

MISSING OUNCES - PIERSON

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To: Ron Clayton
From: Scott Santi
Subject: Summary of Tom Holcomb and Bruce Perry Ore Control Audit

Tom Holcomb and Bruce Perry conducted an ore control audit of the Rosebud mine on September 15-17. In general, both went away with an overall positive impression that a "competent effort" is being made by Hecla and were very pleased on how open and helpful your staff was on providing information.

After a "brain storming" session with Tom and Bruce, they came up with some concerns which might help reduce the overall unit costs at Rosebud by improving the head grade coming from the mine. A list is provided below:

- 1) At lower Au prices, should we increase the current 0.14 opt cut-off slightly to improve the head grade?
- 2) An internal cut-off of 0.08 opt is used for any "ore" encountered in development and mining. Should we increase this to 0.10 opt with the current Au price, milling costs and haulage costs?
- 3) Should we segregate into individual stockpiles each muck round of the fringe material, and do grab sampling of the blasted muck (while waiting for assay results) to ensure no low grade or waste is getting into mill stream?
- 4) Should we utilize an RC rig or diamond drill to drill adjacent possible cuts at the margins of the orebody and utilize slab mining more (rather than driving an entire cut which may contain a lot of waste rounds)?
- 5) Should we form a database so comparisons of production data and ore control data by level, stope, rock type, or model zone can be made?

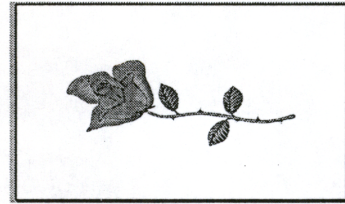
Hopefully, this list of suggestions helps you address the low gold prices we anticipate at a time when head grades are expected to decline from the mine. This review helped Newmont rethink what it was doing at its underground mines.

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MEMO TO: Scott Santi

FROM: Ron Clayton

DATE: 10/1/1998



Rosebud Mine

SUBJECT: Response to Summary of Tom Holcomb and Bruce Perry Ore Control Audit

I appreciate your memo summarizing the above-mentioned audit. The following are responses to your comments:

- Items 1 and 2
 - Your suggestion is exactly correct, as I have discussed at the last two Joint Venture meetings. However, we currently do not have an accurate billing for mill costs for any month of 1998. Most of the problems occur with the bills for April through September. These are the most important because they reflect the way we will be operating in the future (Rosebud only in Pinon mill). Once we have an accurate picture of the milling costs we can expect, we will revise both cut-off grades and the mine plans. I hope the mill cost issues can be resolved this month.
- Item 3
 - Fringe material from the stopes is stockpiled separately by round on the surface until assays are received. This has been the practice since production began. A significant and substantial study to determine whether face samples or muck pile samples would provide the best grade control assays was conducted during the first nine months of production. This study shows significantly more accuracy in the face and rib sampling and was supported by mill results until March 1998. In addition, Francis Pitard recommended that we use face samples based on the heterogeneity of the deposit and the inherent errors associated with sampling muck piles.
- Item 4
 - Sludge drilling and slabbing are used significantly where ore boundaries are suspect or ore occurs on stope ribs and faces beyond known boundaries. It is important to note that to date the stopes that have been mined were core drilled on 25-ft. centers in three dimensions. All holes were drilled significant distances prior to and beyond ore intercepts. In addition, we maintain significantly more active faces than required for production so that we can stop production in multiple locations to optimize grade control.
- Item 5
 - The database you describe has been active since the start of production and many examples of the comparisons you describe have been presented in the Joint Venture meetings. I would be more than happy to provide any of the comparisons for your review. Rock type comparisons must be compared to ore control data via the stope bench maps. All other data can be compared numerically and graphically.

I sincerely appreciate the suggestions and will pursue each of them with my staff so that we can make any improvements possible. We also appreciated the other suggestions that Tom and Bruce made while on-site. I would welcome their in-put and critical review at any time. Should you have further questions please contact myself or my staff at your conveninece.