

Assignment to the lower Malvacipollis diversus Zone is shown at the top by the absence of younger indicators in place, and at the base by the oldest occurrence of M. diversus and the absence of older indicators. The upper sample is a sidewall core and lacks the younger indicators. The deeper sample is of cuttings, and contains indicators for the middle M. diversus Zone, but these are considered caved in light of the sidewall core data. Minor Triassic reworking is seen.

The very rare dinoflagellates include Apectodinium homomorphum which only confirms an upper L. balmei assignment or younger.

Marginally marine environments are indicated by the very rare low diversity dinoflagellates and common spores and pollen.

H. 2241.0m (swc)-2302m (cutts) (2266.5m swc) : upper L. balmei Zone

Assignment to the upper Lygistepollenites balmei Zone is indicated at the top by the youngest occurrences of Gambierina rudata and Lygistepollenites balmei. The zone base is defined by the oldest occurrences of Proteacidites grandis (2292-2302m cutts, 2266.5m in swc) and P. incurvatus (2241.0m swc). Other obvious caving is seen at 2292-2302m however (M. diversus, P. leightonii) and so P. grandis at 2266.5m in swc is more firmly based. Minor Triassic reworking was noted.

Age diagnostic dinoflagellates occur only in the cuttings from 2292-2302m and are probably caved. They do include A. homomorphum which would confirm an upper L. balmei or younger assignment, if in place.

Environments are non-marine to very marginally marine. The sidewall cores contain very few dinoflagellates, mostly Morkallacysta pyramidalis which is considered to be a lacustrine form. The other very rare dinoflagellates indicate very slight marine influence. The cuttings are probably contaminated and so unreliable.

Spore colours of light brown indicate marginal maturity for oil and immaturity for gas/condensate.

I. 2329 (cutts)-2465m (swc) : lower L. balmei Zone

Zonal assignment is indicated at the top by the absence of younger indicators, and at the base by the absence of older indicators, confirmed by the oldest occurrence of Polycolpites langstonii and consistent Lygistepollenites balmei. The presence of Tetracolporites verrucosus at 2465m indicates the lower half of the zone. Minor Triassic reworking was seen.