

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

TERREBONNE DIATOMITE: Atomite Corporation

DESCHUTES COUNTY

Owners: Dicalite Company of California. McKinley Stockton, superintendent; Verne Patterson, chemical engineer.

Location: Section 16, T. 14 S., R. 12 E.W.M., at Lower Bridge, on the Deschutes River, six miles west of the town of Terrebonne, Deschutes County.

Area: Over a square mile of ground has been tested by the company, and the reserves have been estimated at 4 million tons.

History: The old plant of the company burned down in the summer of 1940. The new plant was completed last fall. In April, 1941, three shifts of 35 men each were employed.

Equipment: The new plant produces 20 different products, which are sold for various uses and under different names. The raw diatomite is mined in benches by an electric shovel and trucked to the plant. Some of it (second grade) is air dried in long rows 4 feet wide and 6 feet high in the pit. Most of it is processed wet as follows:

An unverified sketch of the flow-sheet is as follows: Trucks are dumped into storage bin. Diatomite is drawn off by automatic belt feeder to a set of spike-rolls, reducing it to 1-2" size. It is then carried by 150-foot belt conveyor and distributed to two storage bins by a reversable 2-way belt conveyor. From these bins the material is drawn into the first of three drying cyclones. Suction through these is provided by a large rotary fan. Heat is supplied by the exhaust draft from the rotary furnace. Between the cyclone #2 and #3 a sand trap takes out oversize and heavies. From cyclone #3 the material drops into a rotary screw feeder which supplies the oil-burning gould-type of furnace, in this case about 50 feet by 6 feet. At the lower (burner) end of the furnace the calcined diatomite, pale pink in color, is drawn off by another fan, which drives it to the two sizing cyclones. It is then stored and finally sacked by special machines.

Development: The main pit is about half a mile in diameter, and up to 40 feet in depth. Over a square mile of ground has been tested.

Geology: The diatomite is a part of the Deschutes formation, of late Tertiary or Pleistocene age. It is further described by Moore (37).

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Flat lying beds lie in eight layers under 5 to 15 feet of overburden as follows:

1. 5-8' - best grade
2. 10-15' - third grade (being stock-piled)
3. & 4. 2-4' - pumicite, clay waste; sandy, diatoms crushed
5. 8-15' - second grade; bottom of present pit
6. & 7. 12' heavy yellow diatomite
8. 1' - poor grade

Total: 40-60 feet

April 13, 1941
John Eliot Allen
Geologist

Torrance Diatomite

loc. center Sec. 16, T. 14S-R. 12E.

Deschutes Co.
M.S. Stockton, Supt
Vernie Peterson, chem. eng.

Owners: Diatomite Co of Cal. , ~~Los Pulco Kite~~

Sand to have been tested 4 million tons, over 1 square mile.

Pit: 1/2 mile across; being cut down in layers by
electric shovel & trucks. Eight layers in the
deposit as follows:

