

From “A Study of the Winston Red: The Smithsonian’s New Fancy Red Diamond”

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APPENDIX 1

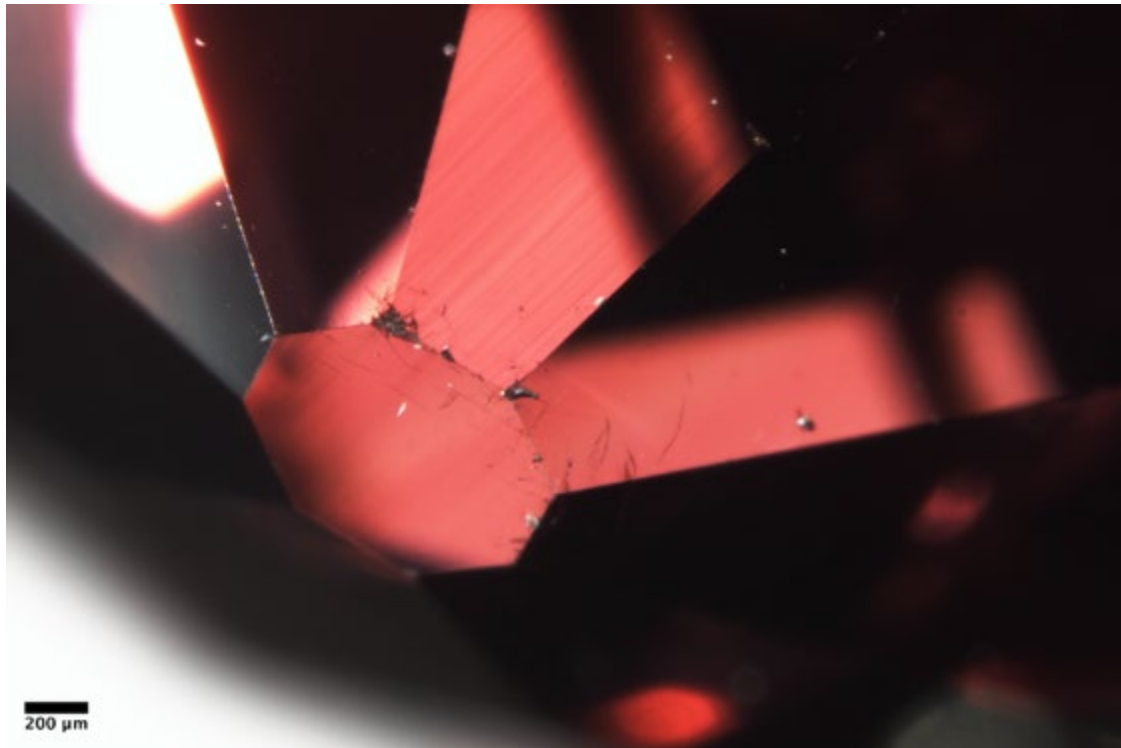


Figure S1. Graining along P1 in plane polarized light.

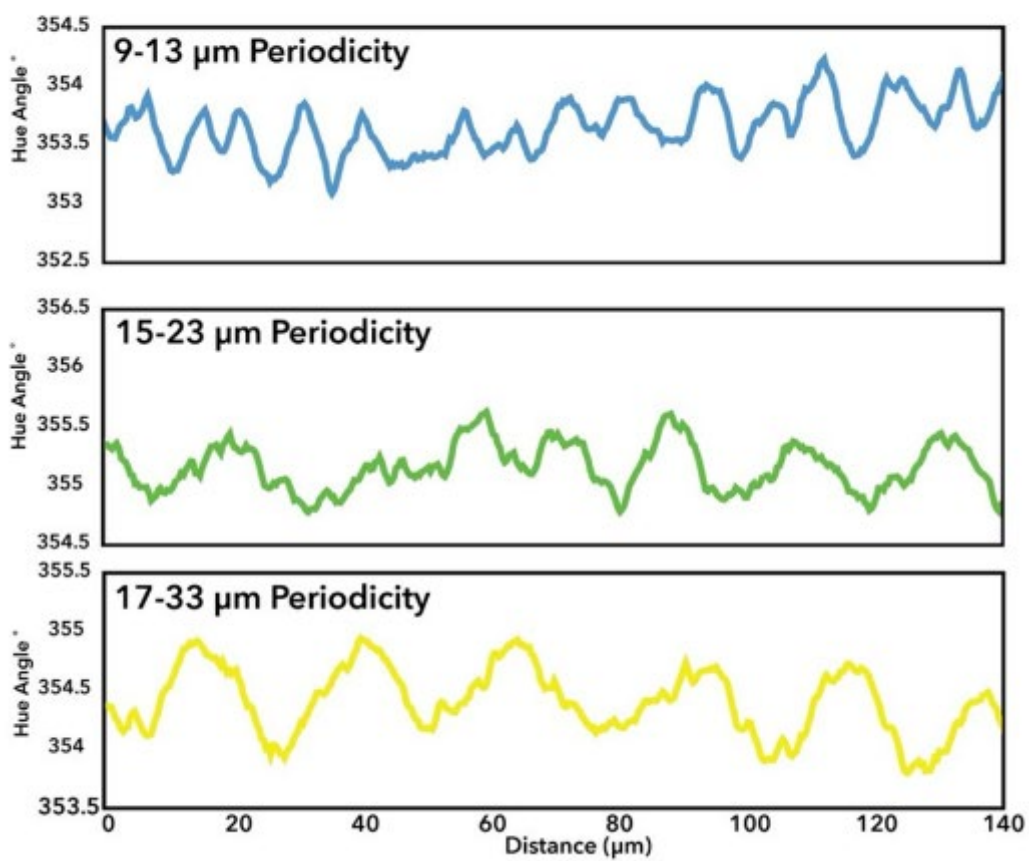
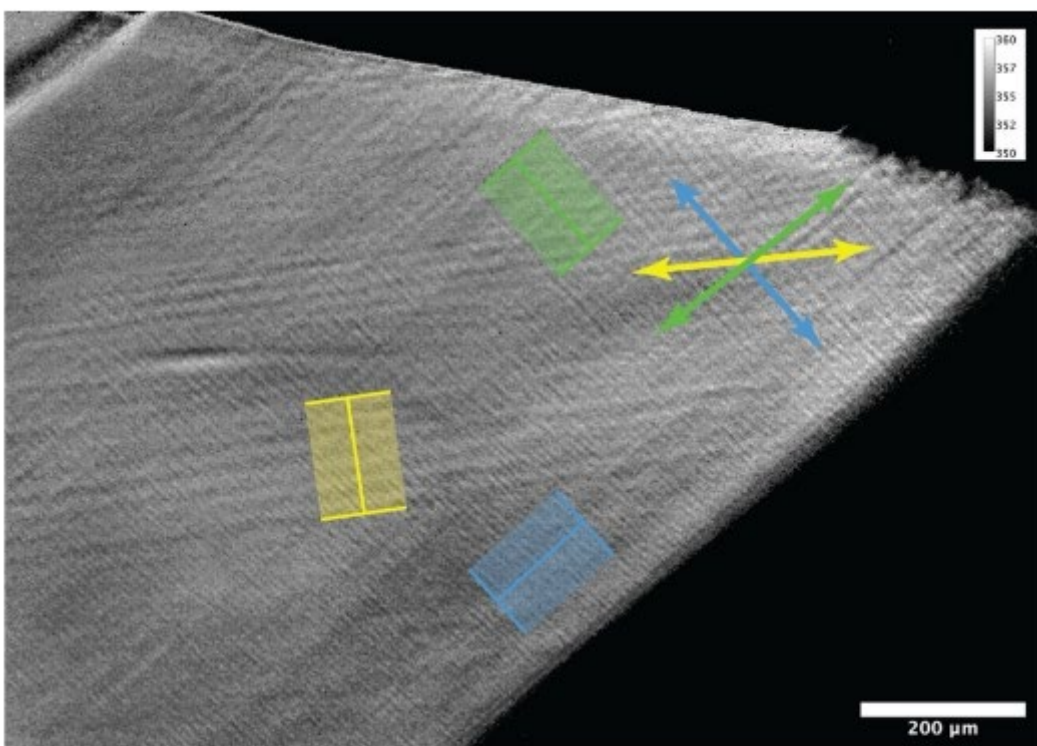


Figure S2. Periodicity across graining lamellae features as shown by hue angle.

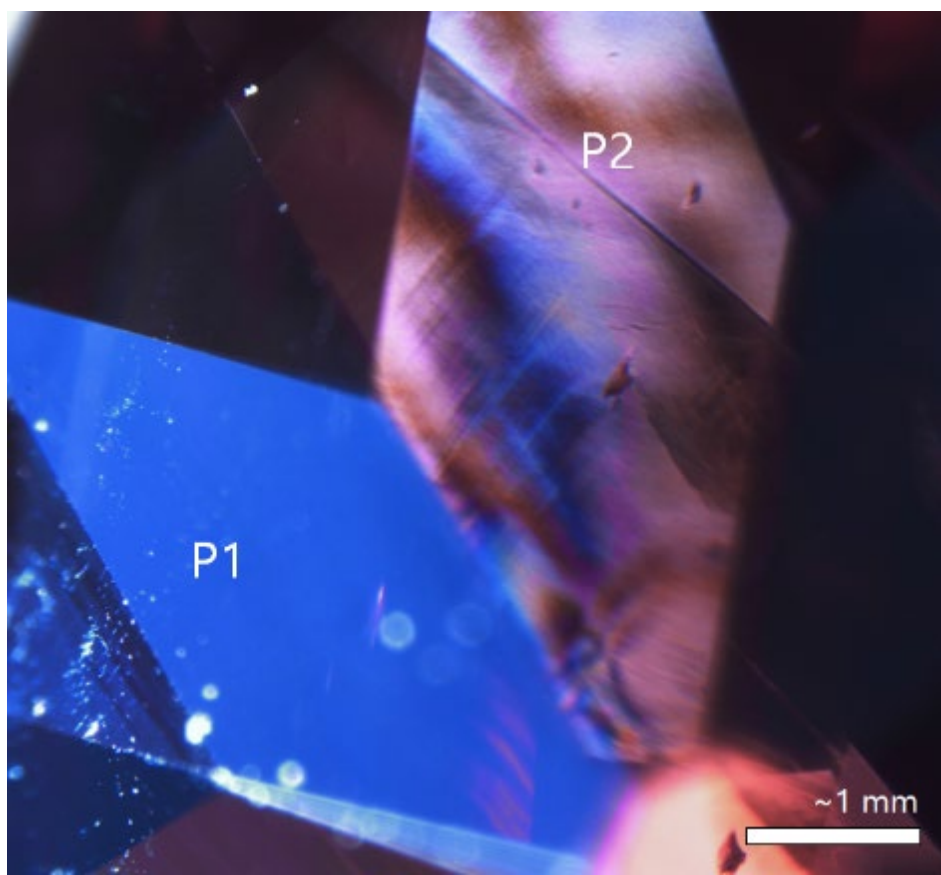


Figure S3. Two directions of graining observed on P2 in cross-polarized light.

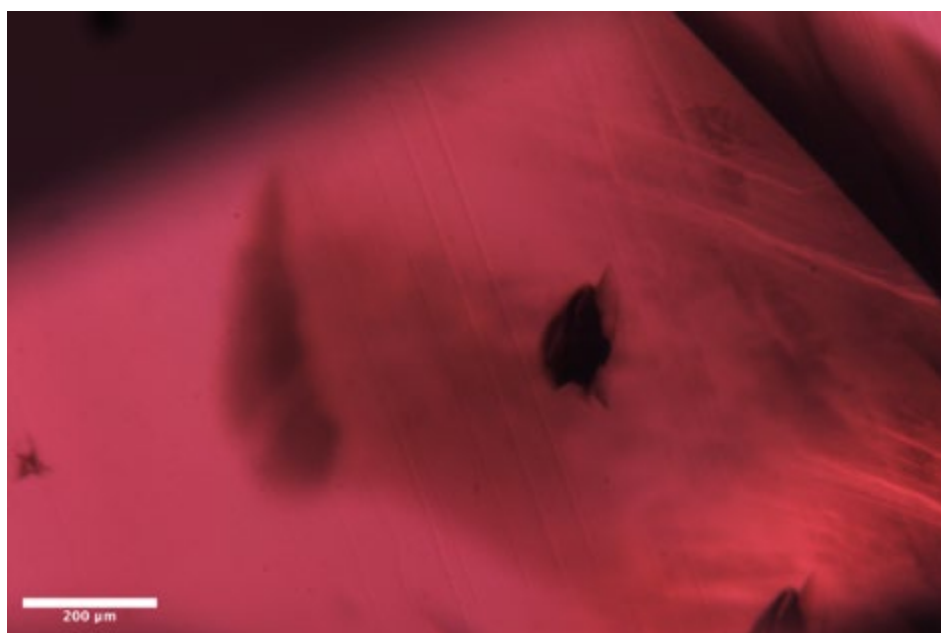


Figure S4. Unidentified inclusion in the Winston Red that appears to be associated with the Rose channel.



Figure S5. Major “feather” crack in the middle of the table appears to run parallel to one direction of graining.

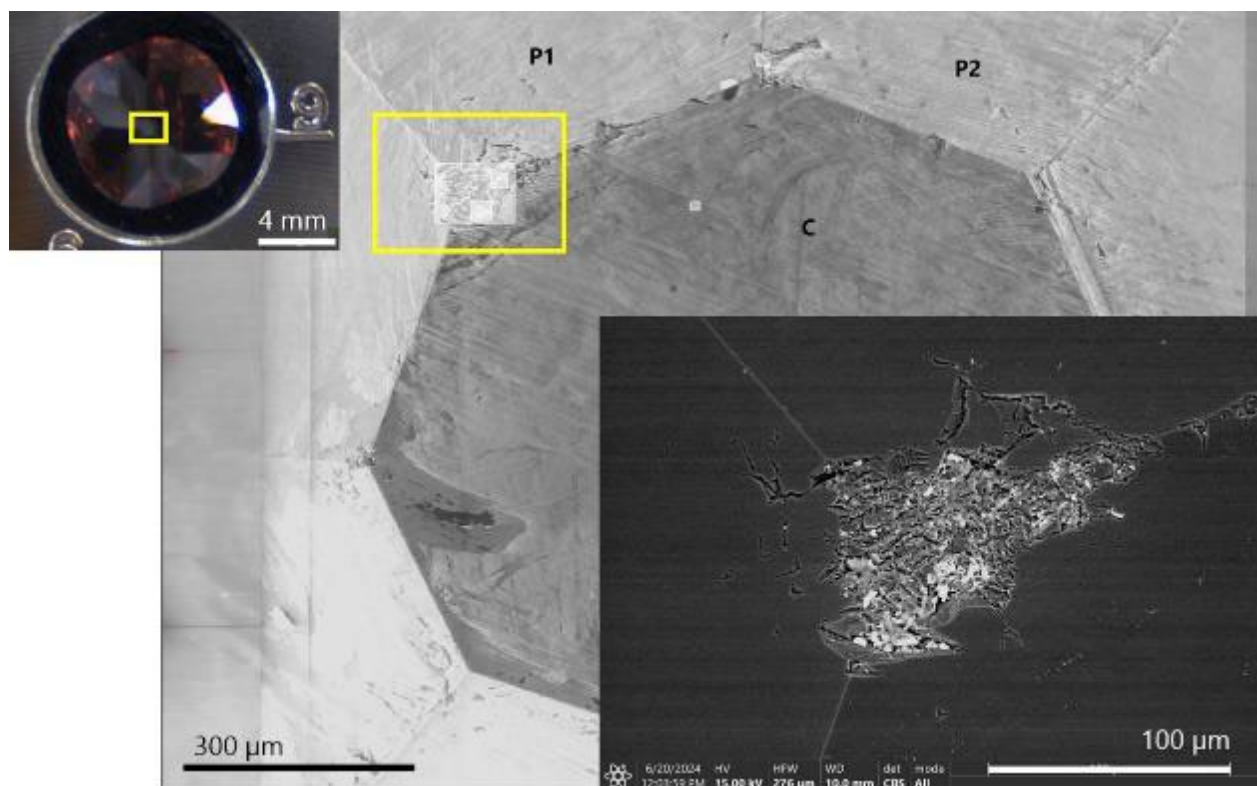


Figure S6. Within the cracks of the “chip” at the corner of P1, SEM energy dispersive spectra (EDS) analyses reveal the presence of potassium-rich silicates, which might be remnants of the kimberlite magma responsible for diamond transport to the surface. However, we are not confident that these are primary signals, since the diamond has been polished, cleaned, and more.

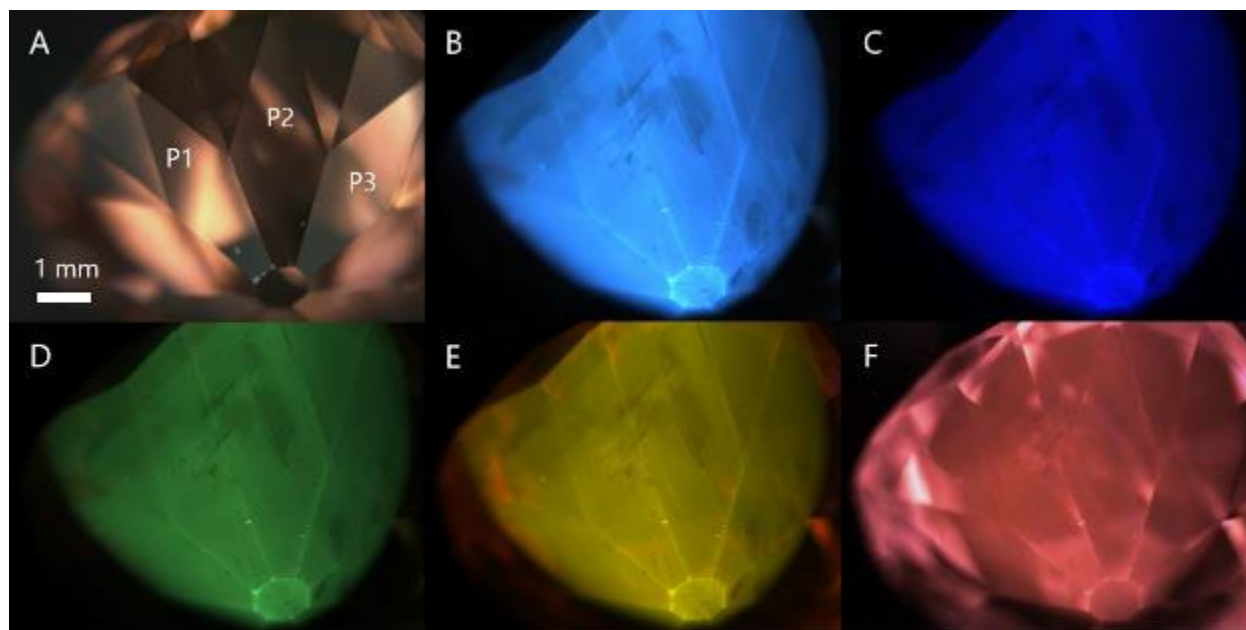


Figure S7. The Winston Red illuminated by white light following UV-exposure, illustrating its photochromic color change. DiamondView deep UV-illuminated fluorescence images collected using the instrument's different filter options: (B) standard filter; (C) blue (390 nm band pass); (D) green (475 nm long-pass); (E) orange (550 nm long-pass); and (F) red (725 nm long-pass).

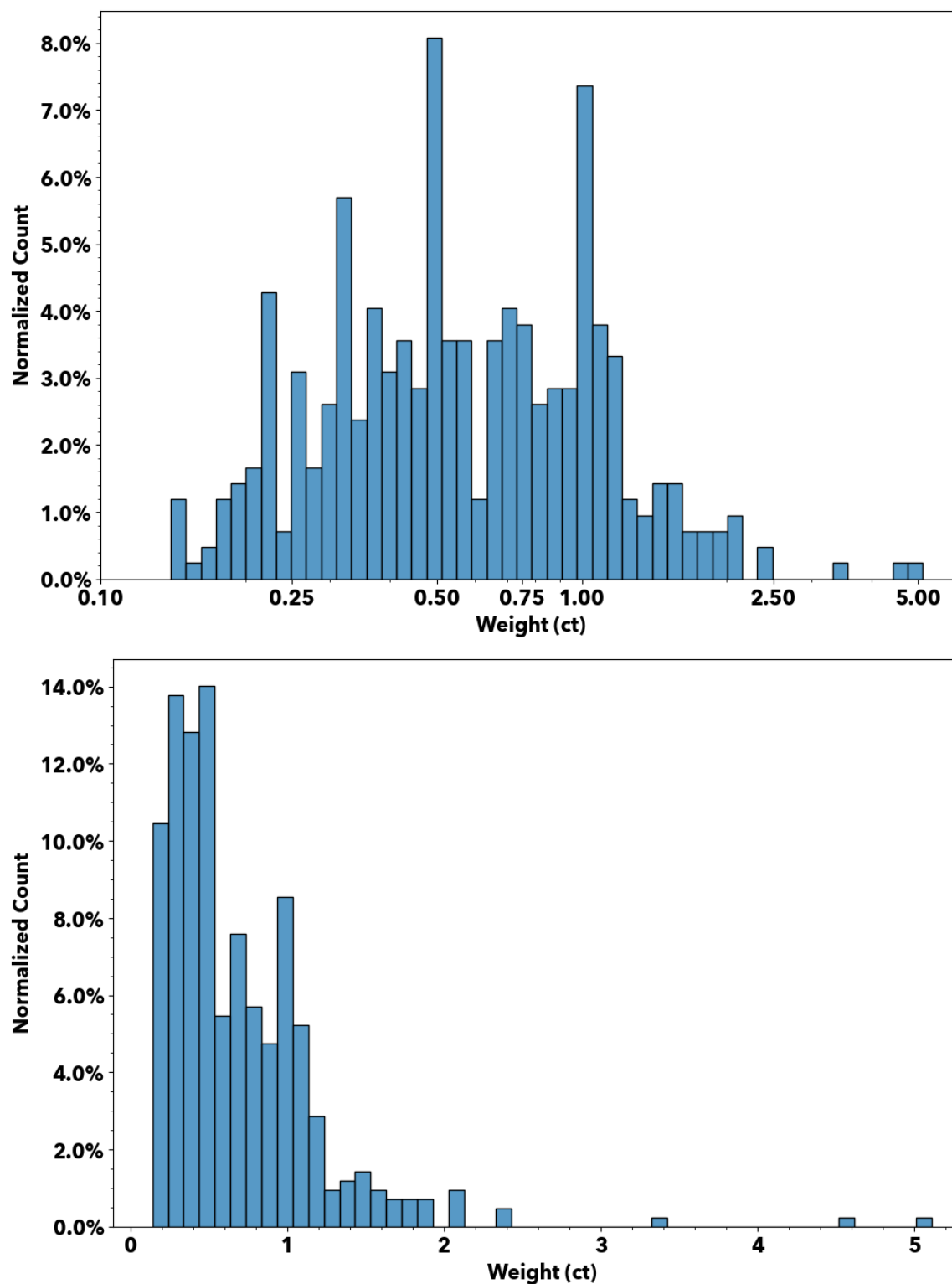


Figure S8. Distributions of carat weights for Fancy Red diamonds that have passed through for GIA grading, expressed in log (top) and normal (bottom) scales for weight.

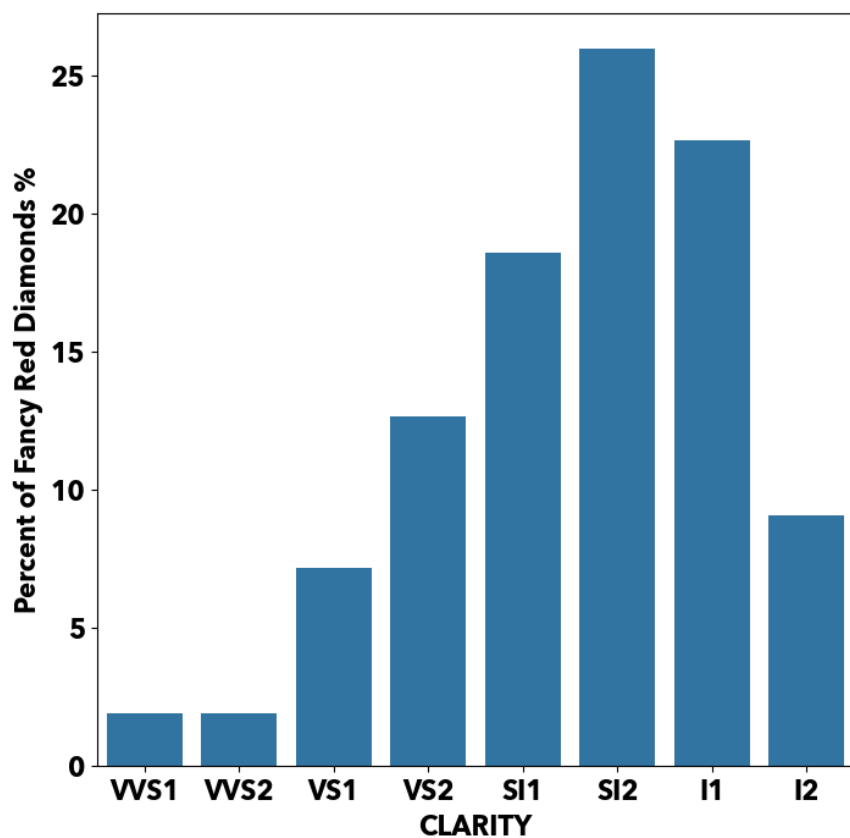


Figure S9. Clarity grades for Fancy Red diamonds that have passed through for GIA grading.

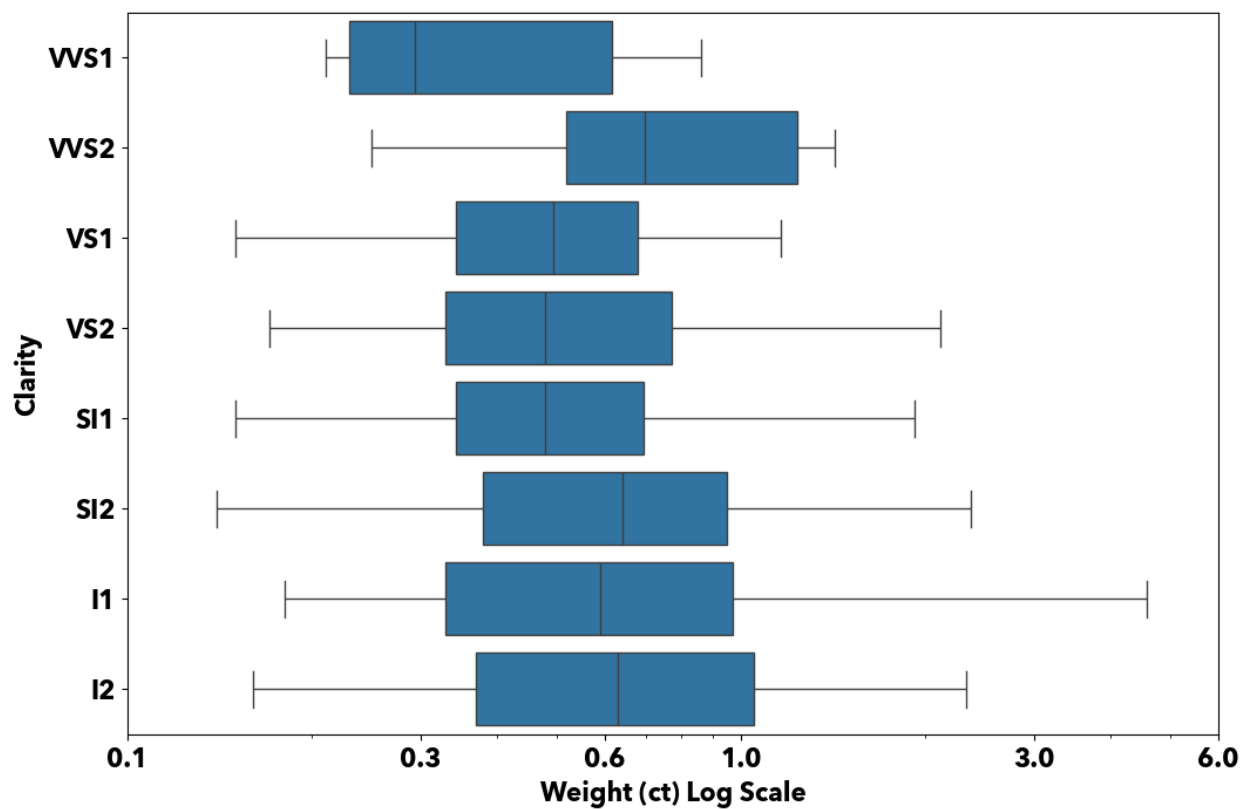


Figure S10. Box and whisker plot of clarity vs. carat weight (log scale) ranges of Fancy red diamonds.