(303) 236-5593
FAX (303) 236-3200
awilson@usgs.gov

October 29, 1999

Mr. M.M. Underwood, Jr.
Director of Physical Resources
U.S. Forest Service - Rocky Mountain Region
P.O. Box 25127
Lakewood, CO 80225-0127

Dear Mr. Underwood:

This is in response to your October 21, 1999 (received October 29) request for information on locatable mineral resources in the Pacer 2 land exchange proposal in which Pacer Corporation has offered certain non-Federal lands within the Black Hills National Forest in exchange for Federal lands also within the Black Hills National Forest.

In accordance with the working agreement under Public Law 86-509, we are providing you with a report on the locatable mineral resources on the lands described in "Exhibits A and B", included with your request. These lands comprise 715.3 acres, more or less, in Custer County, South Dakota.

Sincerely yours,

Anna B. Wilson, Geologist
Mineral Resources Program, Central Region

Copies: E.A. duBray
W.C. Day

LOCATABLE MINERAL REPORT FOR THE PACER 2 LAND EXCHANGE OFFER, BLACK HILLS NATIONAL FOREST, CUSTER COUNTY, SOUTH DAKOTA

By
Anna B. Wilson
U.S. Geological Survey

October 29, 1999

The following report is based on information contained in USGS mineral resource and commodity files, mineral information databases (MRDS and MAS), and on reports and maps available in the USGS library. These data are occasionally augmented with unpublished documents, personal communications, and professional experiences. No field studies or on-site visits were performed in preparing this report. Emphasis is primarily on locatable mineral resources. Leasable and salable resources are covered only if they appear in the above documents. Mineral resource assessments are subjective: the opinions expressed herein are entirely those of the author.

For the legal location description of lands considered for exchange, please refer to Attachment A (which includes Exhibits A and B, as supplied by the U.S. Forest Service). The Parcels are also shown on Attachment B.

Non-Federal (see Attachments A and B)
Cicero Peak and Mt. Coolidge 1:24,000 quadrangles

The geology of the area containing Pacer Corporation's parcels, about 3 to 4 mi southeast of Custer, is mapped as Early Proterozoic metaquartzite (DeWitt and others, 1989) composed of metamorphosed quartzite and pelite (Redden and others, in press).

The non-federal parcels are on either side of the Triangle A and St. Louis mines (see Attachment B), and numerous other small pegmatite bodies are in the immediate vicinity (DeWitt and others, 1988). Wilson and DeWitt (1995) included these parcels in the Custer mineralized area (Attachment C), an area with potential for the occurrence of potassium feldspar and mica in pegmatites. The northwestern corner of the western tract overlaps into the Calamity Peak mineralized area which has potential for mica and beryllium-bearing pegmatites. French Creek may contain placer gold deposits, although none is known on Pacer's parcels.

At a scale of 1:250,000, these tracts are mostly within the area assigned high potential for small pegmatite deposits containing all pegmatite commodities except tin and, possibly, beryllium (DeWitt and others, 1986). Along French Creek there is low potential for small placer accumulations of gold (DeWitt and others, 1986).

Based on proximity to known deposits, the potential for finding small pegmatite bodies in the vicinity of the parcels is high and the potential for gold in placer deposits is low. Potential for quartzite as an aggregate source is high. There is no known potential for any other commodities.

Federal Property (See attachments A and D)
Custer 1:24,000 quadrangle

The geology of the area about 1.5 to 3 mi south of Custer is primarily Early Proterozoic metagraywacke (DeWitt and others, 1988; Redden and others, in press). Small pegmatitic bodies of Early Proterozoic Harney Peak Granite are mapped in the immediate area (Redden and others, in press).

The parcel is immediately east and south of numerous pegmatite prospects (DeWitt and others, 1988; see Attachment D). Wilson and DeWitt (1995) placed this parcel in the Calamity Peak mineralized area which has potential for mica- and beryllium-bearing pegmatites (Attachment C).

At a scale of 1:250,000, DeWitt and others (1986) assigned the area in the vicinity of the Federal parcel high potential for small to medium size pegmatite deposits containing all pegmatite commodities except tin. Based on proximity to known deposits, the potential for finding small pegmatite bodies in the vicinity of the parcel is high. There is no known potential for any other commodities.

REFERENCES:

DeWitt, Ed, Buscher, D.P., Wilson, A.B., and Johnson, T.M., 1988, Map of mines, prospects, and patented mining claims, and classification of mineral deposits in the Cicero Peak 7 ½-minute quadrangle and part of the Pringle 7 ½-minute quadrangle, Black Hills, South Dakota: U.S. Geological Survey Miscellaneous Field Studies Map MF-1978-P, scale 1:24,000.

DeWitt, Ed, Redden, J.A. Redden, Buscher, David, and Wilson, A.B., 1989, Geologic map of the Black Hills area, South Dakota and Wyoming: U.S. Geological Survey Miscellaneous Investigations Series Map I-1910, scale 1:250,000.

DeWitt, Ed, Redden, J.A., Wilson, A.B., and Buscher, David, 1986, Mineral resource potential and geology of the Black Hills National Forest, South Dakota and Wyoming, *with a section on* salable commodities, by J.S. Dersch: U.S. Geological Survey Bulletin 1580, 135 p, 4 pls. (scale 1:250,000) in pocket.

Redden, J.A., and others, in press, Geologic map of the central Black Hills, South Dakota: U.S. Geological Survey Miscellaneous Investigations Series Map, scale 1:100,000.

Wilson, A.B., and DeWitt, Ed, 1995, Maps showing metallic mineral districts and mines in the Black Hills, South Dakota and Wyoming: U.S. Geological Survey Miscellaneous Investigations Series Map I-2445, scale 1:100,000.

LIST OF ATTACHMENTS:

A. Exhibits A & B–Location information provided by the U.S. Forest Service.
B. Mines, prospects, and mineral occurrences on the Cicero Peak 1:24,000 quadrangle in the vicinity of the non-federal parcels (from DeWitt and others, 1988).
C. Location of non-federal and federal parcels in relation to mineralized areas (from Wilson and DeWitt, 1995).
D. Mines, prospects, and mineral occurrences on the Cicero Peak 1:24,000 quadrangle in the vicinity of the federal parcel (from DeWitt and others, 1988).