

**Bentonite** — Wyoming has traditionally supplied about 70% of the U.S. production of bentonite. Together with Montana and South Dakota, this is the primary source of the nation's bentonite. Wyoming's bentonite excels in its ability to absorb water and swell to about 15 times its dry volume and in its ability to exchange sodium for organic as well as other inorganic ions. These properties determine the three principal uses of Wyoming bentonite in the U.S. and abroad:

- As a key additive for controlling the viscosity of drilling muds (about 55% of Wyoming bentonite goes into this use).
- As a binder for iron ore pelletizing (uses some 14% of Wyoming's production).
- As a binder for foundry sand molds (about 19% of the market for Wyoming bentonite).

Other bentonite applications include use as an additive for adhesives, animal feed, cement, fertilizers, cosmetic and pharmaceutical products, paint, and waterproofing or sealing compounds. Also, its superior absorbency makes Wyoming bentonite useful for filtering and clarifying, for pet waste absorbency (cat litter), and as a good carrier for pesticides. However, these miscellaneous other uses account for only 13% of total domestic consumption, and, since the mid-1960s, such markets have either stagnated or shrunk.

**The outlook for bentonite, particularly the type produced by Wyoming, is not bright.** While demand for bentonite grew at a remarkable 8.5% annually from the early 1940s until the late 1970s, the industry has come under pressure in each of the three major end-uses during the 1980s. According to U.S. Bureau of Mines information, production of Wyoming bentonite peaked in 1981 at 3.6 million short tons. Since then, it dropped (by 35% in 1982) to 1.9 million tons in 1983, approximately 50% of the former peak. (The 1984 *Wyoming Mineral Yearbook* reports production of 4.8 million tons in 1981, 2.3 million tons in 1982, and 2.2 million tons in 1984.)

**SRI believes that future markets for Wyoming bentonite will continue to erode and that the market for this material may continue to shrink at 1% to 2% a year** (see Figure III-5). Three major factors influence this decline: first, Wyoming producers are remote from markets and the growing competition from other bentonite producers; second, the three principal uses for Wyoming bentonite are in sectors with poor market outlooks; third, new technologies and

## Wyoming Bentonite Dips as Industry Statistics Forecast Future

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