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To Those Concerned

From Brian Hall

Date June 26, 1981

Subject Specific Gravity Determinations

In conversation with B. Wyslouzil of Lakefield Research he stated that there is generally a difference of 0.2 to 0.3 S.G. units in between powdered pulp size samples (-100 mesh) and the whole rock. This difference could have significant impact on the tonnage calculations of the Anvil orebodies, resulting in a 5 to 8% overestimation. It is proposed that a comparison test be conducted at Lakefield Research to establish what differences exist, if any. To this end 42 core samples of the major ore types (4A, 4D, 4E, and 4G) are being sent to Lakefield Research to have S.G. determinations made in the following manner.

- 1) Core samples are to be S.G. determined using an approved water immersion method.
- 2) The samples are then to be crushed to -10 mesh (reject size) and have an S.G. determined using a Le Chatelier flask and an Air Pycnometer.
- 3) The samples are then to be crushed to -100 mesh (pulp size) and the S.G. determined again by the Le Chatelier flask and Air Pycnometer methods.

Once the results of these determinations are obtained a t-test will be performed to ascertain if a significant difference exists. If so then a regression analysis will be performed to determine an adequate conversion factor for comparing the various sample sizes and methods. In addition if a significant difference between the methods is found to exist a standard method of S.G. determinations should be established.

DISTRIBUTION:

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