THE TRINITY NUCLEAR CRATER

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TRINITY, with its reported 1,100 by 10 ft depression crater, has invoked little interest in the cratering community. However, a review of the old displacement pin data (fielded by Great Britian's Sir William Penny – no relation ☺) together with recent field work revealing some ejected boulders and possible secondary craters around 1,000 ft from SGZ implies that the TRINITY crater was more than just a simple airblast compression crater. Both sets of data suggest that approximately 30 percent of the crater can be attributed to gouging, scouring and at least limited ejection. This possibility is complemented by a "scoping" calculation indicating that airblast can probably only account for about 70 percent of the crater. Further, a recent hydrodynamic calculation by Needham and Crepeau has identified the small surface tongue observed protruding out in front of the early shockwave as being a "dust-ladden ground level jet" possibly formed by "high density air sweeping up large amounts of surface material". This paper presents the data to support the hypothesis that airblast and erosion contributed to TRINITY crater formation in a 70/30 ratio.