



BEAR RIVER **ZEOLITE** BRZ™

BRZ™ OILFIELD GRADE

BRZ™ Oilfield Grade is a powdered product of various sizes that is made from one of the best zeolites in the world. BRZ™ Oilfield Grade adsorbs up to 55% of its weight in water and 50% its weight in oil and also holds cations, such as sodium, barium, calcium, potassium, ammonium, radioactive nuclides, and other heavy metals so that they are not water soluble.

APPLICATION

BRZ™ Oilfield Grade can be mixed with drill cuttings to "dry" or solidify the cuttings into an environmentally stable state.

BRZ™ Oilfield Grade is available in bulk truckloads, one ton bulk bags, and 50 pound bags.

ADVANTAGES

PRODUCTION

- **Easily mixed** with an excavator, front end loader, skid steer, or backhoe in a half frac-tank or three-sided tank.
- **Reduces the amount of material needed to dry cuttings.**
- **Reduces transportation costs** - Solidified cuttings can generally be left at the drill location.
- **Naturally cementitious (pozzolanic)** - BRZ™ Oilfield Grade and drill cuttings can be combined with various accelerators to be used as concrete for the construction of roads and turnaround areas at the drill location.



Bakken rig

HEALTH & SAFETY

- **Safe replacement for LKD and Fly Ash** - LKD and fly ash are hazardous to human health and can affect the respiratory system, eyesight, create skin problems and cause cancer. Fly ash is loaded with heavy metals and quite often radioactive nuclides.
- **Non-carcinogenic** - No crystalline silica quartz

ENVIRONMENT

- **GRAS Listed (Generally Regarded as Safe):** CFR Title 21, Sec. 182.2729
- **Reduces contingent liabilities** - Currently the EPA through their respective state Departments of Environmental Quality are requiring removal of LKD and fly ash material to HAZMAT sites from drill locations. BRZ™ Oilfield Grade could eliminate these regulatory issues.
- **BRZ™ Oilfield Grade is an environmentally-friendly alternative to LKD and fly ash** which are potential hazards to the environment, humans and wild life.
- **Contains no heavy metals or water soluble sodium**
- **Mitigates saline soil problems** - BRZ™ Oilfield Grade mitigates the toxicity of the soil to enhance plant growth by adsorbing sodium.



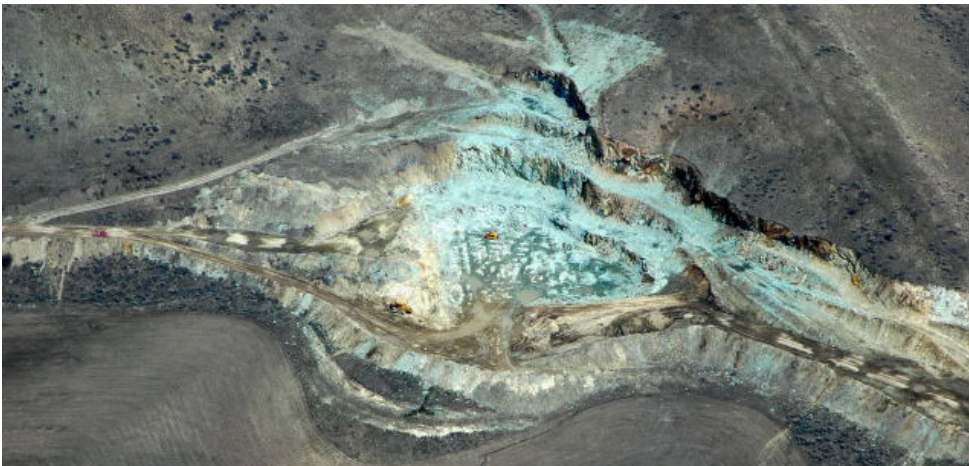
BEAR RIVER ZEOLITE BRZ™

The Bear River Zeolite mine and plant is in Idaho, conveniently located near two railroad lines and major interstate highways. It is in the southeast corner of Idaho, approximately 7 road miles west of Preston, Idaho, 34 road miles north of Logan, Utah, 79 road miles south of Pocatello, Idaho, and 100 road miles north of Salt Lake City, Utah.



The deposit is a very thick sedimentary deposit of zeolitized volcanic ash of Tertiary age known as the Salt Lake Formation. The sedimentary interval in which the clinoptilolite occurs is more than 1000 feet thick in the area. Thick intervals of the zeolite are separated by thin limestone beds deposited in the freshwater lake where the volcanic ash accumulated.

The deposit includes an 800 foot mountain. Zeolite can be sampled over a vertical extent of 800 feet and on more than 700 acres. The current pit covers more than 3 acres. Within the pit, the zeolite is remarkably homogeneous.



Aerial view of BRZ™ pit near Preston, Idaho



Blast hole rig



Trucks haul 18 to 20 tons per load, and the cycle time is about 30 minutes including loading. With both trucks and the other existing equipment, the mine is capable of producing 120 tons per hour.



BRZ™ Oilfield Grade one ton bulk bags loaded on semi tractor trailer.