

ПРЕДЛОЖЕННЫЕ МЕСТА ДЛЯ БУРЕНИЯ В БЮККСЕЙКЕ И ЕГО ОКРЕСТНОСТИ

Л. М а й з о н

На основании известных нам пластов на земной поверхности и на основании исследованных пробуренных пластов в районе Бюкксейка, предложенные мною места бурений можно подразделить на две группы.

К первой могут считаться те (смотри схему карты), бурением которых можно получить и нефть.

К другой же группе относятся места, лежащие вдали от Бюкксейка, они играют роль центров, предназначенных для пробных бурений, которые могут выяснить возможности эксплуатации нефти в северном и западном направлении.

SUGGESTED DRILLING SITES AT BÜKKSZÉK AND ITS ENVIRONS

By L. M a j z o n

The Director has sent me with Z. Schrétér deputy-director to the oil territory of Bükkszék in order to locate new borings.

The geological conditions of the surface deposits of Bükkszék and its environs are treated in two papers by Z. Schrétér (1) and L. Majzon (2). Those of the subsurface strata are exposed in two papers by L. Majzon (3 and 4), on the basis of 67 borings deepened up till now.

The oil territory of Bükkszék is restricted to the so-called Bükkszék-vault, being assymetric to the E and following roughly the direction of N—S. This vault was cut by longitudinal and dip faults in small masses, each of them forming a separate reservoir. The NNE—SSW walls of fault have sunk deeper and deeper the Middle Oligocene strata building up the territory, proceeding to W and S from the line of the drilling site No. 12. In accordance with that fact the more we proceed to W or S, the more the oil appears in deeper horizons. As a result of the dip faults we may observe the same in N—S direction.

The productive wells are divided into two groups. The wells of the first group are situated in a narrow NNE—SSW stripe, called drillings of Templommező. The wells of the second group can be observed on the W wing of the anticline of Bükkszék, in a broad stripe; these are the productive drillings of Csonkásmező.

The drillings Nos 36, 29 and 44 in the S and No. 12 in addition, seem to show as if this part did not contain any quantity of oil worth

producing, since in each one of these wells there were found but oil traces. Boring "Szajla I.", S of the former ones, seems to prove that observation. To the N or NE respectively, there are some possibilities of oil production, since drillings Nos 13 and 14 gave quantities still worth producing.

On the basis of the Foraminifera fauna Majzon (3, 4) divided into several horizons the Rupelian clayey marl ("clay of Kiscell"), considered as uniform until then. These foraminiferous horizons are to be found in every deep boring from Budapest (Városliget II. Margitsziget II. Erzsébet-brine bath) through Békásmegyer, Órszentmiklós, Csomád, Tard, Recsk and Szajla to Bükkszék. Among these foraminiferous horizons — as it is shown by the foregoing table — the oil of Bükkszék is produced from off Nos 3, 4 and 5. That fact would prove that the oil should occur more frequently at the border of the 3rd and 4th horizons.

The following may be emphasized from the existing deep borings of Bükkszék, in order to characterize the foregoing three foraminiferous horizons.

In the bluish-gray clayey marl, occurring in the third horizon, intercalations of tuff and sandstone are frequent. The fauna of this horizon is characterized by the frequent occurrence of Foraminifera with agglutinated shells. This deposit is the oldest surface formation in the environs of Bükkszék and borings Nos. 2., 2a, 2b, 2c, 2d, 3, 3a, 3b, 3c, 3d, 3e, 9, II., IIa, IIb, 15, 17., 19 (after 7,75 m of Pleistocene), 20, 21, 25, 26 (after 14,70 m of Pleistocene), 30 and 54 started in this horizon and the highest level of oil was reached there.

The fourth horizon, below the former one, consists of bluish-gray clayey marl strata and there are already intercalated thinner tuff and sandstone strata. Faunistically this horizon is characterized by the occurrence en masse of the planctonic species of *Globigerina bulloides* d'Orb.

The fifth horizon consists of dark-gray clay containing sporadically hard benches and, in its lower parts, brownish-yellow and brownish-gray clayey marl deposits. Its chief characteristic is the lack of Foraminifera. I have named this horizon "strata of Tard" of the deep boring of Tard where I observed it at first. It appears from Bükkszék to Budapest in great vertical and horizontal extension.

This strata and the scale, menilite and meletta shales of Nagyilonda are according to several searchers, and among them Lóczy, the matrices of the oil.

Below the foregoing strata oil traces occur but sporadically. This would prove that the formation of the oil at Bükkszék would have been connected with the older Oligocene strata.

On the basis of the foregoing facts, the suggested drilling sites in the environs of Bükkszék can be divided into two groups. The first group consists of the most probably productive wells, the second one of exploratory drillings deepened at sites more distant from Bükkszék in order to clear up the possibilities of oil production. The drilling sites belonging to the first group have been located in the proximity of "Templommező", in the places marked with *f*) and *g*). In the proximity of point *f*) we can expect the oil in 142 to 150 m. At point *g*), the oil can be opened in 99 to 105 m.

For these points, the results of the adjacent drillings Nos 14 and 16 are decisive, where oil was produced in 134,25 and 462,50 m.

In Csonkásmező drilling sites *n.*, *o.* (in Schréter's paper marked with E) *h*), *j*), *k*), *m*), and in the NE continuation of that field sites *e*) and *l*) have been located in the W wing of the vault of Bükkszék. Some of these drillings already start in the upper horizons of the Middle Oligocene. Concerning drillings *n*) and *o*) the occurrence of oil is possible between 290 and 386 m; at points *a*), *j*), *k*), *m*), in the same depth, on the basis of the borings already deepened in the proximity. In the northeastern most part of this field, at points *l*) and *o*) near the highway of Pétervására, greater depth must be taken into consideration.

The following exploratory drillings belong to the second group of the located drilling sites: that marked with A near the road leading to Köröspusztá (N of Bükkszék), that marked D on the E slope of Sirokasszó, that marked with E at the S foot and on the N part of Mount Beke (332.8 ϕ). Here, in consequence of the underthrusts which are in connection with the cracks, deeper drillings are to be expected.

Between the drilling sites B and C located on the S and N side of Mount Beke there are variegated clay and gravel strata on the surface. Therefore, besides the Oligocene, we must take into consideration a Miocene of 200 m, and the foreseen depth of the exploratory drillings down to the base-rock will be 1500 m.

W of Bükkszék, on the E bank of the Brook Tarna, three drilling sites have been located (F, G, H). These would be justified by the water of the "csevice"-well springing along the fracture line of Tarna-Valley and considered as hydrocarbonic indication too. We can project here deep borings of 1200 m.