

## “Katowice” Mine

### HISTORY

A mining plant operating in the city of Katowice, in the districts Bogucice, Zawodzie, Paderewski housing estate and the northern and eastern part of Śródmieście district. It existed in the years 1823-1999 where until 1936 it was called "Ferdynand" and in the years 1953-1956 Stalinogród. The plant was liquidated between 1999-2001.

### GEOLOGY

In the geological structure Quaternary and Carboniferous deposits are involved. The area of the former mine is located on the southern wing of the Siodło Główne formation. The extent of the Carboniferous layers is similar to the direction of the NWW-SEE anticline axis, with the general inclination of the layers towards the south and south-west. Layer dip angle is variable and stays between  $5-8^{\circ}$  in the southern and northern parts and grows in the central part, reaching maximum values of  $16-20^{\circ}$ . The largest dips are observed in the "Bogucice" shaft. The bed is cut with quite numerous faults, especially in the northern part, which divide it into separate tectonic blocks shifted relative to each other from several to several dozen meters vertically. The dominant fault directions are the meridian direction and NW-SE direction. The area is outlined by the following tectonic deformations:

- "Wojciech" Fault - constitutes a natural operational boundary with "Kleofas" Mine. It has a similar course to the meridian and throws layers to the east. The drop of this fault is about 70 m in the area of the main shafts. The angle of the fault plane changes within  $45 \div 75^{\circ}$ .
- "Zuzanna" Fault - is a natural exploitation border in the southern part of the coal deposit between "Katowice" and "Wieczorek" Mines. The fault course is similar to the meridian. The fault is well recognized by mining works carried out by the "Katowice" and "Wieczorek" mines in seams 401, 405, 407/1, 501, 504 and 510. The fault throws strata westwards, with a fault plane inclination of  $60 \div 75^{\circ}$ . In the southern part of the deposit, the throw amplitude is about 80 m and in the north direction it gradually decreases to zero.
- Fault VI - is a fault branching off the "Zuzanna" fault in the middle part of the deposit. The fault course is similar to the meridian and its throw is about 20 m to the west. It is one of the main faults accompanying the "Zuzanna" fault. The inclination of the fault plane is  $60 \div 65^{\circ}$ .
- South Fault - is a natural exploitation boundary with the "Staszic" mine. Its course is similar to latitudinal. It was well recognized by mining works carried out in seams 401, 404/5, 405, 407/1, 416, 501 and 510. The fault throw layers in a southern direction from about 15 m in the eastern part, to about 25 m in the western part. The inclination of the fault plane is  $70 \div 75^{\circ}$ .

## MINING

In the mining area of the "Katowice" mine, seams 401, 402, 403, 404, 405, 407, 408, 409, 412, 416, 418, 501, 504, 506, 510 were exploited in the depth zone from several to about 755 m.

## SINKHOLE THREAT

Exists on the surface in the areas where the coal was extracted in the depth ranging from 0 to 100 m in the northern part of the area. At the turn of the 19th and 20th centuries such exploitation was carried out in seams: 401, 402, 403, 404, 405, 407, 408, 409 and 418 (Rudzkie layers) and 501 (Siodłowe layers) under the Bogucice district.