

ENVIRONMENTAL PROTECTION AGENCY

WATER QUALITY OFFICE  
ALASKA OPERATIONS  
RM 9, FEDERAL BUILDING  
605 FOURTH AVENUE  
ANCHORAGE, ALASKA 99501

July 6, 1971

MEMORANDUM

TO: Jack E. Sceva, Geologist, N.W. Regional Office  
Portland, Oregon

FROM: Physical Scientist, Alaska Operations Office  
Anchorage, Alaska

SUBJECT: Mine at Red Devil

Since returning to Anchorage I have learned that as of June 1, the Red Devil Mine and Mill have been closed.

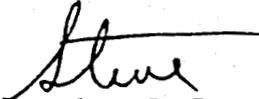
Enclosed is a copy of the mercury analyses for the samples obtained on our trip to Red Devil. I still have not received any analyses from the Cincinnati Laboratory. However, I imagine their analyses will take longer since we requested arsenic, lead, and antimony to be analyzed for also.

Looking over the data, it appears from comparing the H concentrations in the effluent and in Red Devil Creek below the discharge that the flow measurement for Red Devil Creek is not accurate or that a large percentage of the HgS has settled out. If we assume that the mill effluent was diluted fourteenfold, per your report of June 1, then the concentrations found in the mill effluent and in Red Devil Creek below the discharge differ by a factor of 8. Conversely, if the 12000 ug/l of the effluent were completely diluted to give the 108 ug/l found downstream, then the flow of Red Devil Creek would have to be in the order of 120 cfs. I would guess that the stream flow value is in error on the low side and also that some HgS has settled out. The Hg values from the stream draining the Barometer Mine are interesting in that

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it appears most of the mercury is present in a dissolved form. It is interesting also that the discharge from Red Devil Creek and the stream draining the Barometer Mine had no apparent affect on the mercury levels found in the Kuskokwim River.



Stephen G. Provant

Enclosure

cc: Ken Mosbaugh w/attachment