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## **Successful Exploration in a Thrust Belt, Lessons Learned from the Giant Fields of Eastern Venezuela (the Furrial Trend)\***

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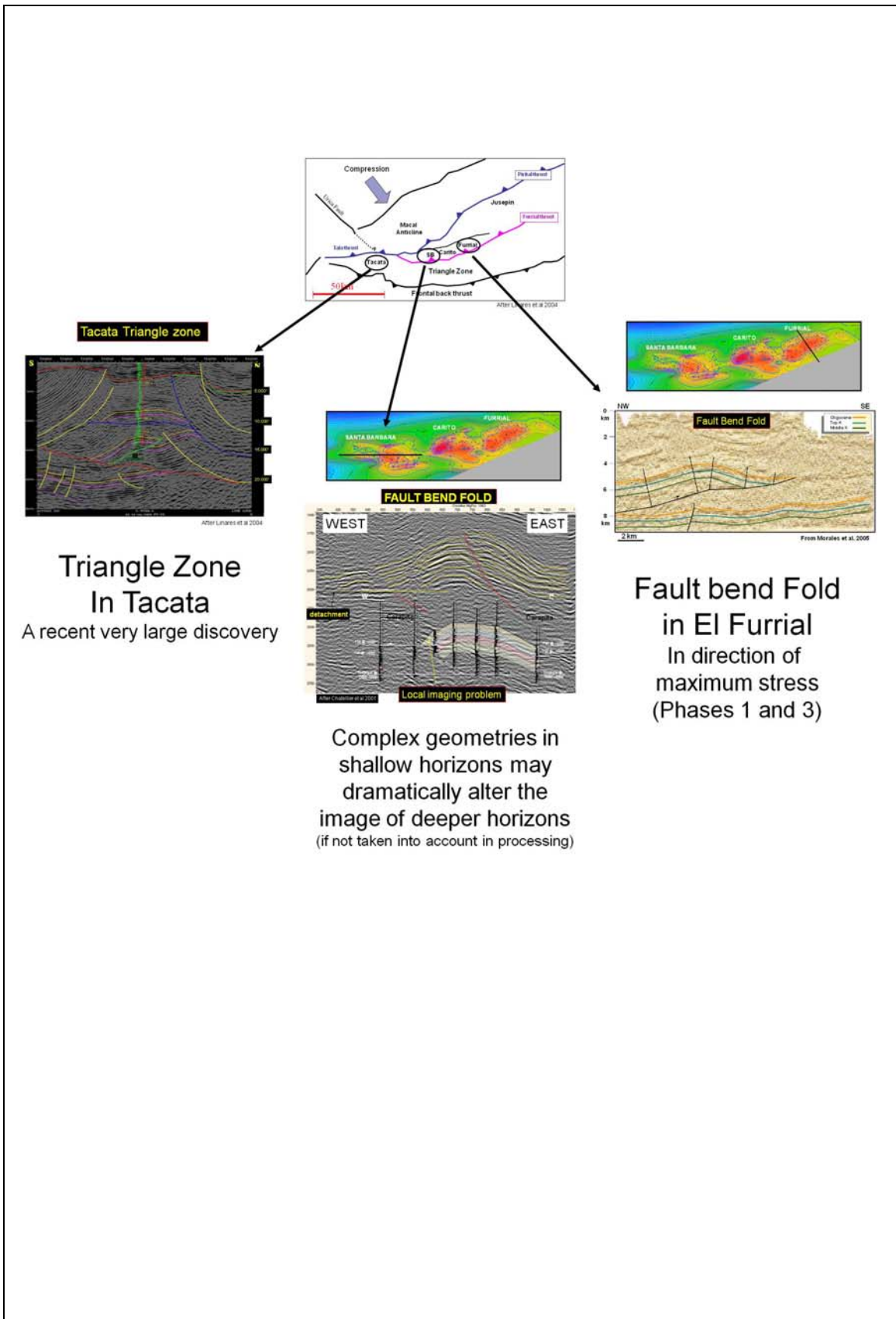
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### **Abstract**

In the last 20 years very large discoveries have been made in the Eastern Venezuelan Thrust Belt, a region often referred as the Furrial Trend. It is composed of a series of giant oil fields with reserves of about 26 MMMbbls and 50 TCF and a gross reservoir thickness exceeding 2500 feet. From East to West these fields are known as El Furrial, El Carito, Santa Barbara fields, and the recently discovered Tacata Field. The Furrial Trend covers an area of approximately 50 by 15 km. Lessons have been learned from this outstanding data set that encompasses more than 500 deep and very deep wells and that has been covered by numerous 2-D and 3-D seismic surveys.

The structural style is laterally changing from a simple fault bend fold in Furrial to a well-developed triangle zone in Tacata. Numerous tools and methods have been developed that allow seeing through this maze of data. The structural complexity of the area is responsible for many abnormal observations, many of which are now better understood. These include anomalies in seismic or petrophysical responses and include geochemical or pressure trends as well as geological puzzles. Recognition and understanding of some particular structural features have permitted the discovery of very large accumulations in unexpected locations.

Because of the large number of wells, the Furrial Trend constitutes an ideal database and an excellent analogue for any exploration and production in thrust belts. Lessons learned from these giant fields should be tested in other thrust belts around the world.



Variability along El Furrial Trend.

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