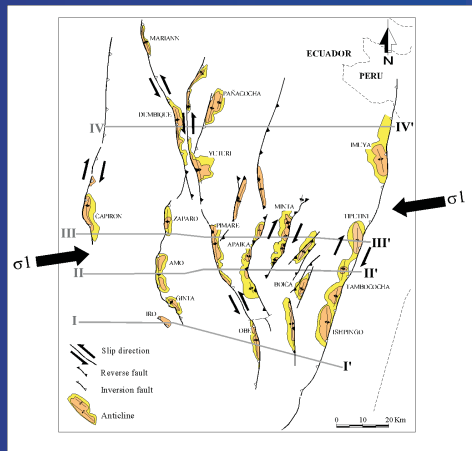


RECOGNITION OF TECTONIC EVENTS IN THE CONFORMATION OF STRUCTURAL TRAPS IN THE EASTERN ORIENTE BASIN, ECUADOR

Structural configuration at the top of the Upper Cretaceous



- Some half grabens were inverted before the Aptian Unconformity.
- From Aptian onwards, fault-controlled subsidence was replaced by regional subsidence.
- From Late Cretaceous to Recent, several strike - slip faulting and inversion episodes occurred, controlled by the strike and dip angle of the faults.

COMPRESSIONAL TECTONIC AND TRAP STYLES

Tectonic Inversion

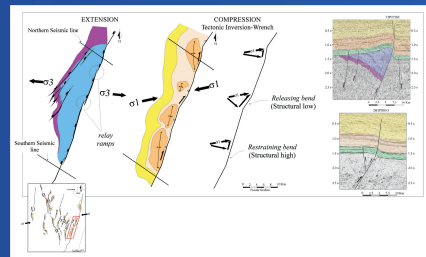


Figure 1
The Compressional stress field reactivated moderately dipping preexisting listric faults, like in the Ishpingo, Tiputini and Tambococha structure (ITT).

Faulted anticlines associated with tectonics inversion (Ishpingo, Tiputini, Tambococha and Capiron oil fields and Imuya structure). **Cross Section I II III IV**

Left-Lateral Strike-Slip

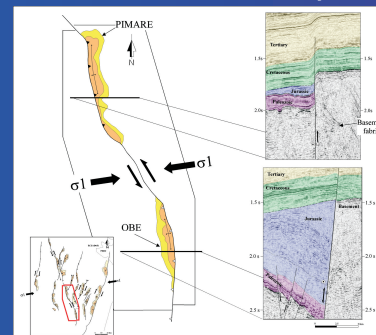


Figure 2
Compressional tectonics affecting the NW trending fault provoked the left-lateral strike - slip displacement, forming positive structures in both the hanging (Obe) and footwall (Pimare) of the fault.

Footwall faulted anticlines in left-lateral strike-slip systems (Yuturi oil field and Pimare structure).

Cross Section III IV
Hangingwall faulted anticlines in left-lateral strike-slip systems (Obe and Dumbique fields).
Cross Section I IV

Right-Lateral Strike-Slip

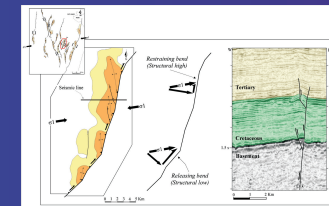
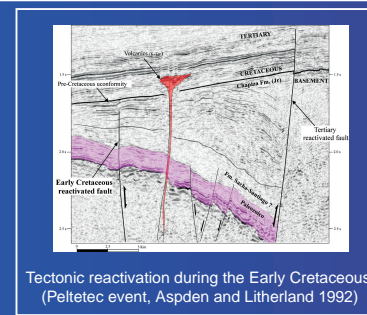
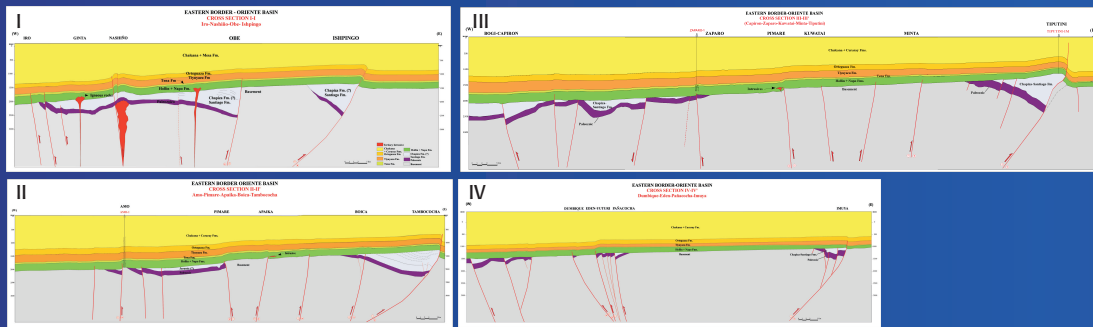


Figure 3
Those trending NE-SW, like Minta structure, were reactivated as right-lateral strike-slip faults.

Hangingwall faulted anticlines in right-lateral strike-slip systems (Apaika field and Minta structure). **Cross Section II III**



Tectonic reactivation during the Early Cretaceous (Peltetec event, Aspdien and Litherland 1992)

CONCLUSIONS

The final trapping mechanism was controlled by the Tertiary compressive events, but was strongly influenced by the Jurassic extensional footprint To reduce the exploration risk of trap formation and timing in the Eastern Region of the Oriente Basin, it is necessary to understand the impact of the different tectonic episodes in the conformation of structural traps.