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C U R R A G H   R E S O U R C E S   I N C.

M E M O R A N D U M

536 Maynard

To: Those listed
From: Stephen Cheeseman

Date: October 18, 1988
Re: F8805 Model

Now that the new F8805 geologic model has been completed, the implications of using this model must be fully understood as it represents a departure from the previous method used to construct the FI and F8701a models. These changes over previous methodology are a result of data analysis from blasthole information and pit mapping. This information is to be considered the best obtainable data used to enhance the preciseness, but not necessarily to the same degree, the accuracy of the new model. There are three main deviations from previous methods of model construction that are outlined as follows:

(i) The compositing process of drill hole assays involves the selection of composite lengths. The assay values are then weighted by their lengths over the selected composite interval. This basic method of compositing has now been adjusted to include the additional weighting factor of density for each assay value in the new model. The rational behind this adjustment is that density or specific gravity is related to the amount of metal in a certain oretype. Generally, but not proportionally, a higher density will reflect higher grade and vise versa. This density weighting process will result in a slightly higher composite value for high grade oretypes. It should be noted that both the FI (Faro Interm) and F8805 model used this density weighting during the compositing stage.

(ii) An analysis of blasthole information reveals that tonnage comparisons with modelled data are more accurate if an average density of 3.00 T/bcy is used. This is consistent with that reported by the metallurgical balance. The F8701a model calculated an average density of 2.91 T/bcy. This difference is reflected in the higher tonnage reported by blasthole information over the F8701a model. The reason for reduced average density in the F8701a model is attributable to porosity. It was believed that quartzose oretype densities should be reduced by 5% and massive pyritic oretypes by 10% to account for this porosity. It is now believed that this reduction is too high and has been eliminated in the new model. This exclusion of reduced densities is important because it implies 0% porosity for all oretypes and will result in a higher tonnage than reported by the previous models. It also implies that water is not a factor when calculating tonnage.

(iii) The FI and F8701a models differ in that the FI model encompasses a complete geologic reserve for the Faro Deposit. The F8701a is limited in that it only contains reserves in AY and BZ Phases. The purpose of the F8701a model was to utilize diamond drill hole information obtained from the 1986 program in the area of active mining at that time. Time constraints prohibited the model to encompass the remaining phases. The FI and F8701a models are similar in that the method used to composite the assays is consistent as pointed out in (i). The criteria used to select the composite lengths is, however, different from that used in the F8805 model. The FI model was bench composited - that is the composite lengths were set to 20 feet. The rational behind this selection was the mining method (20 foot benches) and that blasthole assays were analyzed as 20 foot composites. Composite lengths for the F8701a model were chosen to be 10 feet. This composite length selection differs from that used by the F8805 model. A geologic composite method was used for the new model. Composite length selection in this case was partially dependent upon lithologic boundaries defined by the six oretypes that comprise the orebody. Within these boundaries 20 foot composites were then selected where possible - some composites would end up less than 20 feet because of the variable thickness of a certain oretype. The geological composited data was then interpolated into the new F8805 model. The resulting reserve calculation revealed very good results when compared to blasthole information as follows:

Blasthole/Model Reserve Comparison for Period
Jan 1, 1986 to May 31, 1988

(+4% Pb+Zn)	Tonnes	%Pb	%Zn	%Pb+Zn	Ag g/t	Tonnes Pb+Zn	Tonnes Lead	Tonnes Zinc	Kilograms Silver
Blastholes	8,493,613	3.34	4.74	8.08	na	686,284	283,687	402,597	na
Bench Composited Data									
FI (Undiluted)	7,332,800	3.28	4.85	8.13	44	596,157	240,516	355,641	322,643
FI (Diluted & Mining loss)	7,662,776	2.98	4.41	7.39	40	566,349	228,490	337,859	306,511
Bench Composited Data									
F8805 (Undiluted)	7,364,770	3.45	4.96	8.41	44	619,377	254,085	365,293	324,050
F8805 (Diluted & Mining loss)	7,696,185	3.14	4.51	7.65	40	588,408	241,380	347,028	307,847
Geological Composited Data									
F8805 (Undiluted)	7,792,010	3.65	5.24	8.89	46	692,710	284,408	408,301	358,432
F8805 (Diluted & Mining loss)	8,142,650	3.32	4.76	8.08	42	658,074	270,188	387,886	340,511
F8805 (Diluted & Mining loss)#	8,485,499	3.32	4.76	8.08	42	685,783	281,564	404,218	354,848

Variance

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag g/t	Tonnes Pb+Zn	Tonnes Lead	Tonnes Zinc	Kilograms Silver
Bench Composited Data									
(BH-FI)/BH*100									
FI (Undiluted)	13.67%	1.80%	-2.32%	-0.62%	na	13.13%	15.22%	11.66%	na
FI (Diluted & Mining loss)	9.78%	10.72%	6.98%	8.53%	na	17.48%	19.46%	16.08%	na
Bench Composited Data									
(BH-F8805)/BH*100									
F8805 (Undiluted)	13.29%	-3.29%	-4.64%	-4.08%	na	9.75%	10.43%	9.27%	na
F8805 (Diluted & Mining loss)	9.39%	6.10%	4.87%	5.38%	na	14.26%	14.91%	13.80%	na
Geological Composited Data									
(BH-F8805)/BH*100									
F8805 (Undiluted)	8.26%	-9.28%	-10.55%	-10.02%	na	-0.94%	-0.25%	-1.42%	na
F8805 (Diluted & Mining loss)	4.13%	0.65%	-0.50%	-0.02%	na	4.11%	4.76%	3.65%	na
F8805 (Diluted & Mining loss)#	0.10%	0.65%	-0.50%	-0.02%	na	0.07%	0.75%	-0.40%	na
Variance of F8805 (Undiluted): Geological Composited vs Bench Composited data									
(GC-BC)/GC*100									
F8805 (Undiluted)	5.48%	5.48%	5.34%	5.40%	4.35%	10.59%	10.86%	10.53%	9.59%

Diluted & Mining loss means reserves diluted by 10% at 0 grade with a mining loss of 5%.
Diluted reserves by 10% at 0 grade with a mining loss of only 1%.

Tonnage and density comparisons show that blasthole data are very close to the F8805 model (Diluted). This is not surprising because we have a much better geometric understanding of this area of the deposit from blasthole and pit mapping data. It must be stressed that this level of geometric understanding is limited for the remaining reserves to a certain degree of confidence.

Comparisons of bench and geological composited data for the F8805 model show an approximate 5% increase in tonnage and grade, and 10.59% increase in overall tonnes metal. This agrees with an increase in tonnes metal reported by blastholes in the order of 13.13% over bench composited data of the FI model and provides for a better level of confidence when using geological over bench composited data. Another interesting comparison not shown on the blasthole/model reserve comparison table is the volume differences between F8805 (undiluted) bench and geological composited data of +4% Pb+Zn. A bench composited data volume of 2,400,821 bcy compares to a geological composited data volume of 2,560,149 bcy for this grade category and reveals a variance of 6.22%. This implies a certain downgrading of high grade ore associated with the bench composited method.

The purpose of the F8805 model is to incorporate 1987 DDH data, blasthole and pit mapping information into a new model with a higher level of confidence. These new reserves are closer to the blasthole data. Tonnage comparisons alone show that a F8805 diluted tonnage with only 1% mining loss (8,485,499 tonnes) produces a variance of 0.10%. This is understandable. I do not believe a mining loss is justifiable at Faro because of the spacial distribution of grade and the homogeneity of massive pyritic ores. Our present mining method makes it possible to minimize mining loss - possibly to elimination. Both reserve and tonnes metal variances are greately reduced when a mining loss of only 1% is employed. Alternatively, dilution is a very real factor that may play a very important role in CD Phase. The presence of a middle waste horizon will undoubtedly affect tonnage and grade when mining at strict 20 foot bench heights. Ore control will be of utmost importance at that time. In the past ore control procedures have proven well in these circumstances.

A chart summarizing the various methodologies is provided for convenience. Total geological reserves are also listed with remaining open-pit mineable reserves.

In conclusion this new model represents the most up to date information. We learn more about the deposit as we mine and that knowledge applied to the remainder. On going data collection in all aspects of geology will asure even higher levels of confidence.

I would like to call a tentative meeting on October 20, 1988 at 1:00pm for those listed who have any questions or comments concerning the contents of this memo. Not all are requseted to come, but it is important that we understand all that has been discussed.

List: Minesite

Bill Weymark
Kim Barrowman
Kresho Galovich
Jack Bowers
Ted Scoular
John Huntly
Joe Vandenbroeck
Ed Desjardins
Ed Blaxland
Ian Piwek
Brad Pisony
George Downey

Whitehorse

Gregg Jilson
Lee Pigage
Cam Reed
Ted Parry