

Don Cameron Tours 1998

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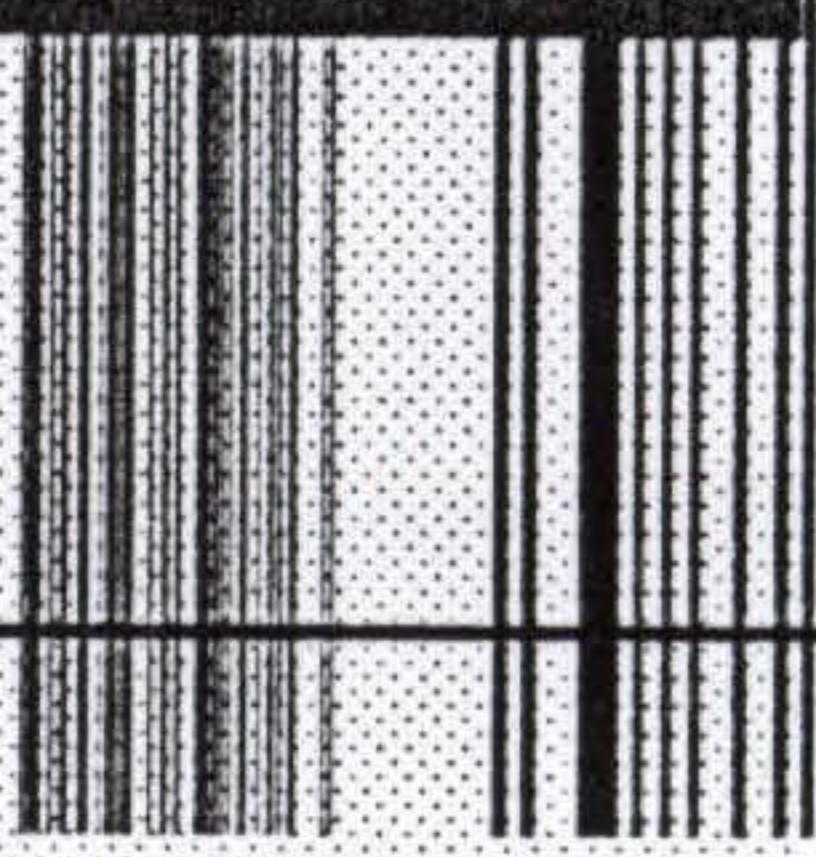
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# Hecla Mining Company

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**To:** R. Clayton

**From:** D. Cameron

**Date:** March 13, 1998

## RE: First Quarter Review of Rosebud Mine.

The geology group is making progress in several areas. The most significant of these are:

- Completed ACCESS database for production reporting and benchmarking.
- Geologic mapping covers high percentage of development.
- Organization of maps
- Staffing
- QA/QC program started

The production database is a model for Hecla and I would like this basic product to be used at other operations. I believe its success is highly linked to the individual effort applied. The QA/QC effort will save the operation money in the long run, and I think the group will find more ways to use it. The geologists and support staff are well-organized to meet the routine needs of the mine operation. I see them using the mapping they are doing, and it's worth mentioning because it's a frustration to see how little it's used in some other operations.

Areas in which the geology program can grow in effectiveness are:

- 1) Use stope cross-sections and definition drill holes to optimize stope limits;
- 2) Learn to use the QA/QC data by producing the recommended graphs and stats, then following up with the lab;
- 3) Cross-train the rest of the staff on the production database;
- 4) Develop resource estimation skills in-house;
- 5) Transfer Surpac skills to two geologists;
- 6) Encourage mine research projects for each geologist.

I have pointed out item 1 in each of my past trips to the mine, and it's quite clear to me. I am certain that the mine operation will benefit greatly from a set of regularly-spaced geology cross-sections along the primary undercuts for each stope. Mapping should be posted to the workings and all drill holes within the area of influence of the section are shown. Planned drifting and production sample results are shown, and the mine plan can be evaluated and improved. The exploration cross-sections do not serve this purpose, and they are not in

routine use by the mine geologists. Generally, they are not at appropriate orientation to the mining.

There is progress and a plan to accomplish the reserve and software skills, and it is desirable that the geologists and geotech attain those. It's my opinion that we can't rely on consultants to do these basic tasks. We need to employ consultants as necessary to bring special skills and experience to ore reserve estimation in the capacity of advisors, but they should not do our reserves. At the mine, these skills should not be completely concentrated in one individual so that succession is smooth if an employee transfers to another operation. Transfer of computer skills is proceeding slowly.

I encourage the geologists to broaden their experience by visiting surface prospects from time to time. Each person should have a research project. The PIMA is part of that, and here are some other ideas:

- Petrography of the volcanic section
- Cross-section of the district
- Cross-section of part of the mine
- Far-East zone

This group is highly motivated and talented. They will continue to grow if they have other challenges to master in addition to the important ones involved with mine production. I hope the comments here will give you some ideas to continue building the capabilities of your staff.