



Energy, Mines and
Resources Canada
Geological Survey of Canada
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Énergie, Mines et
Ressources Canada
Commission géologique du Canada
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October 27, 1993

Your file Votre référence

Our file Notre référence

B. Fowler
Placer Dome Inc.
1440 Hugh Allan Drive
Kamloops, B.C. V1S 1L8

RE: Placer Dome Inc. (PDI)-GSC IPP Project - Sulphurets Geology

Dear Brian:

This letter is to bring you and Ed up-to-date on the IPP project.

Myself and Mathew O'Keefe, a Queen's graduate student, were able to complete many traverses on Placer Dome's ground. Coverage was sufficient to expect that in combination with PDI's detailed information on the Sulphurets Gold Zone, John Payne's map for the Kerr and Newhawk Joint Venture's previous work that quite reasonable preliminary 1:5000-scale geological maps can be produced for your Sulphurets property. During the course of this work several (new?) areas of chalcopryrite and molybdenite mineralization and a few polymetallic quartz systems were noted and about an additional 127 rock grab samples were collected for lithochemical analyses. For the first time small areas ("tip of the iceberg") of intense, possible biotite alteration were noted and two faults, examined with Jack Henderson, have kinematic indicators that they are both thrusts.

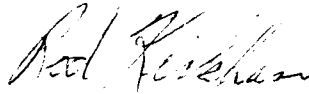
The upper southern part of the Mitchell Au-Cu zone, which I had not observed previously, is the most spectacular sheeted quartz vein system that I have ever seen. The zone for over 100 or 200 m width comprises greater than 80 to 90 per cent subparallel, steeply-dipping quartz veins. These veins, with minor pyrite, are clearly truncated by an overlying low-angle thrust fault. In the hanging wall block syenitic and monzonitic intrusive rocks are intensely K-feldspar altered and are cut by a largely barren(?) or low-grade, extensive quartz vein stockwork but locally these rocks contain abundant pyrite, and chalcopryrite and minor molybdenite. Metal contents of these rocks, both above and below the fault, are critical for determining their exploration potential. On the other hand, numerous post-mineral faults, steep terrain and many active bedrock rock slide scarps would make exploration and potential mining in the area difficult.

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About \$3200 (mainly on helicopter charters) of the \$10 000 GSC budget was spent on this work. If you agree the remaining part of this budget should be spent on lithochemical analyses (estimate ~\$2500 for Au + 33 element neutron activation analyses for these and samples collected previously and some thin and polished thin sections) and for salary (about \$4300) of a geologist(s), such as Ron Wells and/or Steve Roach (both competent geologists familiar with the area), to work on the geological compilation. My calculations indicate that PDI has spent \$3992.17 (Steve Roach's salary May 11 to June 11, 1993) of their \$10 000 portion of the IPP budget. These remaining funds (about \$6000) could also logically be directed to salary to support the geological map compilation. In the immediate future I have other work commitments and I have not moved fully into my office yet so I would prefer to delay the start of this work for a month or two, possibly into the new year. Please let me know PDI's opinions about these subjects.

Yours truly,



R.V. Kirkham

RVK/bv

cc: E. Kimura
A.G. Plant, Director, Coordination and Planning Division
W.D. Sinclair, Acting Subdivision Head, Mineral Resources Division