Mike Paland — graphite

near Union Leader Mine

SE 1/4 Sec 30, T32S, R5W
12 east Glendale

Parks & Swarthley 16:226

S 1/2 SE 1/4 Sec 30, T32S, R5W

vt no 5 — graphite

rupture on hillside east of Sterling, pl.29

near Bineon on Upper Applegate district

graphite schist at Blue Ledge mine on U. Applegate

"Mayflower & Golden Wedge" in Galice district

Pichell, A.N. 1914. Petrology and mineral resources of Jackson

and Josephine Counties, Oregon. Oregon Bureau of Mines Quarterly,

April 6, 1988

Dr. Suzette Rochatte
Africa America Consultant
1574 Wagare Avenue
Lakewood, OH  44107-3641

Dear Dr. Rochatte:

The claims that are staked for graphite are located in Township 41 South and Range 3 West in Jackson County, just north of the California line. According to Russ Mitchell, Star Ranger Station, Rogue River National Forest, (503) 899-1812, the claims were staked by Richard Foster and others. The graphite occurs in pods and lenses and would appear to contain as much as 25 to 30% graphite.

Sincerely,

Jerry J. Gray
Economic Geologist

JJG: ch

Enclosures
Graphite uses prominent in NW

Graphite, such as that manufactured by Toyo Tanso of Osaka, Japan, is used by three industries prominent in the Northwest — silicon wafers, aluminum and aviation.

Thus, the company should have a good regional market for its product. Three silicon manufacturers are in Oregon and Southwest Washington: Wacker Siltronic in Portland, SEH America Inc. in Clark County and Siltec Inc. in Salem.

Ten aluminum smelters are in the region, and the Boeing Co., a major manufacturer of commercial aircraft, is based in Seattle.

Graphite is produced from various forms of raw carbon, such as coke, tar or soot.

Application of high heat and several gases turns it into purified graphite, noted Timothy A. Brown, executive vice president of Vector Technology of Santa Clara, a representative for German and Japanese graphite manufacturers.

Toyo Tanso is one of half a dozen companies worldwide making graphite, Brown said.

Uses for graphite are increasing and so is demand, said Brown.

In silicon-making, a graphite outer bowl surrounds the quartz pot in which a silicon crystal is grown.

The high temperatures used for growing silicon causes the quartz bowls to soften, but the heat-resistant graphite ensures they hold their shape, noted Dave Buck, engineering manager for Siltec, a Salem silicon manufacturer owned by Mitsubishi Metal Corp. of Tokyo.

The graphite bowls have to be replaced several times a year, he said.

Graphite also is used to line walls of furnaces in which the silicon crystals are grown. Graphite also lines furnaces used to manufacture aluminum and steel, as a heat containing measure.

In the aviation industry, graphite is used in jet engines and to make wings.

The Toyo Tanso announcement marks the ninth Japanese manufacturing company to announce plans for a branch operation in Oregon or Southwest Washington in recent years.

Toyo Tanso was founded in February 1941 and first made electric carbon brushes. Presently, the company produces carbon in various forms for electric, mechanical, metallurgical and special applications.

One reason Oregon was chosen for the plant is its "reasonable power costs," Takagi said, adding that his company is negotiating for discounted industrial rates.

Cheap power would be a big incentive to a graphite maker because production of the material involves "enormous" furnaces, said Timothy A. Brown, executive vice president of Vector Technology of Santa Clara, Calif., a representative for two other graphite companies.

"We're talking lots of kilowatt-hours," Brown said.

Portland General Electric Co. provides electric power to the lease site.

According to a source who declined to be identified, PGE cut its power rates 48 percent as an incentive to Toyo Tanso. PGE apparently will give the company free use of a substation and provide installation of the company's power equipment.

Takagi also cited Oregon's comparatively well-educated population, the good work force in the state and good weather as reasons for the site selection.

Company officials also had considered six sites in Washington, including three in the Vancouver area, according to Dan Cudaback, managing director of domestic and international investment for the Washington State Department of Trade and Economic Development.

Joe Tanner, president of the Columbia River Economic Development Council in Vancouver, said he was aware that Toyo Tanso officials made four trips to Clark County during the last few months.

He said local development officials had "some serious concerns about environmental consequences" of the plant's emissions and had asked for clarifying information from the company. The council was analyzing some data and waiting for other information when the company apparently decided to locate in Portland, Tanner said.