

Ref no 2.	Project title		Geothermal Project Unterschleissheim (7,8 – 25 MW), Project volume € 12,2 Mio					
Name of legal entity	Country	Overall project value (EUR)	Proportion carried out by candidate (%)	No of staff provided	Name of client	Origin of funding	Dates (start/end)	Name of partners if any
ZT-Büro Dr. Schmid	Germany	€ 380.000		3 LT	Stadt Unterschleissheim	Stadt Unter- schleissheim, Freistaat Bayern	01-2002/ 10-2004	Hydroisotop GesmbH
Detailed description of project						Type of services provided		
<p>In the southern part of Germany the Molasse Basin with the potential geothermal reservoir (Malm karst) is well known by the hydrocarbon exploration. The subsurface temperature distribution is well known. In the northern part of Munich the reservoir temperature can be expected between 60-75 °C. South the city of Munich the reservoir temperature increase up to 120-140 °C. The city of Unterschleissheim is located north to the city of Munich. In this area a weak temperature anomaly with a subsurface temperature up to 80 °C has been mapped.</p> <p>In the year 2003 the European headquarters of Microsoft has been installed in the centre of Unterschleissheim. The requirement for this decision was a renewable energy supply for district heating. In addition to the city of Unterschleissheim from the point of ecological and climate protection the geothermal energy would be a proper solution. At this time also the oil and gas show a strong price increase. In this case the city of Unterschleissheim could be a pioneer in using renewable energy in the area of Munich.</p> <p>Therefore the responsible persons of the city of Unterschleissheim charged the Hydroisotop GesmbH and JOANNEUM RESEARCH with the prefeasibility study (1999) and a geological/tectonically model (2001/02). For risk minimizing project milestones has been defined and evaluated after each step.</p>						<ul style="list-style-type: none"> <li>• Collaboration by the prefeasibility study and the geological/tectonically model in my function as head of an institute from JOANNEUM RESEARCH</li> <li>• Planning from the two well sites and the drilling path (production well TVD 1960 m, reinjection well TVD 2002 m)</li> <li>• Creating a drilling and testing project for the Mining Authority of the Freistaat Bayern, including the water law regulation</li> <li>• Tender for drilling, completion and testing the two wells with contract awarding to the selected drilling company.</li> <li>• Supervising the drilling and completion activities (turn key project) and operating as company man in case of unexpectes geological or technical problems, especially while drilling in the Malm karst with total mud loss.</li> <li>• Well site geology</li> <li>• Controlling and interpretation of well logging and well site geological results.</li> <li>• Planning and supervising the production and reinjection tests.</li> <li>• Supervising the bore hole stimulation within the carbonatic aquifer.</li> <li>• Collaboration by the exploration reports for the authority</li> </ul>		