

Mud, Important Industry, Has Value in Finding Oil

If your name is Mud, be proud of it. Mud is one of Wyoming's biggest industries.

Mud is the common name for sodium bentonite, a mineral found in extensive deposits throughout the state. Most commonly used by the oil companies in drilling operations, it has more than 400 other uses, including applications in medicines, food preparation, cleaning and laundry, foundries and ceramics.

The mining and processing of bentonite is a multi-million dollar industry in Wyoming. The state is the largest producer of bentonite in the world, and ships many thousands of tons each month to national and foreign markets. Five to ten per cent of the state's yield is used in Wyoming.

Bentonite is a light-colored clay found near the earth's surface. It is gathered from open-pit mines and is ground up almost as fine as flour. A long list of chemical treatments and tests are applied before it is packaged in semi-water proof containers for shipment to markets.

OF VOLCANIC ORIGIN

Bentonite was formed as a volcanic ash which was laid down over certain areas. Sea water and air leached it through the ages, taking certain chemicals and leaving the sodium bentonite clay, a compound containing oxides of aluminum, magnesium, silicon, hydrogen, sodium and calcium.

Bentonite absorbs much more than its own volume of water, and a small percentage of the solution makes a highly efficient lubricant.

Although it absorbs water readily, rain offers no special problems to the open pit mining systems here. In some areas, however, special roofs must be constructed to keep large amounts of water from the clay.

The most significant application of bentonite is its use as drilling mud by oil companies. Mud is essential to the oil industry for its qualifications as a lubricant, wall-builder, and cuttings remover.

Drilling mud is used to remove cuttings from the bottom of the hole, to cool and lubricate the bit and drill-stem; to prevent blowouts; to build walls to prevent heaving and sluffing of gravels, sands and other strata; to prevent cave-ins; and to afford protection for pay zones.

COMPOUND ADDED

Bentonite is taken to the oil well drilling sites in powder form, packaged in heavy paper bags.

When it is mixed with water and other compound is added; barium sulphate, or barite, is added to the mud to give it weight.

Barite is a heavy ore. Rich deposits are mined in Nova Scotia, Greece and Mexico, and in the United States in Arkansas, Nevada, Utah and Missouri.

Barite has a high specific gravity and makes the mud heavy enough to prevent blowouts when drilling through zones of high pressure.

All of the compounds which make up drilling mud are carefully treated, to control its properties of viscosity and wall-building.

The center of Wyoming's bentonite deposits is at Greybull, where several large companies maintain mining and processing mills. Other mines are located at Upton and Moorcroft.

Natrona County claims one bentonite processing mill, located in Mills near the Chicago and North Western Railroad. General Manager J. Kretmer of the Benton Clay Co. said his firm has seven bentonite deposits in the county with a reserve of 10-million tons.

Benton Clay Co. manufactures drilling mud, foundry Green Bond, and chemical additives. The deposits are located near Bates Park, Bates Hole, Natrona, Midwest and Kaycee.

The company is the first and only mud firm in Natrona County and was established here eight years ago.

The companies operate through district and division offices located



Bentonite Mixed With Barite Prevents Blowouts

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