



A childhood interest in amateur astronomy, led me to carry a small Celestron telescope with me wherever I went on geophysical surveys. I wondered what the magnetic signature of a major crater into a uniform two layer geologic target (non-magnetic carbonate sedimentary rock and deeper igneous basement rock) would look like. Most recognized large craters on the earth are in ancient exposed basement shield areas with pre-existing and often complex magnetic fabrics of their own. The Chicxulub signature is much simpler and more perfect. This image shows large Lunar and Martian craters; a 200km peak and ring crater on the left and a 40km crater with a large ejecta blanket outside the crater wall. The magnetically clean Yucatan rocks allowed me to recognize not only the high amplitude magnetic anomalies associated with the uplift and impact melts but very low amplitude micromagnetic anomalies associated with the impact breccia sheets. In May of 1978 when the field survey was about 50% complete, I had an "Ah Ha" moment when I realized I was looking at the magnetic signature of a nearly perfectly preserved 180km+ crater.