

**MEMORANDUM**

**DATE:** February 09, 1996

**TO:** J. Fleming

**FROM:** H. Woo

**SUBJECT:** Chart and table for estimating Grum Ore SG

**CC:** D. Arndt, J. Boudreaux, I. Horne, J. Vanderbroek, B. Piteau, A. Perez,  
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Attached is a chart and table to help estimate the specific gravity (SG) of Grum ore. The SG's are calculated by a regression equation that is based on the major components of the ore and their density characteristics. Please come see me if you want details.

Specific gravity values are calculated in each ore blasthole in the Gemcom Ore Control database and is used by the Geology group to calculate blasthole bench reserves. Since the blasthole reserves include all individual blastholes with SG information, each of the dig packets contains the average SG of the packet. It is this average of each packet that was used for this analysis. All the information from 1252 to 1216 bench was used. A scatter plot of average SG by packet versus PbZn combined resulted. The straight line through the scatter of red points is the best fit line based on first degree regression information of all the data. The lower grade PbZn combined has the most data and is probably more reliable than the higher end. With time, the inclusion of deeper benches and more data, this graph will improve.

The attached table is included for easier estimation. The grade increments are 0.1% and should suffice for what the numbers will be used for. Douglas and I both feel that these values can be used with confidence and will continue to update and improve on its accuracy.

Attachments/2

HFW: D:\wp60\files\SGREG.mem