

Monday, March 17, 2003
SPECIAL SESSION
CHICXULUB SCIENTIFIC DRILLING PROJECT
2:15 p.m. Salon C

Chairs: D. A. Kring
V. L. Sharpton

Urrutia-Fucugauchi J. * Vera-Sanchez P. Soler-Arechalde A. M. Morton-Bermea O. Reyes-Salas M.
 Lozano-Santamaria R. Linares-Lopez C. Rebolledo-Vieyra M.

On the Nature of Chicxulub Impactor [#2132]

The Chicxulub crater is considered the impact site for the K/T global ejecta layer. We report studies of the breccia sequence cored in the UNAM and Yaxcopoil-1 boreholes. Our findings provide a unique opportunity to investigate on the Chicxulub impactor.

Dressler B. O. * Sharpton V. L. Marin L. E.

Chicxulub YAX-1 Impact Breccias: Whence They Come? [#1259]

Six units of YAX-1 impact breccias are tentatively interpreted, from top (795 m) to bottom (895 m), as (1) redeposited suevite, (2) suevite, (3/4) a "nuee ardente/ash-flow"-like deposit, (5) a fragmented melt rock (melt breccia), and (6) a carbonate melt-rich breccia.

Stöffler D. * Hecht L. Kenkmann T. Schmitt R. T. Wittmann A.

Properties, Classification, and Genetic Interpretation of the Allochthonous Impact Formations of the ICDP Chicxulub Drill Core YAX-1 [#1553]

The Chicxulub drill core exposes 100 m of suevite-type breccias consisting of six layered units. The upper four layers are interpreted as ballistic "fall out" suevite and the lower two units may represent ground surged and laterally transported polymict, melt-rich clastic material.

Kring D. A. * Horz F. Zurcher L.

Initial Assessment of the Excavation and Deposition of Impact Lithologies Exposed by the Chicxulub Scientific Drilling Project, Yaxcopoil, Mexico [#1641]

The Chicxulub Scientific Drilling Project recovered a series of melt-rich impactites unlike those from any other terrestrial crater.

Tuchscherer M. G. * Reimold W. U. Gibson R. L. Koeberl C.

Petrographic Observations and Classification: Impactites from the Yaxcopoil-1 Borehole, Chicxulub Impact Structure, Yucatan Peninsula, Mexico [#1310]

First petrographic results from impactites of the Yaxcopoil-1 ICDP drill core are presented and discussed in terms of subdivision and classification.

Tagle R. * Erzinger J. Hecht L. Stoeffler D. Schmitt R. T. Claeys P.

Platinum Group Elements Analysis of Impactites from the ICDP Chicxulub Drill Core Yax-1: Are There Traces of the Impactor? [#1811]

PGE in the impactites from the Chicxulub cores Yax-1 and Y6, show a terrestrial pattern and no meteoritic contamination. This supports a non-homogeneous distribution of impactor material between crater fill and the distal impact formations.

Gilmour I. * Sephton M. A. Morgan J. V.

Organic Geochemistry of a Hydrocarbon-rich Calcareenite from the Chicxulub Scientific Drilling Program [#1771]

The organic geochemistry of hydrocarbon-rich core material recovered by the CSDP is examined to establish whether hydrocarbons are associated with the migration and emplacement of organic matter by post-impact hydrothermal activity.

Zurcher L. * Kring D. A. Dettman D. Rollog M.

Stable Isotope Record of Post-impact Fluid Activity in the Chicxulub Crater as Exposed by the Yaxcopoil-1 Borehole [#1728]

Stable isotope measurements of new core samples from the Chicxulub impact crater constrain post-impact fluid activity.

O'Keefe J. D. * Ahrens T. J.

Basin Forming Impacts: Heterogeneity as a Unifying Construct [#2083]

We have new modelling results for Chicxulub crater that reproduces the major features including inverted stratigraphy, peak rings, terracing, Moho penetrating faults, and melt layering.