

COLUMBIA BRICK WORKS (face and common brick, tile) Multnomah County

Operator: Mr. Franze Olbrich, president, Gresham.

Location: The plant is located on the Portland Electric Power Company Railroad, $1\frac{1}{2}$ miles southeast of Gresham at Hogan station, in the SW $\frac{1}{4}$ sec. 14, T. 1 S., R. 3 E., Multnomah County, just north of Johnson Creek at about 350 feet in elevation. The pit lies 2000 feet to the east, where it is excavated in the 400-ft. terrace to a depth of about 30 feet.

Area and development: ~~The total~~ 50 acres, of which 20 acres has been mined and 20 acres of clay ground remains. Recent work has been done on a lower terrace at plant level, with about 1 acre stripped. The clay here is reportedly of lower grade than the upper level. Thirty men are employed.

History and production: The Columbia Brick Works was founded in 1905, incorporated in 1909, and remained under the same ownership until August 1948. The plant originally consisted of scove kilns; at present there is a bank of 22 Hoffman semi-continuous kilns. Production of tile was almost discontinued during the war years; later the following quantities

of brick were produced:

	<u>Brick</u>
1945	3,800,000
1946	3,500,000

Geology: The pit is cut in the 400-foot or highest terrace stage of Pleistocene alluviation. The present pit face consists of 1 to 2 feet of soil, 10 feet of silty yellow clay, 10 feet of gray clay, and 20 feet of yellow sandy clay. The various grades of clay at the face are mixed in mining. The clay is of transported origin. It was probably deposited in a stagnant backwater which had been ponded during the ice-age flooding and valley-filling stage of the Columbia drainage. Bedrock across Johnson Creek to the southwest consists of Boring lava, and the terrace levels to the southeast at higher elevations consist of glacio-fluvial outwash deposits from the Sandy River drainage.

Equipment and processing: The clay is dug with a $\frac{1}{4}$ -yard dipper electric shovel, which dumps into a 4-yard bottom-dump narrow gauge car, hauled by a small gasoline locomotive over 1500 feet of track to the dry storage shed. Shovel and car are operated by one man, who makes about 30 trips a day delivering an average of 120 cubic yards of clay.

The dry storage shed was completed in 1946, and is 80 by 125 feet in size. The pit car pumps directly into bins from an overhead trestle. A scoopmobile and bulldozer transfer stored clay into bins.

A 300-foot conveyor belt transports the raw clay to the main plant, where it passes through rolls and pug mill driven by a 150-hp. electric motor. The semi-automatic, rotary wire brick-cutter delivers the brick onto a loading belt. Green brick are stacked on steel drying cars, which are then placed in a tunnel dry shed 93 feet long containing 18 tracks, and heated by hog fuel firing together with waste heat from the kilns.

The kilns are the coal-fired, continuous Hoffman type. There are 22 chambers 10 by 25 feet in size, arranged in a single row about 270 feet long. They are fired progressively by coal fed through openings in the top of the chambers. The heat from the chambers being fired is carried into the next kilns to perform the preliminary drying and heating. Wyoming coal is used. Two blowers supply sufficient draft. Each chamber contains 24,000 brick, and there are about 9 kilns fired per week, giving an average monthly production of about 800,000 brick. The long storage shed parallels the railroad track, and is supplied with two sunken roadways for truck loading.

Fired brick are crushed and sacked for "Mortar-Mix." There are a number of car sheds, a change room, oil storage, tool, and smithy sheds, and a small office building.

Reference: Treasher, 42