



Prairie Mill investment pays off

C & C Resources has invested \$25 million in its Edgewood Forest Products sawmill in Saskatchewan, which it expects will pay off in a 20 per cent increase in solid wood recovery.

By Tony Kryzanowski

‘Right sizing’ is how best to describe the recent \$25 million investment that Quesnel, B.C.-based C & C Resources has made to revamp and modernize its Edgewood Forest Products sawmill in Carrot River, Saskatchewan. The company expects a 20 per cent increase in solid wood recovery as a result of the investment.

The new breakdown line at the sawmill provided by German-based LINCK, a new Wellons dry kiln and recent investments in the planer mill will allow the sawmill to process a wider range of sawlogs into solid wood products, and potentially capture more #2 and better lumber.

“We are already seeing the results in the planer mill,” says Ron Dunn, chief operating officer of C & C Resources. “We are getting a lot less trim loss, a lot higher grades as a percentage of the out-turn, and a lot more throughput because of the consistency of the sizing. Those three things are adding up to record production in the planer mill.”

Production at the sawmill in Carrot River—located about 300 kilometres northeast of Saskatoon—is expected to increase to about 140 million board feet per year in dimensions from 1” X 3” to 2” X 6”, with their highest volume product being 2” X 4”.

Dunn added that the main motivation for C & C Resources wanting to make this investment was to ensure that the sawmill was sustainable regardless of the lumber market. The Province of Saskatchewan also made the decision easier with its business-friendly environment and by offering some assistance with employee training.

“Essentially, we felt, and history dictated, that the previous complement of equipment was unsustainable in terms of down markets,” says Dunn.

With the sawmill upgrade, he adds that “Edgewood will have some of the lowest log processing costs in the industry”.

The sawmill is one of the largest employers in Carrot River and surrounding area, providing 100 jobs, with two shifts operating in both the sawmill and planer mill. Byron Warner, Edgewood’s general manager, says that it also provides a number of important spinoff jobs, as well as economic diversity in an area where farming is also



big business. Warner is a long time Carrot River sawmill employee, having started at the facility in 1986 as an equipment operator. Prior to becoming general manager in 2013, he was the planer mill supervisor.

When C & C Resources purchased the sawmill in 2012 from Weyerhaeuser, it had been mothballed for five years. A plywood plant in nearby Hudson Bay was part of the deal.

Typically, when Weyerhaeuser managed the Carrot River operation, its larger sawlogs were sent to the plywood plant. However, when the plywood plant stayed idle after the C & C Resources purchase of the operations, that left few options except to make a lot of chips over the short term at the sawmill, since it was designed to accept a maximum 10" diameter log and they were processing 14" logs through it. Or, they would stockpile the larger diameter logs and sell them to other sawmills in the area. That is no longer the case with the installation of the new LINCK breakdown line.

"We know that there is a lot more money in lumber than in chips," says Warner. "We thought that if we ran the same lumber profile with bigger logs, we would capture more centre boards from the cants and it would provide us with better quality lumber in the end."

What attracted C & C Resources to the Edgewood sawmill was the quality of the wood basket; the timber features very tight grain and small knots, capable of producing high density and high strength lumber.

The average log diameter of the largely spruce and jack pine log basket supplying the mill is between 8.5" and 9", with a significant percentage of higher diameter logs. Projections indicate that the current average log diameter will continue for the foreseeable future.

The sawmill consumes about 350,000 cubic metres per year. About 80 per cent is spruce. Logs arrive at the sawmill in cut-to-length dimensions in 8' and 9' lengths, with the average log haul to the sawmill being 120 kilometres.

Due to the technological constraints in the old sawmill, Warner says that Edgewood has been undercutting its allocated forest resource since it purchased the mill. But that will no longer be the case with the expanded wood diameter that the sawmill can now accept.

In addition to a sawmill that wasn't a particularly good fit for the wood basket, Warner says the sawmill also had older technology—installed in about 1994—with no optimization technology. A major improvement at both the Edgewood sawmill and planer mill is the installation of scanners which allow both facilities to optimize their operations.

In addition to the \$25 million spent at the sawmill, Edgewood recently invested \$2 million in their planer mill. Computer-based lumber grading technology was installed in that facility as part of a general upgrade in 2014.



“We have a 3-D scanner on the sawmill infeed and we can now position logs, which is something we never did with the old mill,” says Warner. “So there is rotation and optimization of what we are doing. The feed speeds are also faster, depending on the diameter of the log.”

While the sawmill is not yet pulling higher grades like select lumber, that is something that Edgewood is considering once employees become more familiar with the new line’s capabilities, as well as possibly pursuing J-grade lumber markets.

“As we get to know this equipment better, we could possibly pursue those avenues,” says Warner. He says a good indicator of the potential to achieve more value uplift from their product is that they currently have customers who purchase their 2” X 3” lumber, sort through it, and successfully remanufacture it to a higher grade.

Construction started on the sawmill upgrade last March, and began with a building addition to the sawmill to accommodate the new LINCK saw line. The concept of the new sawmill was to design it so that it was as straight and as efficient a process as possible, which required a building extension. Production continued on the old sawmill line till the end of October, when installation of the new saw line went into high gear. The new LINCK sawmill line processed its first log the third week of January.

Prior to making a purchasing decision, Edgewood conducted considerable research to find a sawmill equipment supplier.

“It took some time to decide, but we really liked what we saw from the LINCK equipment in operation,” says Warner. “I think it was a good decision because it is really robust, heavy equipment. We will be partners for many years.”

The ‘straight through’ process is a real benefit, Warner adds, and because it is a log profiling line, there is no need for a secondary gang edger at the end of the main breakdown unit. Instead, the final step on the breakdown line consists of a sawbox that makes a final horizontal cut on the remaining cants.

“Everything just proceeds down the line, comes out the other end, and then it’s off to the sorter,” Warner says.

The sawmill is currently in its start-up phase. So far, Warner says that the LINCK line has met expectations, keeping in mind that to fully benefit from this technology, the learning curve in the early stages is steep. But there has been steady progress.

The saw line project started with the installation of a Nicholson 22” debarker to replace the sawmill’s 17” debarker. The logs then proceed through a metal detector and past a Microtec two-dimensional scanner to weed out those logs not shaped for quality lumber production. A turntable directs the remaining logs toward a



Microtec 3-D scanner to optimize recovery. From here, the LINCK line takes over. It starts with a two-sided chip and canter. Then the partial cant is turned and encounters a second two-sided chip and canter, with a profiler and a set of saws as the next step to recover sideboards, depending on the size of the cant. The cant is turned again, proceeds through a second profiler and more sideboards are sawn off. The remaining cant, which can be as tall as 12”, proceeds through a horizontal saw that cuts it either in half or in thirds, producing a final burst of lumber out the far end, based on the optimal calculated lumber recovery pattern.

The green lumber is conveyed to a newly installed but second-hand Gemofor lug loader and then into an existing J-bar sorter.

Mill-Tech provided a modified lumber stacking system for the sawmill, with a tier generator installed in front of the stacker. The stacked lumber then proceeds to the dry kilns. The sawmill has two dry kilns.

The overall saw line design was handled by Edgewood staff working with LINCK. The building expansion was designed and installed by BEP Engineering from Surrey, B.C., Tisdale, Saskatchewan-based, Greentree Engineering, and RobWel Constructors Limited Partnership, with an office in Meadow Lake, Saskatchewan. The electrical contractor on the project was B.C.-based, Summit Electric. Summit Electric specializes in the installation of advanced industrial equipment. They have offices in Kamloops and Quesnel. Items such as log transfers and decks were provided by Mazurek Industries, located in Carrot River. Iron Code Engineering Company, from Salmon Arm, B.C., provided computer coding assistance as part of the new line install.

On the \$2 million planer mill project, B.C.-based Wolftek Industries provided a VAB grade optimizer. The main objective of adopting computer-based grading was to increase planer mill production, and Warner says the transition has been worthwhile.

“Overall, I think this investment makes a pretty broad statement that C & C Resources is here to stay—they were looking to employ people and were looking to work in Saskatchewan,” says Warner. “So I think that Edgewood Forest Products has a bright future.”

C & C Resources chief operating officer Ron Dunn says the company continues to look at options for the Hudson Bay plywood plant, including both operating it themselves or selling the operation, with a potential opportunity for a combination hardwood and softwood log supply. Negotiations are ongoing with a couple of potential buyers.