

Ber. Inst. Erdwiss. K.-F.-Univ. Graz	ISSN 1608-8166	Band 20/1	Graz 2014
PANGEO AUSTRIA 2014		Graz, 14. September 2014 – 19. September 2014	

Middle Triassic facies arrangement of the Lindkogel area (Lower Austria) related to the variation of Calcareous Alpine reservoir rock conditions

WEGERER, E.¹, WESSELY, G.²

¹ Montanuniversität Leoben, Department Applied Geosciences and Geophysics, Peter-Tunner-Straße 5, 8700 Leoben, Austria

² Siebenbrunnengasse 29, A-1050 Vienna, Austria

Stratigraphy and facies arrangement of the Upper Middle/Lower Upper Triassic formations of the Lindkogel area west of Baden exhibit an example, how the variation of facies determine distribution of reservoir rock and sealing conditions within a Calcareous Alpine Zone. Tectonically the investigated area belongs to the Lindkogel thrust slice of the Goeller Nappe. This thrust slice has been moved toward west over its base bordered by strike slip faults. The underlying part of the considered section comprises Permoskythian sediments, Reichenhall, Gutenstein and Reifling formations. The object of this study is represented by an Upper Middle/Lower Upper Triassic platform facies, consisting of Wetterstein dolomite and limestone as well as contemporary sediments of the platform rims. The aim of the investigation was a correlation of facies characteristics with reservoir rock- and sealing rock properties. The reservoir capacity is limited to the platform carbonates, subdivided in massive reefoidal Wetterstein dolomite and bedded Wetterstein dolomite, which can be interpreted as an intraplatform fan deposit. The type of porosity is mainly fracture porosity. The lagoonal Wetterstein limestone on top as well as the massive grey limestone of the southern platform rim show near surface carstification porosity. The geometry of the reservoir rocks has been figured out by maps and sections and an estimation of the pore volume took place. Impermeable layers are the chert bearing limestones of the eastern flank of the Lindkogel massif, first made up by laminated limestones passing finally into marls locally containing the type of the sponge bearing Jaegerhaus limestone, deriving as an olistholithe from a reef. These sediments are covered by the dense Lunz Formation with shales and cemented sandstones.