

(vii)

ABSTRACT

Thermoluminescence studies on the Vempalle dolomite have revealed that it comprises five distinct dolomite lithofacies which were deposited partly as early diagenetic deposit and partly as primary precipitate. Some of the lithofacies repeatedly occur in the same vertical sequence in different sections. Correlation of various lithofacies in different sections has been successfully achieved by the study of thermoluminescence glow curves.

The presence of shale bands within the Vempalle dolomite could be confirmed by radiometric data.

Detailed petrography, study of acetate peels, and partial chemical analysis justify the above findings.

Magnesium content is found to have an affect on the low temperature peak while radioactivity does not seem to have any consistent relationship with the thermoluminescence glow curve peaks.

With the data of magnetometric survey, an isoanomaly map is drawn; this is used to demarcate the contact between the Vempalle dolomite and the basic intrusive.