**A CARBONACEOUS CHONDRITE-RICH LITHOLOGY FROM THE HED PARENT ASTEROID; PRA 04401**

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The paired howardite breccias Mt. Pratt (PRA) 04401 and PRA 04402 are notable for their high proportion of carbonaceous chondrite clasts [1]. They consist predominantly of coarse (0.1-7 mm) diogenite (orthopyroxene), eucrite (plagioclase + pyroxene), and carbonaceous chondrite clasts set in a finer grained matrix of these same materials. C-chondrite clasts up to 7 mm are composed mainly of fine-grained opaque phyllosilicates with lesser high-mg# olivine and pyroxene, sulfide, spinel, and carbonate. Most of these clasts appear to be texturally consistent with CM2 classification [1] and some contain relict chondrules. The clasts are angular and reaction or alteration textures are not apparent in surrounding matrix. Two consecutive sections (,10 and ,11) of PRA 04401 each contain about 60-70 modal% C-chondrite clasts, while Ni abundance in a separate chip used for bulk analysis implies addition of about 35% chondritic material. We also examined a single section of PRA 04402 (,6) which contains about 7%. Although many howardites are known to contain a few percent C-chondrite clasts [2,3,4], PRA 04401 is, to our knowledge, the most chondrite-rich howardite lithology. Low EPMA totals from CM2-type clasts in other howardites suggest that they frequently contain 10 wt% or more water [2], a figure consistent with their mineralogy (we use "water" as a generic term for either $H_2O$ or structurally-bound $OH^-$ in minerals). PRA 04401, therefore, demonstrates the potential for hydrous lithologies with >5 wt% water to occur locally upon the nominally anhydrous HED parent body. Since the origin of this water is xenogenic, it might therefore be concentrated in portions of the asteroid surface where it would be readily observable by remote sensing techniques.

We plan to further examine C-chondrite clasts in PRA 04401/2 with the intent of establishing firm chemical classification, estimating water content, and evaluating relationships with host breccia. To help place these meteorites into context of the HED parent, we will also compare these breccias with other howardites to evaluate which lithologies are likely to be more prevalent on the asteroid surface [5,6].

**References:** [1] McCoy & Reynolds, 2007. Ant. Met. News. [2] Zolensky et al.,1996. MAPS 31:518-537. [3] Gounelle et al., 2003. GCA 67:507-527. [4] Lorenz et al., 2002. LPSC Abs#1570. [5] Warren et al., 2009. GCA 73:5918-5943. [6] Mittlefehldt et al., 2010. LPSC Abs#2655.