

Translated from Turkish :

Salt Domes of Central Anatolia

In Anatolia the area draining the Kizil İrmak contains many salt works. In this article only the more important ones in the region of Çankiri, Sungurlu and Kirşehir will be discussed.

Fifteen kilometers southeast of Çankiri the rock salt mine bearing the same name is found. Here, an inclined tunnel enters into the salt mass and the salt is extracted by room and pillar method of mining. Approximately 30-35 percent of the salt is left in the pillars. The salt mass pierces the gypsiferous series of the region and comes nearly to the surface. The magnitude of the salt core is not known, all the works being in the salt mass. On the north the attitude of the beds are not observable but to the east, west and the south red beds underlying the light colored gypsiferous shales show steep dips indicating the domal nature of the structural condition. The south dips are the most impressive being in parts overturned. The salt appears to be capped by the gypsum. The amount of salt annually mined is determined by the demand which for the Çankiri area is 3000 tons. Some perfect isometric sodium chloride crystals are obtained from this mine.

The salt works of Taytak, Yerli, Koçç operate on the principle of evaporation. The sodium chloride saturated liquor is

suined from springs is allowed to settle in flat shallow ponds and the salt is removed at the completion of the dehydration process. Salt thus obtained analyses 98 % sodium chloride and about one tenth of one percent magnesium chloride.

At Cayan rock salt is found surrounded by vertical dipping red sandstones and pink shales.

At Boncuk, ten kilometers south of Cayan, the salt is extracted from the liquor of a salt spring.

At Sarıkaya salt works, although the salt is obtained from a salt spring, the existence of an anticlinal salt mass is inferred from the steep dips on the two sides of the valley in which the spring is located. It is believed the salt springs are the result of salt mass penetrating the water table.

At Baraklı rock salt outcrops near the core of an anticline. A short distance north of the salt exposure cold hydrogen sulphide spring is found.

The rock salt at Sekili is mined by room and pillar method. Here the domal character of the structure is clearly indicated by the very steep dips on the west south and east.

At the Tepesf Delik rock salt mine, southeast of Kirşehir, a dome is indicated by west, south and east dips. However, dips

here are comparatively mild being in the neighborhood of 40 degrees.

Hacı Bektaş mine near the south of Kızıl İrmak contains thin bands of gypsiferous shale in the salt mass. South dip is very steep being 81 degrees. East dip is cut off by a fault and west dips rather mildly. This mine produces 5000 tons of salt per annum.

The attention must be drawn to the fact that in Çankiri, Sekili Tepesi Delik as well as here, though the east and south dips are present, the north dip in each case is either concealed or absent.

The stratigraphy of the region may be summarized as follows :

- A. — Recent fresh water deposits.
- B. — Light gray shales with gypsum.
- C. — Red sandstone and conglomerates.
- D. — Grey marls with some lignite and dark shales.

E. — Reddish sandstones and conglomerates.

Dr. Paul Arni in his Yerköy region studies has come to the conclusion that the gypsiferous series extend from Oligocene to Pliocene. Formations D and E are Eocene. The Stratigraphic position of the salt is not known but it is at least pre-Jurassic.

A glance at the accompanying sketch brings the remarkable north-south alignment of Nos. 3, 6, 8, 9 and 7, 10, 12 ; and east-west strike of Nos. 1, 2 and 4, indicating a tectonic origin to the formation of these salt masses. The principal present structural trend of Anatolia being east-west, the north-south line is assumed to indicate an old Paleozoic fault.

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