

Double impact rings Luat and Bertam, Cenderoh area, Perak

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In the course of detailed mapping of the Quaternary felsic volcanic ash in the Cenderoh - Kota Tampan area of Perak, our study team found evidence of double impact rings: Luat and Bertam circular features. The diameters are between 3.5 and 4 kilometres and the two rings are partially superimposed. The larger Bertam Ring consists of four concentric topographic expressions. Several years earlier, shocked quartz and other PDFs (planar deformation features) comprising clasts in a breccia at Bukit Bunuh were identified as impact breccia or suevite (Tjia & Mazlan 2003). However, no obvious impact topography was found associated with Bukit Bunuh. Since that paper, follow-up fieldwork has resulted in discovering more localities bearing evidence of extraterrestrial impact features in the general area of Kota Tampan - Cenderoh reservoir. A major discovery consists of fragments of very dense iron-rich rock. These fragments were found scattered over a relatively small area near Kampung Beng and occupy the outer ring of the Bertam ring. The larger fragments measure about 15 cm. All fragments are subangular and most show distinct irregular but relatively planar fracture surfaces. One of the fragments has a broadly pitted surface suggestive of “ablation”, similar to those on proven meteorites and interpreted to have formed by partial melting. Early investigation by XRD shows the main composition of these rocks are hematite and magnetite and the presence of kamacite in melt breccia found in the same area is also detected.