

# FIRST RECORD OF CALCAREOUS NANNOFOSSILS FROM CHAMBARÁ FORMATION, PUCARÁ GROUP, PERÚ. A NEW BIOSTRATIGRAPHIC TOOL FOR REGIONAL CORRELATION IN THE LATE TRIASSIC?

J.P. PÉREZ PANERA<sup>1</sup>, L. CALVO-MARCIELSE<sup>1</sup>, M.J. CUELLO<sup>2</sup>, P. GIAMPAOLI<sup>2</sup>

<sup>1</sup>Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET) - YPF Tecnología S.A. (Y-TEC). Av. del Petróleo Argentino s/n. 1923. Berisso, Buenos Aires, Argentina. [perezpanera@gmail.com](mailto:perezpanera@gmail.com); [lydiacalvom@gmail.com](mailto:lydiacalvom@gmail.com)

<sup>2</sup>YPF S.A. Macacha Güemes 515. Ciudad Autónoma de Buenos Aires. [m.josefina.cuello@ypf.com](mailto:m.josefina.cuello@ypf.com); [pablo.giampaoli@ypf.com](mailto:pablo.giampaoli@ypf.com)

**INTRODUCTION.** In the frame of a technical evaluation agreement between Perupetro S.A. and YPF E&P del PERU S.A.C, calcareous microfossils from the Pucará Group were analyzed to constrain the age and paleoenvironment of deposition of the related units. The samples came from Cantera Tello outcrop (Chambará Formation), East Andes, San Martín Department, northern Perú (Fig. 1). The 42 m succession is composed of an alternation of ~ 2 to 4 m thick laminar and massive wackestones, packstones, grainstones and mudstones beds, in which gastropods, broken unidentified invertebrate skeletons and druses occur (Fig. 2).

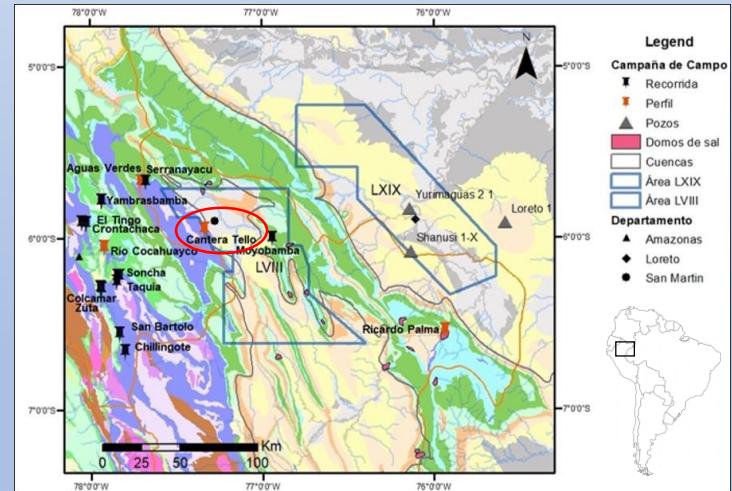


Fig. 1. Location map of Cantera Tello, San Martín department, Perú

**MATERIALS AND METHODS.** Fourteen samples were selected for microfossil (foraminifera) and calcareous nannofossil analysis. They were prepared according standard techniques

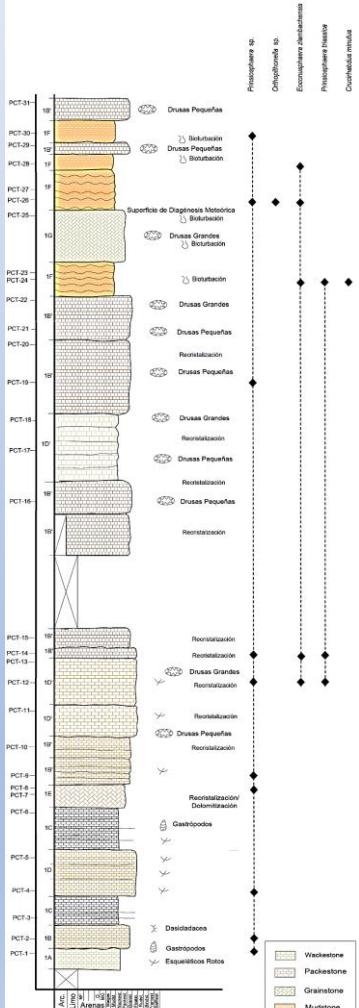


Fig. 2. Cantera Tello outcrop and the recovered calcareous nannofossil

**RESULTS AND DISCUSSION.** All samples were barren for microfossils, but 13 yield poorly preserved, scarce and moderately rich calcareous nannofossil assemblages (Figs. 2, 3). This finding represents the second record of this group in Late Triassic marine deposits in the Southeastern Pacific Ocean and the third outside the Tethys Realm. Assemblages of the lower part of the Cantera Tello outcrop are characterized by nannoliths of uncertain affinity identified as *Prinsiosphaera* sp. In the upper part, assemblages are slightly more abundant and composed by the calcareous cyst *Orthopithonella* sp., the nannoliths *Prinsiosphaera* sp., *Prinsiosphaera triassica* and *Eoconusphaera zlambachensis*; and the coccolith *Crucirhabdus minutus*. According to the *Eoconusphaera zlambachensis* record in the succession, the lower part would correspond to a late Norian age and the upper part to the Rhaetian (Fig. 3). This estimation agrees with the proposed age for the Chambará Formation in the Central Andes. Other studies conducted on the Chambará and overlaying Aramachay and Condorsinga formations outcrops in the area, revealed similar calcareous nannofossil assemblages.

OUTCROP	FORMATION	SAMPLE	EPOCH	AGE	Fields of View	Preservation	Abundance	Richness		
Cantera Tello (Nueva Cajamarca)	Chambará	PCT-30	Late Triassic	Rhaetian	600	P	F	1		
		PCT-28			600	P	R	1		
		PCT-27			600	N/A	N/A	N/A		
		PCT-26			600	P	R	3		
		PCT-24			600	P	F	3		
		PCT-19			600	P	R	1		
		PCT-14			600	P	F	3		
		PCT-12			600	P	R	3		
		PCT-10			600	P	R	1		
		PCT-9			600	P	R	1		
		PCT-6			600	P	F	1		
		PCT-4			600	P	R	1		
		PCT-2			600	P	F	1		
		PCT-1			600	P	F	1		