

**RESOLUTION OF THE  
WHITE MOUNTAIN APACHE TRIBE OF THE  
FORT APACHE INDIAN RESERVATION**

**WHEREAS,** Fort Apache Timber Company, a major enterprise of the White Mountain Apache Tribe has been adversely impacted by the shift in market trends toward more speciality lumber products; and

**WHEREAS,** FATCO Management has developed a Ten Year Strategic Plan to meet the BIA and WMAT approved Forest Management Plan requiring technological upgrades to the current sawmill; and

**WHEREAS,** FATCO Management has completed a feasibility study to develop a sawmill edger optimizer processing system to maximize yield and value recovery and enhance specialty wood production; and

**WHEREAS,** development of an edger optimizer system at the FATCO meet an essential economic development of the White Mountain Apache Tribe by:

1. Maximizing tribal employment opportunities, retaining current employment levels, and creating career opportunities in the specialty wood processing industry; and
2. Improving FATCO's competitive performance to ensure long-term viability; and
3. Matching future timber supply with market opportunities and improve forest health and forest growth potential.

**BE IT RESOLVED** by the Tribal Council of the White Mountain Apache Tribe that it hereby approves the submittal of the FY 2001 HUD Economic Development Initiative Grant in an amount of \$1 million to develop an edger optimizer system as an integral part of the overall modernization of the Fort Apache Timber Company to meet an essential economic development need of the White Mountain Apache Tribe.

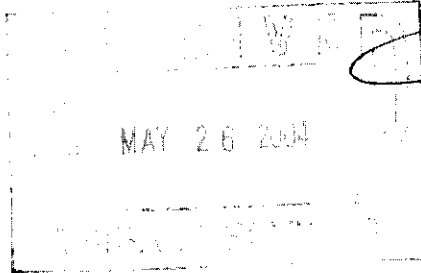
**BE IT FURTHER RESOLVED** by the Tribal Council of the White Mountain Apache Tribe that it authorizes the Tribal Planning Office to assist FATCO, working in cooperation with the White Mountain Apache Housing Authority to secure a Section 108 Loan Guarantee in an amount of \$1.5 million to finance development of an edger optimizer system for the Fort Apache Timber Company. The total project is \$2.5 million.

**BE IT FURTHER RESOLVED** by the Tribal Council of the White Mountain Apache Tribe that it hereby requests Economic Development Initiative funding from HUD in accordance with the attached application, and authorizes the Chairman and Vice-Chairman to negotiate and sign the grant contract and any amendments thereto in


**Resolution No. 07-2001-181**

accordance with EDI – HUD guidelines.

The foregoing resolution was on July 2, 2001, duly adopted by a vote of FIVE for and ZERO against by the Tribal Council of the White Mountain Apache Tribe, pursuant to authority vested in it by Article IV, Section 1 (a), (s), (t) and (u) of the Constitution of the Tribe, ratified by the Tribe September 30, 1993, and approved by the Secretary of the Interior on November 12, 1993, pursuant to Section 16 of the Act of June 18, 1934. (48 Stat.984).



  
Chairman of the Tribal Council

  
Secretary of the Tribal Council

## INTRODUCTION

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The Beck Group (BECK) and the management of Fort Apache Timber Company (FATCO) have completed a ten-year plan for FATCO's operation. The plan recognizes that almost all of FATCO's major equipment centers are old, worn out and technologically out of date. Financial projections indicate an opportunity to improve total Tribal annual income by \$12.4 million annually through a combination of capital projects (total costs \$22.4 million) and changes in operations.

The objectives of the ten-year plan include:

- Match future timber supply with market opportunities and associated equipment requirements
- Improve forest health and forest growth potential
- Improve FATCO financial and competitive performance to ensure long-term viability
- Improve product quality and associated customer satisfaction
- Maximize Tribal employment opportunities while achieving other objectives

The priorities and focus of the plan include:

- An initial emphasis on improving product quality
- A need for increasing production volume to improve financial performance and capital project returns
- A substantial opportunity for improving lumber recovery and overall profitability
- Human resource development

The large log sawmill edger optimizer project represents an important and integral part of the overall modernization of FATCO's sawmilling operations. While it will provide significant direct benefits, it also will "open up" the sawmill, and provide space needed to install the next project, a new trimmer and trimmer optimization system, which will provide an even higher return on investment. However, the trimmer system cannot be installed until the new edger system is in place.

## EXECUTIVE SUMMARY

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The Beck Group has completed a feasibility study and preliminary engineering for a new edger optimizer for the large log sawmill. Salem Equipment and INOVEC (two potential vendors) have visited the site and provided suggestions and equipment cost quotations for the project. Engineering assistance has been provided by Bradford Conrad Crow Engineering. As envisioned, the new edger will be located in a building addition along the north wall of the large log sawmill.

BECK staff have worked closely with the management and Board of FATCO in completing this study. FATCO personnel have provided key planning information. Their cooperation and assistance have been a valuable part of the planning process.

### **Major Equipment**

The edger optimizer system will be state-of-the-art, employing the latest technology. The edger will be a high-speed, high production unit capable of replacing the two older manual edgers. The optimized system will be designed for maximum lumber recovery and grade yield. The major pieces of equipment include:

- Scanner using high resolution line array cameras and laser locating spots
- Optimizer unit consisting of a high performance computer with proprietary software
- Sequencing and Positioning Controller
- Queuing scanner table and center chain positioning infeed
- 4" x 42" top arbor edger with four saws

### **Financial Summary**

The expected cost for the planned project is \$2,476,000. The costs include all equipment and installation costs, demolition, indirect expenses (engineering, project management, etc.) as well as a project contingency.

Based on fiscal year 2001-2002 economic conditions, the expected Internal-Rate-of Return for the project is 34.5%, providing a Net Present Value of \$3.3 million (assuming a discount rate of 8%).

## EXECUTIVE SUMMARY

A summary of the capital costs follows; a more complete cost estimate is provided on page 7a. Vendor cost quotations, photographs and other equipment information are provided in the Appendix.

### Capital Cost Summary (\$000)

Item	Equipment	Installation Labor & Material	Total
Civil/Structural		223,000	223,000
Process Equipment	1,156,734	158,000	1,314,734
Residual System	91,000	19,000	110,000
Miscellaneous	19,000		19,000
Electrical Installation		158,000	158,000
Mechanical Installation	17,038	41,300	58,338
Indirect Costs			298,000
Contingency			261,928
Demolition			33,000
<b>Total Project Cost</b>			<b>2,476,000</b>

### Project Benefits

The two current board edgers are very old and technologically out of date. They have heavy kerf saws, and the controls for the saws (setworks) are limited in their capabilities. Because of inaccuracies of the machines, lumber is currently sawn approximately 0.250 inches over width, as compared to what newer, more modern edgers are capable of achieving. On an average 9.25 inch wide board, this amounts to about 2.7% oversizing, or lost fiber.

In addition, the current edgers are totally manually operated; complex decisions are made by people, and errors are quite common. With the new edger system, these decisions will be made with the aid of a sophisticated scanner and computer system that evaluates literally thousands of possible solutions before the board is finally positioned and the "optimum" sawing decision (the decision that results in maximum value recovery) is made.

## EXECUTIVE SUMMARY

The new system will also have infinite size setting capability, as compared to the current edgers which are limited to one inch setting increments. This is especially important on higher value "shop" lumber products, which are sold on a random width basis--and where the extra fraction of an inch can make the difference as to whether one additional door or window component can be recovered from the piece of lumber.

In estimating potential benefits, tests were conducted by determining the maximum or "theoretical" value that could be obtained from a piece of lumber arriving at the edger, then allowing the edger operator to make his decision and comparing the value of the lumber actually recovered with the potential value, assuming the piece was "optimized" with a new edger system. These tests were completed for both current edgers and with different edger operators. The results indicated a potential for significantly increasing the volume and value that could be recovered from the incoming log. Allowances were made to reflect that, even with new equipment, some "losses" as compared with the theoretical, will occur. Vendors of edger optimizer systems typically guarantee 98% value recovery.

In addition to improving value and volume recovery, the new edger system will also provide savings in operating costs. One new edger system will require less maintenance than the two older edgers; electrical cost savings are also expected as a result of one less machine center in the sawmill; and finally, the new system will require one less operator per shift, resulting in a savings in labor costs.

The following summary illustrates the various improvements expected from the edger optimizer project. The figures are based on FATCO's fiscal year 2001-2002 budget, but reflect the plan to operate the large log sawmill on a two-shift basis beginning fourth quarter, once capital projects currently underway are fully completed (remodel of boilers and lumber dry kilns). In other words, the figures are based on current economics and future operating plans and associated production levels.

### Summary of Expected Benefits

Benefits	\$ Per Year
Improved value recovery (5.85%)	785,000
Reduced maintenance expense (5%)	20,000
Electrical cost savings (5%)	30,000
Labor savings (two people)	65,000
<b>Total Benefits</b>	<b>900,000</b>

## PROJECT DESCRIPTION

This project will replace two existing manual controlled board edgers with one new computer-operated optimized board edger. The new edger system will be located in a new building addition on the north side of the large log sawmill. (See the sawmill layout drawing on page 6a.)

Boards from the double cut side of the mill will be discharged from the existing outfeed rolls (212) onto a new overhead transfer (214) to a new rollcase (216) onto a belt (218) running under the existing trimmer line and discharging to the edger infeed landing table (220).

Boards from the single cut bandmill will be discharged from a new rollcase (202) to a series of belt conveyors (204 and 206) running under the trimmer infeed line and onto the edger infeed landing table (220).

The boards will then be conveyed by the infeed chains to a radius-backed unscrambler (222) where they will be separated and singulated. The boards will be aligned to the right side of the conveyor on the system lumber line.

A board turner will allow the operator to turn the boards wane up or wane down.

The boards will then be scanned (225) and a computer will select the best position and alignment of the board to maximize total value recovery. The board will be physically aligned on a repositioning table (226) and then run through the board edger saws (230).

The finished boards discharge onto an overhead landing table (238) located over the existing trimmer infeed. Edgings from the trimmed boards will be conveyed to the chipper. The boards will be conveyed on an overhead transfer (240) to a location on the trimmer line, just ahead of the trimmer.

The following pages include a layout drawing illustrating the building addition and new edger system, a detailed capital cost estimate and the planned project schedule.