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The Ancient Maps of the Salt Mine in Wieliczka

Adam Lyszkowicz, Poland

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Outline

- Introduction
- Short history of ancient maps
- German maps, description
- Methods of measurement and accuracy
- Resources

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The importance of salt

- For thousands of years, salt has played a huge role in:
 - the economy,
 - politics,
 - and even religious beliefs.
- It was a symbol of wealth.
- Knowledge of the importance of salt in ancient time is based mainly on research into the areas of excavation (salt mines).



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Location

Present view of Wieliczka center with the salt





Present mine state

- Mine has 9 levels,
 - the first level Bono reaches a depth of 64 meters,
 - the last lies 327 meters beneath the surface of the Earth.
- The total length of sidewalks connecting approximately 3000 workings places:
 - sidewalks, ramps, operating chambers, lakes, shafts, manhole handling exceeds 300 km.
- Volume of workings space is about 7.5 million m³.

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Short history of ancient maps of mine

- In the history of mine we can find statement that the **first surveyor** of the mine was in the **16th** century **Peter** the Frenchman.
- Around year **1600** surveying works in the salt mine Wieliczka were performed by the **Tabenhey**, priest of St. Nicholas Church in Krakow.
- In the year **1636** manager Andrzej Górski brought from Sweden the surveyor who name was **Martin German**.
- The result of his work were:
 - four maps marked with Roman numerals **I, II, III, IIII**, which until now only **three** maps exist.

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German map I of Wieliczka town

Contents of map I

- Terrain is not shown on the map.
- On a map are plotted stream and a few ponds
- On a map are shown streets, however without no names, labelled is only market.
- Marked on map village fields, gardens and orchards
- Building plots, the yards, hollows, ponds, new shaft.
- Churches,
- Industrial buildings or pits.

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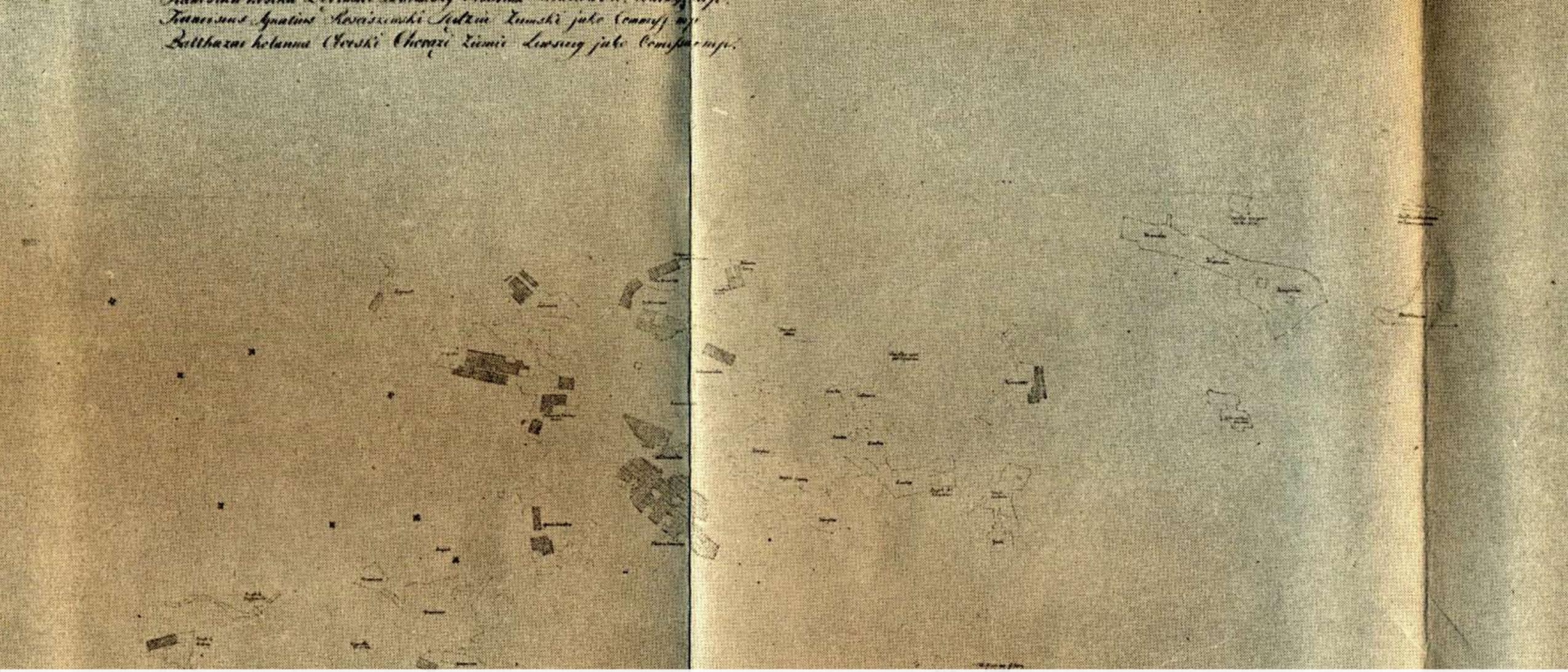
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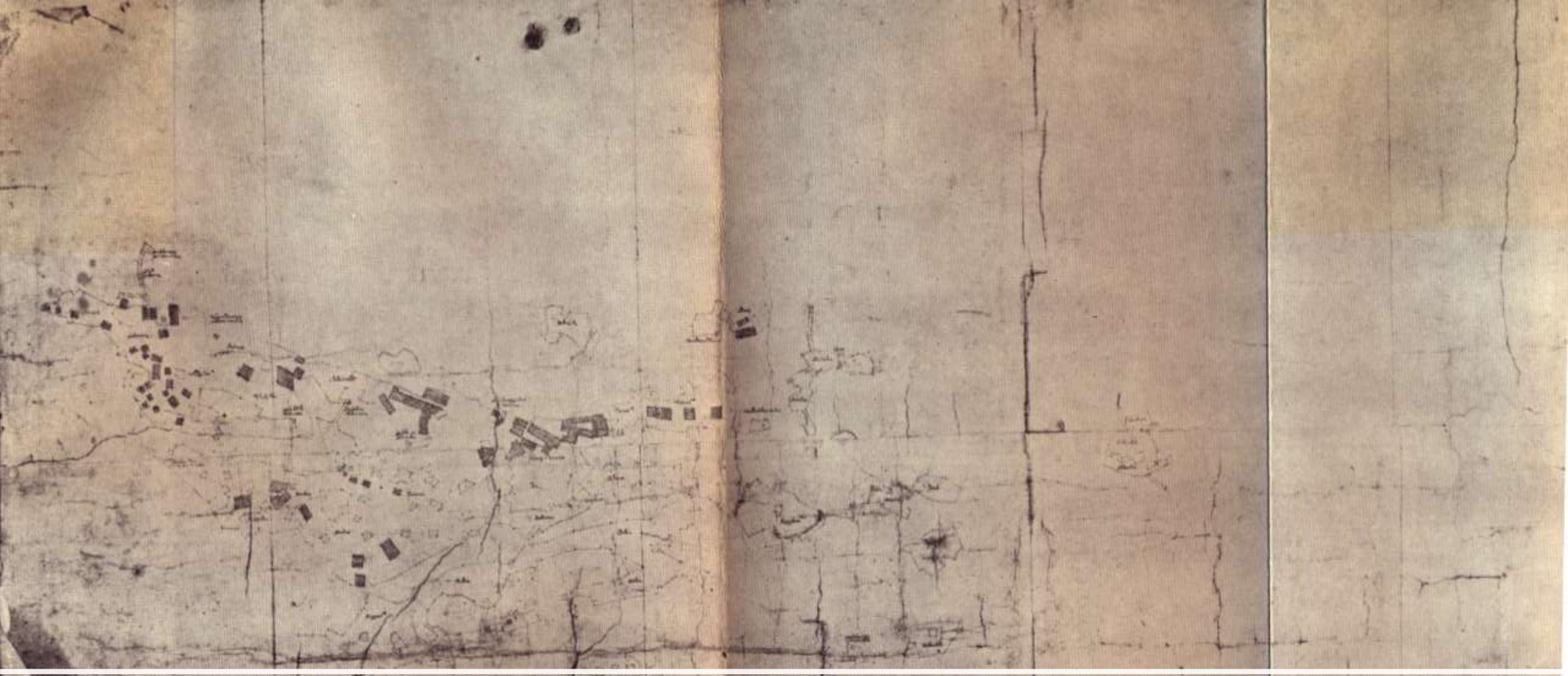
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Handwritten text in German script, likely a title or description of the map.



German map III, the second level of the mine



German map of third level

Method of measurements

- magnetic traverses,
- characteristic points on the surface were projected on these simple traverses using right angle prism.

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Accuracy and conclusion

- accuracy of the German maps was estimated by Poczobut-Odlanicki and Milewski in 1958,
- differences from 0.5 to 1%,
- very **high** as for surveying in **XVI** century.

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