

## „Saturn” Mine

### History

The Mining Plant operating in Czeladz, Będzin (districts Syberka and Zamkowe) and Sosnowiec (district Milowice and partly Pogoń and Stary Sosnowiec) in the years 1860 to 1993. In 1993-1996 the mine was liquidated. Earlier mines exploiting coal in this area operated under the names: Czeladź, Saturn, Milowice, Czerwona Gwardia.

### Geology

In the geological structure of “Saturn” Mining Area Quaternary, Triassic and Carboniferous deposits are involved. Carboniferous deposits in the area lie in the form of a trough. The outcrops of these deposits on the surface are located in the southern part of the area and the deepest of them lie in the central part. In the northern part the seams were washed away and are present only in the north-eastern corner of the area. Closest to the surface the coal seams are located in the western and southern parts of the deposit. The area is characterized by very complex tectonics, through which the coal mining area of KWK Saturn is divided into several blocks. Carboniferous layers are cut in two N-S lines, i.e. on the Przelajka - Siemianowicki - Wielki fault line in the western and Eastern - Central faults in the central part and a number of smaller, latitudinal faults (Northern, Southern, Mortimer).

### Mining

In the mining area of the “Saturn” Mine seams 412, 414, 415, 501, 504, 506www, 510, 611, 612, 615 and 620 were exploited in the depth zone from 0 to approx. 400 m. The thickness of the seams and extracted coal varied from approx. 1 to 8 -9m (deck 510).

### Sinkhole threat

Exists on the surface in the areas where the coal was extracted in the seam outcrop, mainly in the western and southern parts of the Saturn mine mining area. Such exploitation was carried out in seams 412, 414, 415 (Rudzkie layers), 501, 504 and 510 (Siodłowe layers) and 611, 612, 615 and 620 (Porębskie layers). The greatest threat exists in the areas of shallow exploitation of 501 and 510 seams due to the significant thickness of the extracted coal layer (approx. 5 - 6 m).