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To J.F. Olk

From P.I. Clarke

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Subject

GRUM INTERIM COMPUTER MODEL

An interim model for the Grum now exists that superceeds the wholly Kerr-Addison / Noranda model previously used.

This interim model basically consists of the following:

1. Original Kerr-Addison surface and underground DDH surveys and Pb, Zn, Ag assays, checked and corrected where necessary.
2. Cyprus Anvil 1980 DDH's (the geological interpretation used in the model is not updated with these. Assays are used to improve grade estimation).
3. DDH composites compiled in similar manner to Faro and Vangorda models. (Not exactly the same as S.G. values for individual samples are not available with Kerr-Addison data.)
4. Kerr-Addison geological interpretation unchanged.

So essentially there are some extra DDH's to help with the grade estimation, the DDH composites have been put together in a similar manner to other models, and this data has been used to interpolate grades into the original Kerr-Addison geological interpretation of the Grum deposit.

Specific gravities for massive sulphides and quartz sulphides (the two sulphide types distinguished in the geology of the model) have been left unchanged from the Kerr-Addison estimates which are 4.0 and 3.0 respectively.

GEOLOGICAL RESERVE ESTIMATE

Cut-Off = 4.0% Pb + Zn Undiluted Grades

	K.A./Noranda Model	C.A. Interim Model	% Change
Ore (000's MT)	27,650	30,781	+11
% Pb	3.1	3.1	0
% Zn	4.9	4.9	0
Ag G/MT	48	49	+2

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ULTIMATE PIT RESERVE ESTIMATECut-Off = 4.0% Pb + Zn Diluted Grades -6%(Pit Design is Dec. 1979 C.A. version)

	K.A./Noranda Model	C.A. Interim Model	% Change
Waste (000's M <sup>3</sup> )	46,081	45,688*	-1
Ore (000's MT)	15,583	16,875	+8
% Pb	3.1	3.0	-3
% Zn	5.0	4.9	-2
Ag g/MT	47	47	0

\* See notes

At this point in time more work needs to be done on the pit design. The waste volume indicated is underestimated because overburden in the Doal Lake area has not been fully taken into account.

The pit design is a relatively rough version compared to a final design. It is adequate from an initial feasibility and development point of view. However, as figures from the design come to be used for more detailed studies it is necessary to improve the quality of the design.

Depending on what decisions have to be made by the company and when, it may be worthwhile re-designing a pit around the interim model rather than waiting for the full CAMC model to be completed.



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