

## **MORPHOLOGY OF DIAMONDS FROM THE JUÍNA KIMBERLITE PROVINCE, MATO GROSSO STATE, BRAZIL: PRELIMINARY RESULTS**

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Diamonds from the São Luiz river in the Juína Kimberlite Province (92.5 Ma), southwestern border of the Amazon Craton, northern Brazil, have been described by their ultradeep inclusions. We report here morphological data for diamonds from two pipes (J5 – 50 stones; C4 – 100 stones) and from the São Luiz, Porcão, and Duas Barras (26 stones) rivers. Diamond body colors are mainly colorless, gray, and brown; yellow, white, and pink stones are rarer. Most of the diamonds are fragments and common main forms are resorbed octahedral, macles, and tetrahexaedroid. Surface textures on octahedral faces are trigons, positively oriented trigonal pits (rare), hexagons, shield shape laminae, serrated lamination, and hexagons containing trigons (rare). Textures described on secondary tetrahexaedroid surfaces were elongated hillocks, shagreen texture, and lamination lines. Inclusion cavities, shallow depressions, frosting, ruts, and macle lines occur in both surfaces. Crescentic steps and tetragonal pits were rarely observed. J-5 diamonds are less resorbed than C-4 ones where octahedral partly resorbed (56%) and macles are more frequent in the first (34% of the stones are tetrahexaedroids). C-4 diamonds are intensively resorbed and octahedral (14%) are less common than tetrahexaedroid forms (61%). J-5 stones had probably experienced less resorption conditions when compared to C-4 diamonds. Diamonds from the two pipes differ between them while alluvial diamonds are similar to C-4 stones. The data suggest that there is more than one type of mineralized pipe in the province and that alluvial diamonds are mostly derived from C-4 and similar pipes.