
October 14th-20th, 2024

The Saghro domain of the Anti-Atlas (central and eastern Anti-Atlas): exploring global correlations



FACULTE DES SCIENCES BEN M'SICK
UNIVERSITÉ HASSAN II DE CASABLANCA

Preliminary Program:

October 14th: Arrival in Agadir airport. Night in Agadir

October 15th: Departure from Agadir to Taznakhte. The day will be devoted mainly to the stratigraphy of Lower Cambrian units (Terreneuvian), known as the Taroudant Group (Adoudou and Taliwine formations). These sequences are indicative of the onset of rift-pas- sive margin conditions on the northern boundary of the West African Craton. Night in Taznakhte.

October 16th: The day will focus on Precambrian rocks from Zenaga and Bou Azzer inliers. We begin by visiting the passive margin sequences of the Taghdout Group (Early Mesoproterozoic). This group is crossed by the Anti-Atlas Major Fault (AAMF) which represents a Pan-African suture zone. We continue the day by visiting the Zenaga inlier Paleoproterozoic rocks, representing a record of the Eburnian orogeny, and we finish the day with the Late Ediacaran volcanic rocks (Ouarzazate Group) of the Bou Azzer Inlier. Night in Agdez village.

October 17th: This day will be exclusively dedicated to Neoproterozoic and Cambrian rocks and associated ore deposits of the Bou Azzer inlier. The inlier is mostly known by its dismembered ophiolitic complex, and its rich mineral potential including a variety of ore deposits (e.g. the Bleida stratiform copper deposit, the Jbel Laasel Gold–palladium mineralization, and the Bou Azzer Co-Ni-Fe-As (±Au±Ag) district). The inlier exhibits Late Neoproterozoic outcrops of diamictite (Teddiline Group) and banded iron formations (BIF) that may form an important role in global correlations. The Jbel Boho volcanic ashes and flows of the southern Bou-Azzer inlier represent one of the preserved magmatic suites occured in Lower Cambrian host rocks of Morocco, which triggered a post-orogenic extensional environment that led to the opening of the Rheic Ocean. Night in Agdez.

October 18th: This day will be devoted to Cambrian-Devonian rocks along with outcrops of late Ediacaran stromatolites and the Ouarzazate Caldera system. The Early Ordovician biostratigraphic units of the Feija Externe Group are characterized by attractively preserved faunas (Fezouata Biota) and notable lithofacies variation. The uppermost Ordovician (Second Bani Group) units contains a glaciogenic sedimentary deposit related to the Hirnantian glaciation known throughout the world. Night in Ouarzazate.

October 19th: This day will be dedicated to the Ediacaran succession of the Saghro massif to observe the field evidence of the transition from a back-arc basin of the Pan-African-Cadomian orogeny to Cambrian rifting. Our primary focus will be on the Ediacaran-Cambrian boundary in the Id Bab N'Ali area. The second stop will be in the Tizi N'Tzazart region to observe the Intra-Ouarzazate Group unconformity, representing evidence of the collapse of the Pan-African-Cadomian crust and the emplacement of the Silicic Large Igneous Province. Following that, we'll visit the Iknioun village to observe the early Ediacaran sedimentary fill of the Saghro

Group's back-arc basin and its subsequent deformation, accompanied by the emplacement of high Sr/Y granitoids. Night in Merzouga.

October 20th: Travel back to Agadir.