11950 McVey Road
Hill City, SD 57701

October 20, 2010

F. David Searle
Wyoming Environmental Quality Council
Herschler Bldg.
122 W. 25th St.
Cheyenne, WY 82002

Dear Mr. Searly:

There is to be a hearing in Sundance on October 27 concerning the proposed exploratory drilling by Golden Predator in the Mineral Hill area of Crook County, WY. I won't be able to be present to testify, but I want to express my thoughts about the water and geology of this area. For the past 40 years I have studied the hydrogeology of the Black Hills, and I taught geology field camp at Ranch A for many years.

Enclosed (Figure 1) is a USGS geologic map of this area. Sand Creek is typical of many streams in the Black Hills in that it is perennial in the headwaters (such as Mineral Hill area), but sinks downstream where the stream encounters the Madison Limestone. At Sand Creek, this is just above the junction of the confluence with Cold Springs Canyon. Approximately 3 miles down the canyon, at Ranch A, the water comes out at big springs at the lower contact of the Madison Limestone. I'm sure hydrogeologists would agree this is the same water even though there has never been a dye test confirming that this is the same water.

My point is that the landowners downstream of Ranch A have a legitimate concern about the water quality of Sand Creek, and the impact from the proposed project at Mineral Hill. Therefore all due diligence should be made concerning regulations for this project. I hope, for example, a detailed EIS will be prepared.

Sincerely,

Perry H. Rahn, PhD PE

Figure. 1. Geologic map of the area near Sand Creek, WY (from Hodson et al. 1973). Ranch A is located at the downstream area of Madison Limestone (MDpe). Other symbols include Minnelusa Formation (PPm), Deadwood Formation (OE), Tertiary intrusive (Ti) and Precambrian rocks (pCr).

References:

Hodson, W.G., R.H. Pearl, and S.A. Druse, 1973, Water resources of the Powder River Basin and adjacent area, Northeastern Wyoming: U.S. Geological Survey Hydrologic Investigations Atlas HA-465.