



Supplementary File S2. Fig. S1. (a) Field photo showing the crater rim and floor

(b) Polymict breccia showing deformed melt-bearing silicate and carbonate breccia in the crater center



Supplementary File S2. Fig. S2. Field photo showing breccia ejecta in the crater floor (a) and ejecta surrounding the crater rim (b)



Supplementary File S2. Fig. S3. (a) Deformed silica breccia from the crater floor ejecta.

(b) Ni-Co-Fe-rich sample from the crater rim.



Supplementary File S2. Fig. S4. (a) Shocked carbonate rich polymict breccia in the crater floor.
(b) Shocked chert ejecta from the crater floor



Supplementary File S2. Fig. S5. (a) Small carbonate and silicate ejecta (b)
From the crater floor showing shatter cone deformation.