

OTHER INFORMATION

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The works connected with the well-drilling of the Geothermal Project of Miskolc have been concluded

PannErgy Group has successfully closed the drilling works of five geothermal wells connected with the largest geothermal investment in Hungary and the region, the Geothermal Project of Miskolc. With reinjection well KIS-PE-02 of Kistokaj, the number of geothermal wells constructed within the framework of the geothermal heat supply program of Mályi-Kistokaj-Miskolc has risen to five.

PannErgy has concluded one of the essential phases of the investment called the Geothermal Project of Miskolc and supplying Miskolc City of County Rank and its agglomeration with geothermal heat by successfully completing the drilling works of the following five wells that were designated earlier for appropriate heat supply.

MAL-PE-01	2305 m
MAL-PE-02	1514 m
KIS-PE-01	1737 m
KIS-PE-01B	1093 m
KIS-PE-02	1058 m
Depth of the wells	

During the well-drilling works of the Geothermal Project of Miskolc launched in 2010, PannErgy was recurrently forced to change its former strategy relating to the deepening of the wells and technical installation, and apply novel technological solutions in the course of construction.

In parallel with the successful drilling operations, one by one, the wells were subject to production and tests, and therefore it can be stated that the waters in well MAL-PE-01, MAL-PE-02 and KIS-PE-01B feature very similar characteristics, and broadly correspond to the water in well KIS-PE-01. Well KIS-PE-02 is still under examination, but in the light of the antecedents a water composition similar to those of the other wells can be foreseen. In addition to water tests, gas examinations have also been conducted in the wells, and it has been confirmed that they have insignificant methane and CO₂ contents. In consequence, geothermal energy production will diminish the emission of greenhouse gases originating from energy generation with the use of natural gas to a mere 1/150 fraction.

The sequences of geological layers are identical in the wells, and only the thicknesses of the individual layers differ from each other. As a result, the geologic congeniality of the water-bearing layers can be found at different depths, and therefore the bottom depths of the five wells are not the same.

The correspondence of the water chemical and geological results jointly confirm that PannErgy meets the requirements of the governmental decree pertaining to reinjection, and thus returns the extracted water to the same geological layers, thereby ensuring the protection of underground water reserves.

In addition to drilling wells, as well as constructing heat transmission lines and connected technical units, PannErgy still in quest for opportunities relating to the secondary use of the cheap and environmentally friendly geothermal heat. In association with Geo-Wendung Zrt., the process of planning the expansion of the existing system has already started.

In line with our initial plans, we want to commence the implementation works of the Mályi. Kistokaj section of the geothermal district heating system in 2013. In addition to agricultural and industrial utilization, all the households and institutions in the settlements in question could be fully supplied. With its planning works being in an advanced state, the investment is intended to be realized in close cooperation with PannErgy and the local governments. The results of the drilling works within the framework of the Geothermal Project of Miskolc clearly suggest that there is sufficient heat energy available for the further expansion of the system.+. said Levente Lengyel, Chairman of Geo-Wendung Zrt's Board of Directors.

It can be claimed that we are over the hardest part, there are no more uncertainties that would hold the Geothermal Project of Miskolc in suspense as a result of the potential delay or inefficiency of the drilling works, because the most difficult phase of the investment, the well-drilling works have just been closed. Owing to this investment worth EUR 22. 24 million and implemented in two years, from 2013 Miskolc will be joined by Mályi and Kistokaj in the utilization of geothermal energy.

On many occasions, our colleagues were to work under extreme weather conditions so that the works of the Geothermal Project of Miskolc connected with well-drilling could be completed on due time. The successful drillings have confirmed both the initial geological opinions and the correctness of PannErgy's strategy. In consequence, it has been proved that the company chose the most appropriate locations for well construction so that Miskolc could join the heat supply in the most efficient way possible. Environmental impacts were continuously monitored and examined, not only before the drilling operations, but also during their implementation in order to safeguard and preserve the environment and water reserves of the Mályi. Kistokaj. Miskolc region+. explained Balázs Bokorovics, Chairman of PannErgy Plc's Board of Directors.

PannErgy Plc