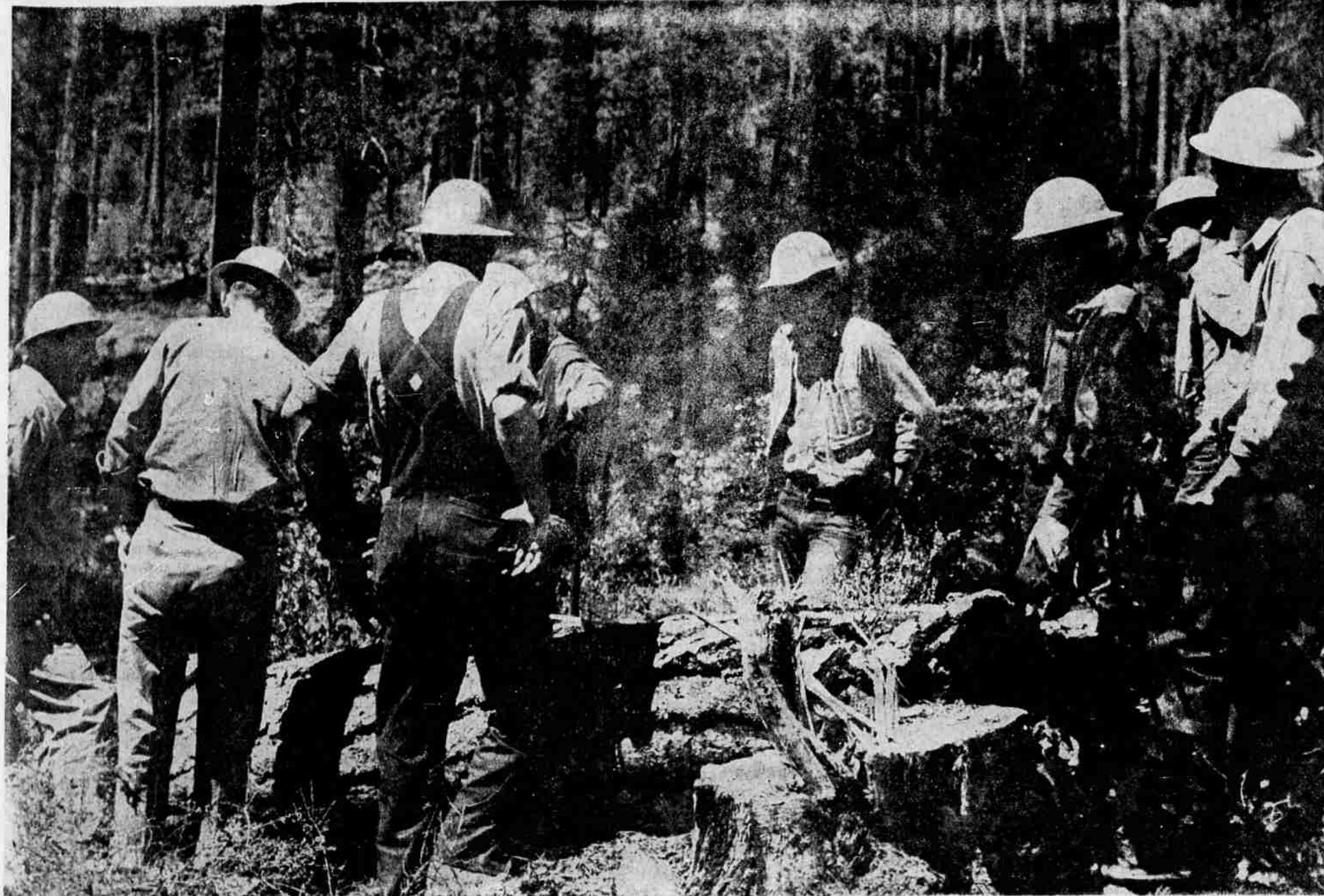




Pulp Industry Aids State's Payrolls

(In view of the announcement earlier this year that the Powell River Company, Ltd., plans construction on the Central Oregon plateau of a pulp mill, the following article, written for The Bulletin, is of special interest. It was prepared for the Deschutes county fair edition by the Northwest Pulp and Paper Association, manner in which mill leftovers are being utilized in the expanding industry is discussed.)

The booming American pulp and paper industry has shown Oregonians in the last five years just a fraction of the future economic potentiality it offers their state.

The industry's trade publications and the press have recently reported construction and expansion plans that by 1960 would add more than 400,000 tons of wood pulp production a year to Oregon's present annual pulp output of about 800,000 tons.

Economists estimate that this increased production would create about 1,000 new Oregon jobs and increase the state's payrolls by more than \$5,000,000.

Employment in Oregon pulp, paper and paperboard mills a year ago exceeded 5,000 persons. Total wages and payrolls were more than \$25,000,000 — a 27 per cent increase over 1951. The value of Oregon pulp and paper products shipped in 1956 amounted to more than \$120,000,000 — compared with \$75,000,000 in 1951.

These estimated figures give only a rough idea of the industry's importance, and growing importance.

THE COVER PAGE



The man pictured on the cover is Maurice (Shorty) Iverson, one of Brooks-Scanlon top log cutters. Tough, wiry and strong as a horse, Shorty is symbolic of the hardy breed of men who work in the Central Oregon woods and keep the logs coming in to the big mill. Iverson is married, the father of two boys and a girl and owns his own home in Bend. He has been cutting logs for the company for eleven years.

importance. The real story of the pulp and paper industry potential for Oregon lies in a series of unrelated, non-spectacular developments occurring in Oregon's woods and mills and in pulp research laboratories throughout the country.

Use Found for Leftovers
The state's pulp mills have accelerated their use of more sawmill and veneer mill leftovers in pulp production. As of September, 1955, it is estimated that mill leftovers utilized for pulp and fiber amounted to 900,000 tons per year. In 1953, only about 480,000 tons of leftovers were pulped. A substantial supply of unused sawmill leftovers still is available for pulp utilization. The effect of further utilization of mill leftovers will be to increase total product, total income, total jobs — without increasing the harvest of Oregon's forests. The same factors apply as it becomes economically feasible for pulp mills to use even more of the logging residues.

Oregon ranked 14th among states in 1952 pulp production and 12th in 1955. The state's accelerated move to become a major pulp and paper producer coincides with the industry's increased utilization of previously unused forest woods and species. Hydraulic and mechanical barkers and whole log chippers annually are increasing the use of Oregon's woods and mill residuals. The pulping of alder represents use of a species not even classed as a forest raw material several years ago.

Anticipated expansion of Oregon's pulp and paper industry

comes at a time when the industry appears on the verge of solving — or partially solving — one of its headiest problems, that of profitable utilization of the non-cellulose half of wood consisting of lignins and wood sugars.

Common to both kraft and sulfite pulping processes, the problem of disposal of spent pulping liquors has been largely met to date by dispersal of mill effluents into nearby water courses, or, more recently, by evaporating the liquors to accomplish burning of the organic solids to create mill power and recovery of the process chemicals for reuse.

Industry has even devised, after investing much money and many years in research, ways to burn spent sulfite mill liquors to eliminate the ton of organic solids produced with each ton of pulp. Weyerhaeuser Timber Company pioneered this accomplishment in 1948 with a new magnesia-base recovery process at its Longview mill. Its Cosmopolis mill near Aberdeen began operating this spring as the first magnesia-base recovery mill in the United States built new from the ground up.

Perhaps even more interesting are the almost monthly announcements made by pulp firms and research laboratories about products that can be made from sulfite and kraft spent liquors.

Crown Zellerbach Corporation has for several years made a series of commercial products from lignin sulfonates — it calls them Oranex — which serve as binders for fibrous products like softboards, as flocculants to settle fine particles out of liquids, as chemical reaction emulsifiers and stabilizers. C.Z. announced early this year that it was making two other chemical products from kraft lignin, dimethyl sulfide for use in commercial solvents, plastics and counter odorants and methyl mercaptan, an amino acid component for animal feeds.

This year Rayonier Incorporated, with pulp mills in several states including Washington, announced it could make synthetic textile fibers from vanillin derived from lignin. And made from hemlock bark rich in lignin, Rayonier announced Rayflo, a product used in oil well drilling muds, ore flotation and leather tanning. A host of bark products has for several years also been manufactured by Weyerhaeuser Timber Company at its Longview integrated sawmill-pulpmill site.

Puget Sound Pulp and Timber Company has been a leader in the development of by-products since 1945, when it placed in operation the first plant in the nation to produce alcohol from spent sulfite liquor. Puget Sound goes even further by manufacturing by-products from a by-product. Solids which remain after the alcohol has been distilled are in turn processed into products used in tanning, oil well drilling muds, and in the manufacture of cement, adhesives, and vanillin. Recently, it has added an alcohol-base solvent for use in both homes and industry.

For years, spent sulfite liquor has demonstrated its worth as a road binder and dust palliative on the secondary-type of road. Publishers' Paper Company at Ore-

Log Grading School Held

Now under way at Brooks-Scanlon, Inc., with attendance open to all interested lumbermen of the area, is a school considered one of top importance to the lumber industry.

It is a logging graders' school, with Hans Millus, Brooks-Scanlon, Inc., head forester in charge. In session for the past month, the school has half a year yet to go before the course is completed.

Meeting each week to study log grading are some 12 or 15 men. Establishment of the school is recognition of the importance of log grading in this era of hurried production and "tight" markets.

Prior to the start of the school, federal and private foresters joined in a log grading study and demonstration in the Sisters woods. There, trees were studied when standing, and again examined when cut.

At present, federal and Brooks-Scanlon loggers "pair" in grading logs as they come into the mill here. Each grader keeps his own sheet, and tallies are compared at the end of the month.

One of the purposes of the school is to attain uniformity in log grading methods, as well as to qualify men as experienced graders.

gon City, Coos Bay Pulp Corporation at Empire, and Inland Empire Paper Company at Millwood, Washington, have all been leaders in developing and encouraging such use. Now these spent sulfite liquors are scheduled for testing as a dust-layer for thousands of miles of roads far beneath the earth's surface. The coal mining industry is arranging experimental use of the liquor on roadways in deep mines where modern rubberized shuttle cars are used which may create a serious dust hazard in the narrow confines characteristic of mines.

Using kraft and sulfite lignin as a reinforcement-filler for rubber tires was revealed this year. A Canadian process, it would substitute lignin derivatives for carbon black. The lignin - composed test tires have been proclaimed tougher than their predecessors.

Late in 1956, the Oregon State College Engineering Experiment Station issued a research report that described a commercially profitable means of producing protein concentrate for animal feed from spent sulfite liquor. Trade journals this year also announced that western Europe is currently buying high-vitamin stock feed supplements in the form of torula yeast from Wisconsin sulfite mills. Made from the sugars found in spent liquor, a food-grade torula yeast for human nutrition is said to have already been developed by Wisconsin pulp mills.

As other uses are more fully developed and as other markets for non-cellulose by-products of the pulp industry are discovered, it may be that someday the value of pulp by-products rivals the value of the pulp itself.

The Wood In Your Life

Farmers Loggers Of The Future



A review of the fine crops and cattle seen at The Deschutes County Fair in past years shows that you have done an admirable job of husbandry and conservation of your lands ... But then everybody expects farmers and ranchers to grow fine crops of wheat, alfalfa, oats and potatoes as well as livestock.

What one doesn't normally realize is that the American farmer is the largest single owner of woodlands ... as much acreage as the forest industries and all the public agencies put together!

"Trees are a crop," too, they say. They can be harvested, seeded, grown and harvested again. Alert farmers, realizing the opportunity for profit, are becoming tree farmers also by managing their woodlands for a continuous harvest of trees.

A very great deal of credit on conservation work goes to the splendid young men and women who make up the groups of 4-H clubs, the F.F.A., the F.H.A. and others. Your fresh ideas inspire others and point the way to a greater and more prosperous country.

We wish you every good fortune in making your place under the sun.

Lelco, Inc.
Brooks-Scanlon, Inc.