# Mining in European History and its Impact on Environment and Human Societies –

Proceedings for the 2<sup>nd</sup> Mining in European History Conference of the FZ HiMAT, 7.-10. November 2012, Innsbruck

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Forschungszentrum (FZ) HiMAT
Die Geschichte des Bergbaus in Tirol und seinen angrenzenden Gebieten –
Auswirkungen auf Umwelt und Gesellschaft
Universität Innsbruck

The research centre HiMAT is supported by the University of Innsbruck, the Province Tyrol, the Autonomous Province of Bozen-South Tyrol, the Province Vorarlberg, the Province Salzburg and the Department of culture of the Province Tyrol.











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www.uibk.ac.at/iup ISBN 978-3-902936-18-9

## The Life and Mining Work of Felician von Herberstein (1540-1590)

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#### Introduction

The aim of this study is the life and mining-work of Felician von Herberstein in the Kingdom of Hungary and in the Austrian hereditary provinces, which was carried out in the course of the authors Ph.D. Thesis. He was employed as a mining expert by the king of Poland and prince of the Principality of Transylvania (István Báthory) to innovate mining techniques and miners support (Rausch, 2007; Rausch-Mátyás, 2012).

#### His Background, Family and Activiy

His family was a noble, distinguished and aristocratic family from Styria; the estate's centre was in Guttenhag and Herberstein. His father was Andreas von Herberstein, who was head of the Styrian cavalry and a seneschal of the Habsburg archduke Ferdinand. Felician's uncle, Sigismund von Herberstein, was a well-known traveller and diplomat. Sigismund von Herberstein wrote about Russia (the Principality of Moscow) for the first time in second half of the 16th century. His work is an excellent description about this hitherto unknown country. Information about Felician's life and activity can be gained form the funeral oration written by David Reuss, who was a court-pastor of the family of Herberstein. David Reuss wrote this oration about Felician and his son, Raimund. He died in 1591 and this funeral oration was later published in 1595 which survived in a few copies in the National Library of Hungary and the Austrian State Archives (Finanz- und Hofkammer, Alte Hofkammer). The members of this line of descent were Lutherans, and they successfully championed Lutheran church protection, especially during the reign of the archduke Charles. Felician von Herberstein after his move to Nagybánya (now Romania, County Maramures, Baia Mare) not only protected the local Lutheran church but also helped the primary school, and supported the local temple's restoration. He was buried in this temple in 1590, but it was destroyed by fire in the 18th century and only the church tower remained. In the local museum there is a brief description of his life and professional activities, where he lead the mining-administration and the local mint for more than ten years, and in the course of this activity he obtained excellent results.

Felician von Herberstein was born in 1540; he spent his youth in the imperial and royal centre in Vienna in the service to the Court. He carried on with university studies in the newly-founded University of Graz. During these years he dealt with natural science subjects outside the university studies. He could speak more than four foreign languages and after he finished the studies he continued diplomatic services in Malta, France and in the Ottoman Empire. During

this diplomatic service his political carrier was starting despite the fact that his main objective was to innovate his mining expertise. In order to achieve this goal he travelled around the metal mining districts, and salt mines in the Austrian hereditary provinces to examine mining technologies and modes of production. He was especially interested in solving the problems of deep mining, which lie in providing fresh air and transport of waste materials away from the shafts. During this time he was member of the War Council (Hofkriegsrat), so he could travel around the Hungarian mining districts to learn about Hungarian mining traditions. In the course of this activity he visited the most important cities, which dealt with deep mining in Highland (now Slovakia). These cities were Selmecbánya, Körmöcbánya and Besztercebánya. In mines the miners exploited gold, silver and copper in very high quality (Bobory, 2005). At this time these mines represented the most developed metal-mining district in the Kingdom of Hungary. Felician von Herberstein was an innovator and therefore he wanted to rent the risky metal-mining district of Szatmár (now Romania, county Maramures), at the border between the Principality of Transylvania and the Kingdom of Hungary. The centre of the mining-district of Szatmár was Nagybánya, which represented the site of the chamber (administration) and the mint. The leader of the chamber guided the mining-administration, in mint produced high-quality gold and silver coins. Although there were three other settlements that belonged to this district, which contained many mines, but the most important mine in the area was in Nagybánya, the so-called Királytáró or Nagyverem, which was rented by Felician von Herberstein. This region was in the possession of the Hungarian king until 1585, and after that it belonged to the Principality of Transylvania. Since Felician von Herberstein dealt with exploiting ores before, he moved with his family to Nagybánya, because his friend, a member of the well-known Hungarian aristocratic noble family Batthyány, Boldizsár Batthyány, obtained permission from the Hungarian king to open a metalmine in his own estate. In the course of this enterprise he asked Felician von Herberstein for help, so the Styrian noble man could enter the mining business. After this he moved on to Nagybánya and contacted the Transylvanian government in order to rent the mining-district of Szatmár.

During this time the prince of Transylvania was István Báthory who was at the same time the king of Poland too. Since he wanted to support local metal-mining he looked for a suitable specialist in this field. For this reason Felician von Herberstein visited him in Poland, and so this Styrian noble man became in charge of conducting a study tour to survey the sites of Transylvanian metal-mining and Herberstein visited many Transylvanian metal-mining-districts in 1585. After that he wrote a detailed account in Latin. This account allows to extract important information about Transylvanian precious metal-mining's techniques. Herberstein described in detail deep underground mining, gold washing and open cast mining. In this time the most profitable mode of metal mining were gold washing and open cast mining, because deep underground mining demanded highly specialized craftsmanship and significant financial investment. Due to this survey the Herberstein family was on good terms with the princes of Transylvania (family Báthory) and so Felician von Herberstein was allowed to rent the noble metal mines in the county of Szatmár. Since he wanted to develop deep underground mining in this region he had to borrow money from various investors for carrying out his plans. He started mining activities in Feketebánya. This settlement belonged to Nagybánya and due to the nature of the promising gold

and silver mines miners had to start deep underground mining to obtain the ores. In the course of these activities shafts, beams and air shafts were being rebuild, and the mining facilities constructed by János Thurzó in 1522 (he was a business partner of the Fugger family) such as the furnaces and pulping mills were restored. In addition he ordered new furnaces and pulping mills to be built due to the increasing productivity. He also was responsible for building a new mint with new coin-manufacturing machines because the new coins had a wider surface and he purchased the new machine from credit (Bobory, 2005; Huszár, 1996). Since Felician von Herberstein was a very good innovator he refined the modes of ore purification and therefore he imported lead for this process from Poland. He was greatly appreciated by his workers since they got high salaries and their employer operated a private grocery, where the workers were charged lower prices, than in the other groceries. He hired a lot of German miners and gave them accommodation too. Since Felician von Herberstein provided not only a good primary school and rental flats for his workers they were very loyal and faithful to him.

He had two sons, the firstborn was Raimund, but he died in 1591. The second son, Friedrich von Herberstein would have continued his father's enterprise, but since he had to cope with a lot of problems he gave it up and moved to Poland in 1597. The developments of Felician von Herberstein had a very important influence in this region over the years and the building of the mint still stands.

### Acknowledgement

The project was supported by OTKA PD 108877 scholarship. (Hungarian Scientific Research Fund, postdoctoral scholarship).

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