1. The general data about Ilyinets impact structure was given in the [1-3] and in the lot of other papers reviewed in [1, 2]. In this paper we give the main results of the core study from two boreholes (8D and 9D) with the depths 140 m and 120 m respectively drilled in 2010 in the central part of Ilyinets impact structure (fig.1, 2). This study allows making an assumption about the siltstone origin. The investigation shows that the siltstone contains saponite clay minerals (14 Å), mica (10 Å) and kaolinite group minerals (7 Å) as well as quartz feldspars and calcite (fig. 3). This siltstones show intense brecciation and deformation similar to shock one (fig. 4).

The siltstone forms the blocks of various size that contain pieces of granitoides with the traces of vertical movement. Under this observation we can suppose that at least a part of the examined siltstones was formed before the crater creation. The vertical and horizontal distribution of rocks allows assuming that this structure is a result of an oblique impact with possible subsequent rebound. This assumption is also supported with existence of the gravity anomaly at north-west part of the crater [3].

Fig. 1. Schematic geological map of Ilyinets impact structure: 1 – Ptz, granitoides of impact structure base; 2 – the same in the central uplift; 3 – the approximate area of negative gravity anomaly out of crater contour; 4 – glassy impactites; 5 – suevite lens; 6 – glassy impactites under the suevite lens; 7 – siltstone; 8 – water surface; 9 – the position of boreholes (white – made before 2010, green – studied in this article); 10 – inhabited localities; 11 – outcrops; 12 – the place of deer bone discovery.

Fig. 2. Principle crosssecting along the cores: 1 – sand, 2 – weathered impactes blocks, 3 – blocks of brecciated siltstones.

Fig. 3. Deformation structure looks like a part of shatter cone (borehole 9D, depth 77 m).
2. The product from a reindeer antler (Rangifer tarandus L.) was found in the ancient drop of the Ilyinets suevite output (fig. 5). It is very similar to artifacts dug out in old town of Voin’ (XI-XIII Century AD) [4] (now under water level in the mouth of Sula river). Because of the unique nature of Illintsy material for millstone production it was possible to determine the areas of raw-materials and products spreading and thus, the commercial connections in Ukraine at that time. To find out the age of the antler the AMS 14C measurements were made using the new AMS installation in Debrecen (2014). The authors thank to I. Major (Institute of Nuclear Research of the Hungarian Academy of Sciences (ATOMKI), Debrecen, Hungary) for great job on sample preparation and AMS The comparison of the reindeer bone age (882±33 years) and the time of reindeer disappearing in Kiev region (10000 years ago) shows the existence of economical links between Kiev Rus and people of Arctic region.

Fig. 4. Powder pattern of siltstone.

Fig. 5. The product from a reindeer antler.