

SHORT CONTRIBUTIONS TO FLORIDA GEOLOGY

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Faulting in the North Port Injection Well Sarasota County, Florida

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Comparison of E-logs of three wells shows an anomalously thin Delray Dolomite-Cedar Keys A interval in the North Port well (1). The only nearby control consists of Wells 2 & 3 (Fig. 1). In Wells 2 & 3 the average thickness of the Delray Dolomite-Cedar Keys A interval is 410 feet. In the North Port well (No. 1), these two formations are only 220 feet thick. Such radical thickness changes of this interval in southern Florida are unknown unless sections have been faulted out, as occurs in two wells in Brevard County (Winston 1995).

A comparison of lithologic data led to the discovery of this fault. In some 70 Delray Dolomite sections that I have examined, there has never been so much as a trace of anhydrite; however, in the southwestern Peninsula, anhydrite is characteristic of the Cedar Keys A. This suggests that the anhydrite labeled "a" on Figure 2, must have been faulted out in Well 1, and most, if not all, of the dolomite overlying anhydrite "b" in Well 1 must belong to the Delray Dolomite. Regionally widespread anhydrite "c" defines the base of the Cedar Keys A.

I have placed the fault in Well 1 at 3035 feet, on top of a prominent gamma ray kick. Coincidentally, on the borehole video survey there is a two-foot interval between 3047 & 3049 feet with a mild hole enlargement--this could interpreted as fault gouge.

The correlations shown on Figure 2 give the Delray Dolomite in Well 1 a thickness of 65 feet compared to the average of 185 feet in the other two wells. The Cedar Keys A in Well 1 is 155 feet thick, compared to the average thickness of 250 feet in the other two wells.

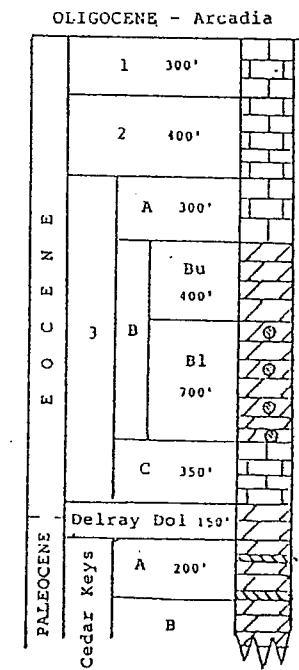
References

Winston, G. O., 1994, "The Paleogene of Florida - vol. 3: Lithostratigraphy of the Cedar Keys Formation of Paleocene and Upper Cretaceous Age - Peninsular Florida and Environs", Miami Geol Soc, 50 p.

Winston, G.O., 1995, "The Boulder Zone Dolomites of Florida - vol. 1: Paleogene and Upper Cretaceous Zones of the Southeastern Peninsula and the Keys", Miami Geol Soc

Well List

1. North Port injection well
2. Gulf 1 Vanderbilt
3. Eastport injection well



Generalized Geologic Column
Local Working Units
Sarasota County

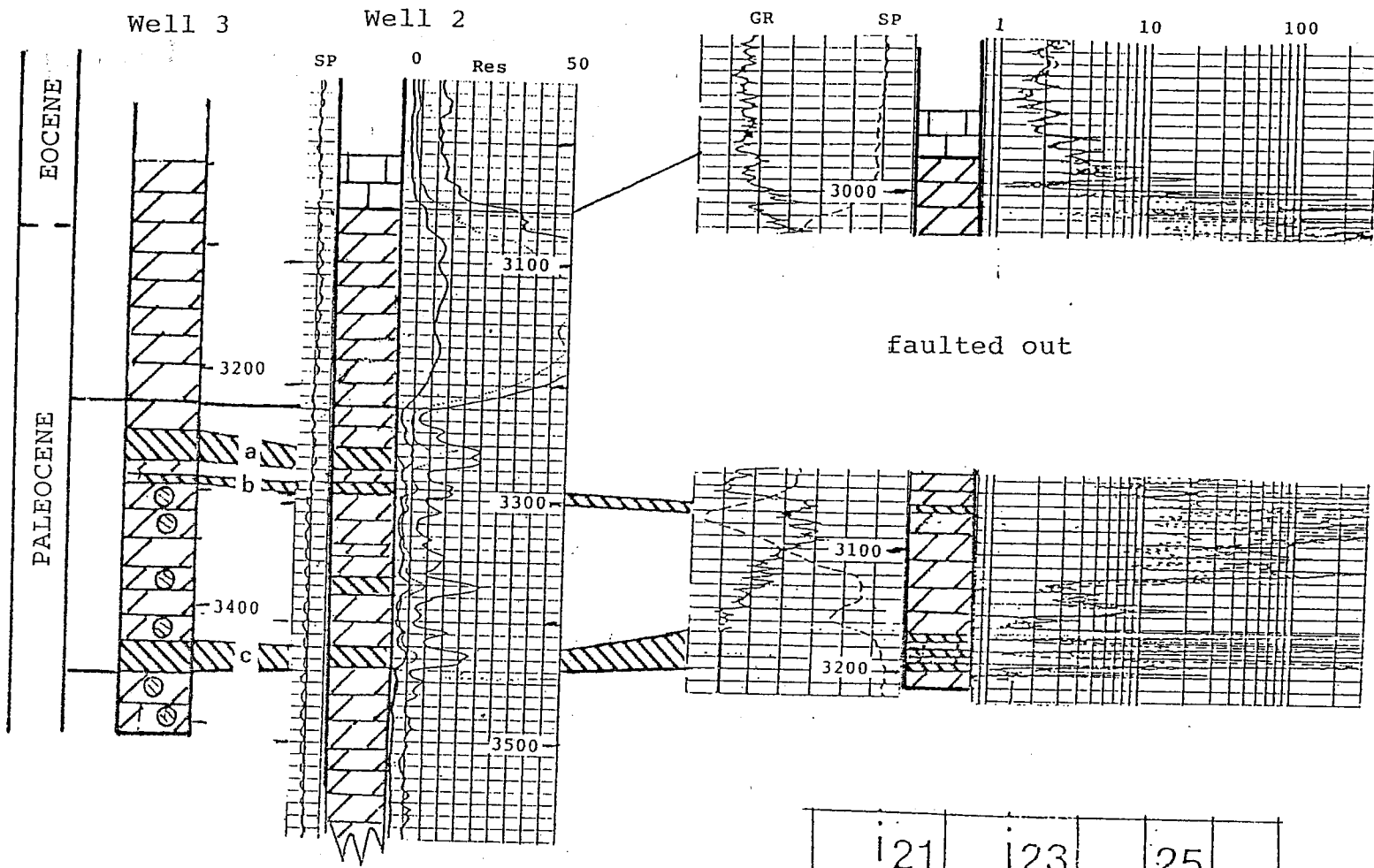


Fig. 2

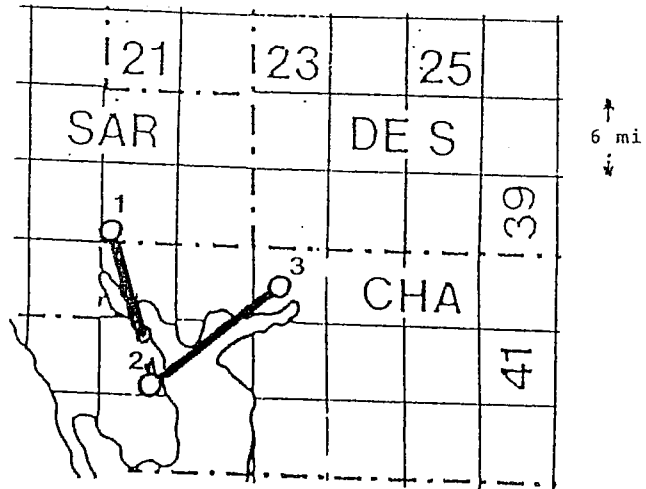


Fig. 1