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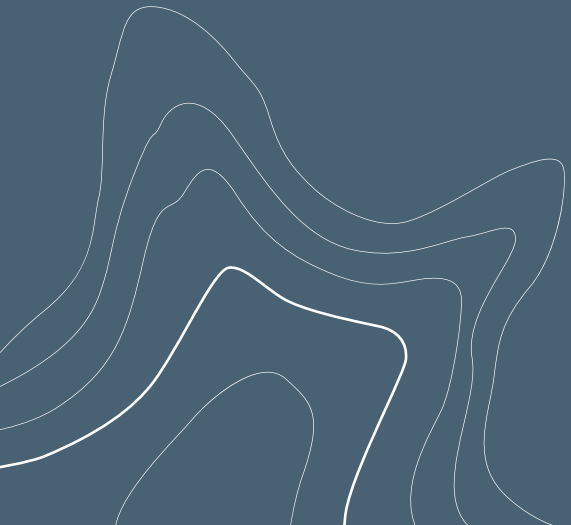
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# GEO THERM





The optimization of permanent, fixed costs is important for every company. If these items are too high, a stable development cannot be ensured in the varying market environment. Companies having a building larger than a family house, whether working in a production all, operating an office building, or managing a school; they will surely face similar problems in one regard: the heating bills. Mining Support Kft. offers a solution which can significantly decrease heating expenditures regardless of the size of the building to be heated, providing constant temperature even on the coldest winter days with a lot lower prices, and without maintenance costs.

**EVEN FOR LESS THAN  
1% OF THE CURRENT  
HEATING COSTS!**





# WeHEAT

## WELLS FOR HEAT EXCHANGING ADVANCED TECHNOLOGY

The WeHEAT method by Mining Support Kft. is a new, innovative way of power generation. Our new technology is implemented in existing, unused deep holes. The 1800-2500 m deep, closed cycle heat generation system can supply a heating demand of 300-500 kW.

## REUSE OF ABANDONED DEEP HOLES

Most of the deep-drilled wells deeper than 1800 m in Hungary were made to extract some kind of raw material. These wells are used as long as they operate efficiently. As the raw material is further and further extracted, the deep holes of the depleted fields are abandoned and production is stopped there, and the wells are closed. Thus, both the barren and the stopped wells' structures are left without any functions.

## GEOHERMIC GRADIENT

Temperature rises by 30 Celsius on average with every kilometer when heading down towards the center of the Earth. In Hungary, this rate reaches even an average of 50-60 Celsius; therefore, the temperature is often higher than 100 degrees at a 2 km depth. The WeHEAT technology uses Hungary's outstanding geothermic gradient, without any new deep drillings.



**... HIGHER THAN  
100 DEGREES**

## GEOHERMIC ENERGY FOR HEATING AND HOT WATER

The most efficient method of usage of the earth's heat is direct building heating and hot water supply. In this case, the extracted heat can be fully utilized, and in case of a closed cycle, its temperature can be maintained in the highest temperature range. The efficiency of the system is very high. The geothermic energy gets to the consumers through an auxiliary medium in all cases. This can also be thermal water, but e.g. the WeHEAT closed heat producing system uses clean water.

## FUNCTION AND COST -EFFECTIVENESS

The WeHEAT technology allows the reuse of barren and the stopped deep holes for energetic purposes. Besides using and technically supplementing the existing deep-drilled wells, we also start closed cycle geothermic energy production, without fluid generation. The flexibly applicable technology is suitable for the implementation of heat generating systems with a power of between 300-500 kW, which is enough for institution heating and for the supply of the energy demand of small industrial facilities.

## WEHEAT

The WeHEAT technology is a geothermal probe in a closed system, implemented in the well structure of barren or stopped deep holes. Its principle of operation is based on the heating effect of the natural earth heat source, i.e. the dry, hot ground. We build an inner pipe system inside the deep hole, and circulate fluid in it. The fluid heats up during the journey, and then transfers the heat on the surface to the internal heating system of the building, and travels back to the start point.



**WEATHER-INDEPENDENT AND STABLE**  
**ENVIRONMENTALLY FRIENDLY**

**SIMPLE HANDLING**

**CONVENIENT**

**SAFE**

**CLEAN**

(dust- and smoke-free)

**HIGH EFFICIENCY**

90-95 %

**COST-EFFECTIVE**

cost-savings on the heating bill, for even 1% of the current expenditure, without gas- and electric installation costs, or chimney cleaning costs

**CLOSED CYCLE**

no water burden, no need for water authorization, no issues regarding the placement of used water

**THE USAGE OF  
THE EXISTING WELL  
STRUCTURE HALVES  
THE COSTS!**

## **SCOPE OF ACTIVITIES**

Mining Support Kft. performs a full scope of geothermal services:

/ survey

/ designing

/ implementation

/ operation

### **SURVEY**

Consultancy on geothermal systems, survey of geothermal energy usage possibilities, offering of customized systems.

### **DESIGNING**

Energetic calculations, heat capacity investigation, well-related works investigations, data evaluation. Profitability calculations, modeling, making of well reconstruction designs, planning of surface connection drawings and mechanical solutions, making of the design documentation.

### **OFFICIAL AUTHORIZATIONS**

Making of the technical operation plan, complete management of authorization procedures, elaboration of energy declarations, authority declarations, keeping contact with the authorities.

### **IMPLEMENTATION**

Well-related works, surface connections, building engineering implementation, terrain works, waste management.