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THE KT TRANSITION AT YAXCOPOIL-1 DRILLHOLE.

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We examined the lithology, stratigraphy and mineralogy of the KT transition in the Yaxcopoil-1 hole which was drilled on the southern inner flank of the Chicxulub impact crater, approximately 60 km from its center. The100m thick suevite breccia that marks the Chicxulub impact ends abruptly with an undulose and erosive upper contact and is overlain by 60cm of dolomitic limestones with small cross- and flaser-bedding and numerous small disconformities. The lower 25cm of this interval are unfossiliferous due to intense dolomitization. At the top of this interval is an erosive contact overlain by a 3-4mm thick glauconitic layer that indicates a significant hiatus. The first Danian planktic foraminifera are present 2cm above the glauconitic layer (P. eugubina) in a micritic limestone that marks an open marine environment. Small early Danian planktic foraminifera are abundant in the next 5cm and also indicate the P. eugubina zone with a benthic assemblage indicative of middle to outer neritic environments. Mottled sediments and bioturbation by Chondrites and Thalassinoides are common. Middle to outer shelf evironments persisted into the Danian P1c zone, when shallow carbonate platform conditions where reestablished. The lithologic succession above the suevite breccia reflects normal conformable and homogenous deposition characterized by low energy environments and sea level changes. There is no evidence of significant detrital input, reworked breccia or altered glass and the sediments above the breccia are surprisingly unaffected by post impact events, such as mass sliding and slumps, which would be expected to be considerable immediately following the Chicxulub impact. The age of the suevite breccia is difficult to establish in the ab-

sence of microfossils. However, this impact breccia is temporally and lithologically separated from the earliest Danian by normal marine sedimentation that exhibits periods of bioturbation, hardgrounds, erosion and the formation of glauconite layers, all of which indicate that sediment deposition occurred over an extended time period which may have preceded the KT boundary. These data indicate that the underlying suevite breccia, which marks the Chicxulub impact, may predate the KT boundary, similar to the impact glass spherule layers in northeastern Mexico.