

The tight folds along the north margin of Ventura basin, the onshore Ventura Avenue Anticline and onshore-offshore Rincon and Dos Cuadras anticlines, have also been proposed to be kinematically-linked to either the Oak Ridge fault (Yeats and others, 1988, Huftile and Yeats, 1995), or to be S-verging above a S-directed thrust (Namson and Davis, 1988). These folds dip more steeply at the 1 Ma level than for Miocene horizons (Redin and others, 1998, Yeats and Taylor, 1989), consistent with models for detachment folds and flow of material into the core of the folds (Jamison, 1987; Epard and Groshong, 1995). When we attempted to unfold the anticline in one piece, the unfolding failed. A diagnostic output indicated stretching; the fold can not be flattened in the same way as a piece of paper. The fold was approximated by dividing the map into 7 pieces and unfolding each separately. It would be possible to quantify the stretching and layer-parallel shortening from outcrop and cores in wells and then compare this to results from unfolding.

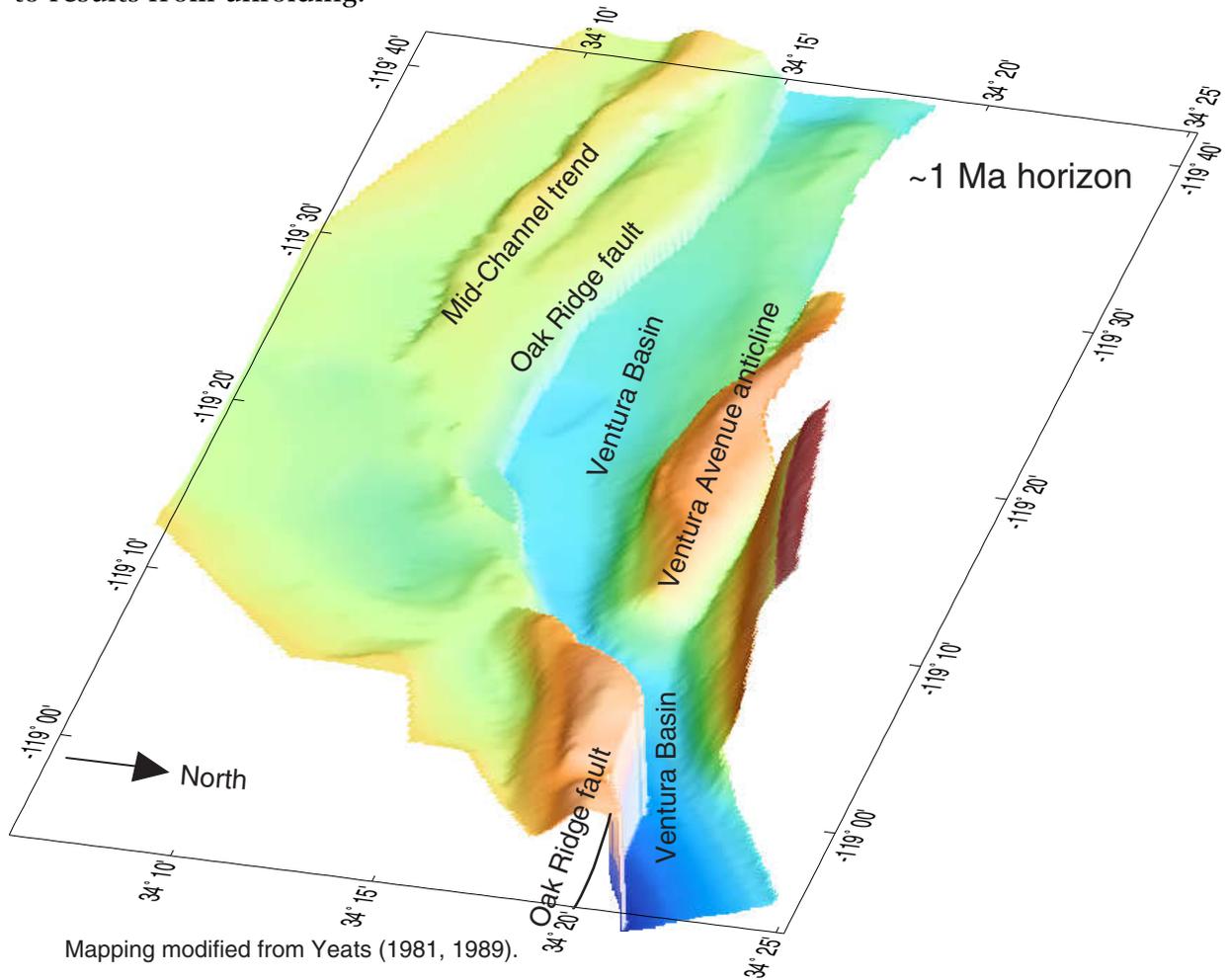


Figure 7: Oblique view of the ~1 Ma map in Figure 2. Figure made by Carmen Alex. The view is toward 250° from a 30° elevation. The overthrust part of the footwall (north) of the Oak Ridge fault is not shown. The gridding for this figure smoothed through faults that bound the Mid-Channel anticline in the background. The relation between active offshore folds and the larger Oak Ridge fault system is shown. Due to the oblique view, relatively high areas such as Ventura Avenue anticline appear WSW of their actual positions relative to the latitude-longitude references. Use the vertical view contour map for the actual positions of the structures.