1967

**Great Northern Newsletter for Management Employees, 1967**

Great Northern Paper Company

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In an address before the New York Society of Security Analysts on November 2, Peter S. Paine, Chairman and Chief Executive Officer, made the following reference to the possibility of a plywood mill in Maine:

"At the present time, we are in the final stage of completing a plywood plant near our linerboard mill in Cedar Springs designed to produce 60 million square feet of 3/8" southern pine plywood annually. It should be in operation by January. We think that plywood has a great future for our Company, both in the North and South. We have already had some plywood manufactured out of Northern spruce, and when our small and young plywood organization has the experience of this new mill well in hand, we are going to turn our attention to a plywood mill in Maine. There we own, on our own lands, a minimum of 7 billion board feet, a large percentage of which would be available for plywood. We have already started in a small way by shifting our wood operations from the 4-foot size to tree-length logging, which means that we will be bringing long logs to central points to be cut up into pulpwood lengths or chipped for shipment to our mills. This is the first step that is necessary to assemble your wood to make plywood. We think that plywood in the North has a particular plus for Great Northern, because our wood resources there have not been fully exploited.

I have been talking so far primarily about construction grade plywood. It is interesting to note that most of the hardwood facings made in this country today come from the Northeastern and North-central regions of this country and are shipped to the West Coast to be laminated to cores. Of course, if cores were available in Maine, this might change the direction.

Yes, there are many marketing problems involved and also there are many production problems yet to be answered, but we have high hopes for our future in this area."

A New Addition to Great Northern's Production Facilities. . . At 8:09 p.m., December 13, No. 3 machine started up at Cedar Springs. This machine is a 280" wire width Beloit designed to produce corrugating medium at 1,000 f.p.m.

This completes the $50MM expansion that began in October, 1965, and brings the mill's 3-machine rated production capacity to 2,000 tons per day.

1967 Great Northern Annual Report

Great Northern's 1967 Annual Report is now off the press and being mailed to stockholders. Distribution will be completed by Friday, December 15.

An innovation this year is a special 12-page, full-color section entitled Paper Moves to Market. Designed to provide stockholders and others interested in the Company with a better understanding of the products we make and the markets we serve, it will be distributed separately to customers, mill visitors, and others.

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**EAST MILLINOCKET MILL**

A new roll identification system, utilizing color code cards for each paper machine, was started December 4. These cards are being used only on machines 1 through 4. Each machine has different colored cards which are stamped with roll widths and inserted in the rolls before the rolls are inspected. The inspectors check the roll width stamped on the end of each roll against the roll width stamped on the colored card and measure each roll. The finisher also uses these colored roll cards for easier roll identification at the finishing station.

Utilization of these cards with the subsequent checking by the inspectors and finishers should eliminate wrong roll sizes being shipped to our customers and assist in finishing operations.

Changing pulleys on the main line shafts of Nos. 1 and 2 paper machines was recently completed. This, along with a gradual change to nylon dryer gears, permits the speedup of these machines from 1130 - 1150 f.p.m. to 1200 - 1250 f.p.m.

The newly tiled broke tank was put back in operation on December 10.

Using wood from the river was terminated on November 30 because of cold weather. Softwood is now being reclaimed from the two wood piles.

The second grinder for No. 13 grinder line arrived December 7.

**GREAT NORTHERN PLYWOOD CORPORATION**

All phases of construction are proceeding steadily. The millwrights have begun the assembly of the mechanical component of the debarker system. The final section of the back wall of the steaming vats has been poured. The building sprinklers in the tray area have been completed, and the assembly of the core conveyor has begun. The dryer roofing has been completed and the exhaust stacks for the cooler section have been set. The pouring of the low pressure pneumatic piping support foundations have been completed, and approved foundation drawings for the package boiler plant have been received.

**MILLINOCKET MILL**

The reinforcing job on No. 2 silo has been completed, and now all three silos are in use for chip storage. The Ohmart chip measuring gauge has been moved from No. 3 silo over to No. 1 silo where it can measure chips from all three silos. It will also serve as a check for the new Brun gauge. The river froze up November 29, and we are now totally on winter woodroom operation. The east gradall has been removed from operation and completely overhauled.

On fine groundwood, No. 4 Dorr-Oliver thickener is still causing trouble. The plastic sectors with the polypropylene bags are not working out too well. We are experimenting with stainless steel sectors with either stainless steel cloth or plastic cloth. We are still in the
process of completing work on the fine groundwood system, such as: a new line from the series screen accepts trough, rewiring the temporary start-up instrumentation panel to a new permanent location, and reinforcing the stainless steel pipe from the cleaner supply pumps.

The sulphite pipeline to East Millinocket is now running at maximum capacity. It is presently necessary to use both pipeline pumps to accomplish this rate. No. 8 digester has been lined, and we are now ready to fill with water and cure the lining.

In the Paper Mill, work on improving wire life has been progressing satisfactorily by the use of special chemical pretreatment.

The coater and supercalenders have just completed a two-week curtailment. The basestock machines ran Jet, Publication, and Catalog grades while the coater was down, and the paper was wound off on the Coater Mill winders.

Repairs to the damaged generator at McKay Station were completed December 4. Unit testing was resumed on December 5. The unit, when not being run for test purposes, is being used to produce power. It is being run at 100 percent gate, 14,500 KW for an average of 16 hours a day.

** * * * * * * * * * * * *

John B. Rogers, Director of Personnel Administration, was chairman of the New England API, Industrial Relations Section meeting, held in Boston on December 5 at the Sheraton Plaza Hotel. Attending from Great Northern was J. C. Preble, Director of Employee Relations. Others in attendance represented 30 Industrial Relations people from 5 New England states, New York and Washington, D.C.

Black Clawson Concepts Seminar
....On November 28 and 29, Great Northern personnel met with all divisions of Black Clawson at their Paper Machine Division located in Watertown, New York. The purpose of this joint seminar was to discuss and review where the two companies stand today on many subjects; what Black Clawson is considering for the future in the way of equipment and systems, possible solution to some papermaking problems, and the development of any thoughts Great Northern personnel might have in any of these areas.

Company personnel attending this seminar were: Messrs. Paine, Haak, and Hellendale.

From Engineering & Research: Messrs. Cowan, Nelder, Lindsay, Griffee, Mattson, Johnson, Kozlovich, and Thaxter.


Xerox Magnafax Telecopiers have been installed on a trial basis in the Controller's Departments at Millinocket and Cedar Springs to evaluate the economics of transmitting hard copy documents between the two locations.

The telecopier is a tabletop, compact unit that uses a telephone to transmit or receive documents. A document is inserted in the sender's telecopier and a telescopy set (similar to a carbon set) is inserted in the receiver's telecopier. The telephones of both sender and receiver are placed in the telecopier's acoustic couplers and the transmission is made. In six minutes a facsimile of an 8 1/2" x 11" original document is completed on the receiver's telecopier. Normal telephone conversation may take place before and after a transmission.
WOODLANDS DEPARTMENT

NORTH

In the Pittston area, all camps have completed the pulpwood cut. Small crews are picking up merchantable hardwood and preparing roads for winter hauling. Three of the jobs will be truck hauling, and one job will use horses and tractors. In Aroostock, two camps have completed their cut for this season and are now able to truck some wood. The remainder of the wood must wait until roads freeze up. The Bartlett, Guerette, and Garrity camps will continue cutting into January.

The new slasher at Millinocket is now operating. Production is limited at present as the crew is learning operating procedures, and log deliveries are irregular. Log deliveries will pick up as woods roads freeze up. By Christmas, all of the crews at the Garrity camp will be cutting tree-length wood and this will improve the supply picture.

210.48 cords of pulpwood, the production record set in a 45-hour week last month by three woodsmen at the Jo-Mary operation, will produce a strip of newsprint 5-feet wide, 160 miles long. This is the equivalent of 190 tons of paper, or enough to keep a publisher with an approximate daily circulation of 81,000 papers going for better than two weeks, and would require six railroad cars to ship.

The West Branch Storage is at 39.6 billion cubic feet. This is 69.4 percent of full storage and 5.6 percent above the 60-year average.

Storage in the upper lakes is above average for this time of year, while the lower lakes are below average. An adjustment in storage will be made as soon as the third unit at McKay Station is in operation.

SOUTH

In preparing for increased plywood veneer requirements at Great Northern Plywood Corporation, Company equipment is being deployed to improve logging roads on tracts with veneer stumpage. Site preparation is progressing at a favorable rate and will continue throughout the planting season.

The Fall dry period has been broken by recent heavy rains, and soil moisture is now adequate for our planting program to commence. The first pine seedlings were planted on December 6 in Early County and planting will continue until around March 1.

Construction at the Cairo, Georgia, wood yard continues to progress satisfactorily and all grading has been completed. Rock has been spread on the wood yard surface and the railroad side track is now being laid. The scale house and weighing scales are also nearing completion and operation is scheduled to begin early in January. This wood yard is located 65 miles from Cedar Springs and annual production of 20,000 cords is anticipated.

Southern Division timberlands are open to public hunting as a part of the Woodlands Department’s Public Relations Program. Judging from the interest in hunting permits, which are issued free of charge, hunting prospects appear to be good for both large and small game.

Campus recruiting is now in its second month and continues in full swing. Visits have been made to the University of Connecticut, Boston College, Northeastern University, Western Michigan University, Michigan Technological University, and the University of Maine, which is the last college until the new year.
One of the newer and more sophisticated pieces of Research equipment is the QNSM Formation Tester. Formation is the nonuniform appearance of a sheet of paper as seen with strong light behind the sheet. The formation tester "sees" the non-uniformities in a sheet of paper like the human eye; but unlike the eye, it provides a permanent record and a quantitative measure of what it "sees."

Several specific examples of the use of the formation tester are:

1. Mottle in printed samples of coated paper. Our work showed that the formation of the coating basestock was directly related to the mottle (nonuniform blackness) seen in the coated, supercalendered, and printed sheets.

2. Uncoated rotogravure printability. We have found that good smoothness alone does not guarantee good rotogravure printability. The sheet must also be free of severe wire marking. This wire mark is "seen" by the formation tester but is not measured by the smoothness tester. In another study of the effect of groundwood content on printability, it was shown that some of the paper, having essentially the same smoothness as the other rolls, had a very mottled appearance in areas having a heavy layer of ink. The intensity and size of this mottle pattern was directly traceable to the poor formation of this paper.

3. Defective wires on coating basestock machines. Having recognized the importance of wire mark and formation of the coating basestock, routine formation tests pointed out basestock which we expected to print poorly after it had been coated and supercalendered. Print tests on the final paper confirmed the poor printability. The onset and disappearance of this phenomenon was directly traceable to the installation and removal of two wires on the basestock machines.

We have done little scientific work to date to actually help change, or adjust, paper machine components to produce better formation and less wire mark. However, we now have the background to know which aspects of formation are important and how to evaluate them quickly. These are important first steps in an intelligent, systematic program to improve sheet quality.

New Filler for Opacity

Show-thru of printing from one side of a sheet to the other is a major problem with lightweight papers such as Catalog and Directory. We normally use titanium dioxide (costing 25 cents a pound) and Hi-Sil (at 8 cents a pound) to increase opacity and reduce show-thru. These are expensive pigments and their use can seriously reduce the profitability of lightweights.

A new filler called Hi-Opaque clay has been evaluated recently. It has proven to be an excellent, yet relatively inexpensive, opacifier. Hi-Opaque is a high purity clay that has been specially heat processed to give an expanded crystalline structure. Whereas regular clay particles, when magnified, look like stacks of flat plates, the Hi-Opaque particles would have the appearance of popcorn balls. The use of Hi-Opaque with its relatively high opacifying power, good retention on the machine, and lower price (4 cents a pound) significantly reduces the manufacturing cost of certain grades.

As our lightweight tonnage continues to grow, we will use more and more fillers such as Hi-Opaque to meet the continuing customer demands for lighter weight paper of equal or higher opacity. Meanwhile, we will continue to search for pigments that are even more efficient and economical than Hi-Opaque.
Coating Research

A new coating preparation system is now in use in the coating plant. The new cooking system allows the use of raw stock in our coatings as a pigment binder. The starch formerly used was converted in the starch factory at a 15 percent greater cost. Supplementary benefits of the system are a greater ease of cooker operation and a higher cooker capacity.

The process has a number of unique features, and it is probably the first system of its kind in the preparation of coatings. It is anticipated that these improvements will give us one of the lowest coating preparation costs in the industry.

ABOUT THAT CREDIT CARD...

All Company-authorized credit cards are issued and cancelled by S. G. Hawes, Manager of Compensation. In case of lost cards, immediately notify him by telephone. Time is of the essence in reporting losses because of unauthorized use and resultant charges that could be Great Northern's responsibility.

Please don't use the American Express credit card to charge odd items such as gasoline, etc. This causes a bottleneck in the bookkeeping department because charges on the bills from American Express do not identify the purchases, and it takes forever to straighten out.

"The Effects of Syphon Clearance on Dryer Performance" is a film that was shown December 12 at the East Millinocket and Millinocket mills. This film was presented by the Power Specialties Company, Inc., North Randolph, Mass., and Mr. Donald Calkins was available to answer any relative questions.

This was an opportunity to learn more about dryer drainage, and both Operations and Engineering people attended.

The following is a continuation of the article ON BEING A DEPARTMENT HEAD printed with permission of the Royal Bank of Canada. This article was introduced in last month's Newsletter.

The Art of Management

Management is a professional enterprise. Visionaries are people who let their thoughts fly out into the wide blue yonder without attempting to harness them. The manager's constructive imagination is governed by an orderly mind, viewing the possibilities, analyzing the difficulties, and controlling the execution. He is both a dreamer to plot a new path and a drummer to get his people marching on it.

The manager must be an organizer. Good organization is the heart of a successful business operation. It means the distribution of duties or functions among sub-units and among individual employees in such a way as to operate at high efficiency, with production and service of the required volume and quality at the required time, by the best method and at the lowest cost. It is the manager's duty to detect any discrepancy between a worker's potential productivity and his performance, and to see that the gap is made smaller.

The manager who takes an inefficient branch or department and makes it run effectively experiences an emotional lift of no small magnitude.

It is obvious that if this could be done by the rule book, there would be no special quality needed in a manager. Rules and directives can take you so far, but they do not provide the incentive to get things off the ground, the courage and stamina to lead the way through difficulties and around obstacles, or the competence to wrap up the project successfully.

(Note - This series of articles on BEING A DEPARTMENT HEAD is not an expression of opinion by your editor or any other member of Great Northern Paper Company.)
NEW EMPLOYEE

DILLON F. SMITH, effective December 4, joined the Southern Division Plant Engineering Department as Mechanical Engineer, reporting directly to Waylon Lacey, Plant Engineer. Dillon is a graduate of the University of Florida with a BME degree in Mechanical Engineering. Prior to coming with Great Northern, Dillon was an Engineer with St. Joe Paper Co., Port St. Joe, Fla.

PERSONNEL CHANGES

MATTHEW R. WILLIAMS, effective October 1, was promoted from an hourly Area Operator A classification to the position of Power Shift Supervisor at the Cedar Springs mill, reporting directly to Charles Jacob, Assistant Power House Superintendent. Matthew has been with the Company since July, 1963.

KEITH R. VEAZIE, effective November 1, was promoted to the position of Systems Coordinator, reporting to W. O. Wagner, Manager of Administrative Services, Millinocket. Keith's primary assignment over the next year and a half will be in charge of the IBM 360, Model 40, computer conversion group. As leader of this project, he will be responsible for coordinating the staff assignments both within the Systems Department and with other departments of the Company.

CHARLES R. GRANTLAND, effective December 1, has been promoted from Assistant Traffic Manager to the position of Traffic Manager, Northern Division, reporting to C. F. Fischer, Director of Transportation. Charlie joined the Transportation Department in the South in December, 1965, and in April of this year, he transferred to the Northern Division.

RICHARD D. VIOLETTE, effective December 1, was promoted from Technical Assistant to the Paper Mill Superintendent to Foreman Paper 1-4 Machines at the East Millinocket mill, reporting to J. W. Griffin, Paper Mill Superintendent. Dick has been with the Company since January, 1962.

WALDO C. PREBLE, effective December 1, returned to the Millinocket area to become Plant Engineer at the Millinocket mill, reporting to Scott Weldon, Mill Manager. Waldo has held various engineering positions with the Company, most recently as Plant Engineer at the Cedar Springs mill.

WAYLON A. LACEY, effective December 1, was promoted from the position of Division Engineer-South in Central Engineering to that of Plant Engineer, reporting directly to W. W. Ricketson, Mill Manager. Waylon has been with the Company since May, 1963.

FRANCIS H. LARKIN, effective the first of 1968, returns to Millinocket as Scheduling Supervisor in Central Engineering, Northern Division, reporting to P. I. Firlotte, Project Manager. Since August 1, 1966, Fran has been in Cedar Springs as Engineering Office Supervisor.

RESIGNATIONS

NEVILLE W. MANN, Plant Engineer, Millinocket mill, resigns effective December 31 to return to the construction industry. Nev has been with the Company since April, 1966.

RETIREMENTS

THEODORE T. FISKE, Foreman Paper 1-4 Machines at the East Millinocket mill, retired December 1
Retirements Cont.

with nearly 46 1/2 years of service in the Paper Mill, starting as a Fifth Hand in 1923.

CHARLES A. COFFIN, Tour Foreman-Paper, East Millinocket mill, retired December 1 after 44 1/2 years of service. Charlie joined the Company in May, 1923, and since June, 1923, has worked in the Paper Mill.

A host of friends wish Ted and Charlie many happy years of retirement.

NEWCOMB W. SUTHERLAND, General Superintendent-Aroostook Area, will retire December 31 after 27 years of dedicated service. From substitute cook for a cruising crew to his present position, Newt has been responsible for the production and delivery of over 2,000,000 cords of wood, and the construction of hundreds of miles of road and other facilities necessary to procure this wood. All join in wishing him a long and happy retirement.

Happy Holidays

Thank you all for your contribution to a happy and prosperous 1967. The Officers and Directors join me in wishing you and your families a very Merry Christmas and a Happy New Year.

Sincerely,

[Signature]

President
Great Northern Paper Company reported the best year in the Company's 69-year history, setting new records in production, sales, and earnings.

Peter S. Paine, Chairman of the Board, said in a preliminary report that net income for the fiscal year ended October 1, 1967, had increased 10 per cent to $13,745,000. The 1967 earnings amounted to $4.80 a common share, compared to $4.36 in 1966.

Sales gained 8 per cent to $133,736,000 in fiscal 1967, and shipments reached an all time high of 1,076,000 tons of paper and linerboard. The Company's Maine mills shipped 619,000 tons of newsprint and groundwood specialty papers and 67,000 tons of coated paper, while its Georgia mill shipped 930,000 tons of kraft linerboard.

Addressing a luncheon meeting of the New York Society of Security Analysts, following announcement of 1967 results, Mr. Paine said the year's showing was made possible by efficient operations and effective marketing of the Company's products during a year of mixed market trends. "Measures were taken to strengthen the Company in all operating areas to meet increasingly competitive market conditions anticipated for 1968," he said.

Reviewing 1967 results, Mr. Paine told Analysts the "profit from operations totalled $23,103,000 up 6 per cent or $1,330,000 from 1966. However, a substantial increase this year in expenses related to our expansion program, more than offset this profit gain, and income before taxes declined $226,000. Countering this was an additional investment credit realized as a result of our expansion program. In 1967, this credit amounted to $2,364,000, equivalent to 87 cents per share of common stock, up $928,000, or 33 cents a share from 1966."

In April, the quarterly dividend on common stock was increased 20 per cent to 30 cents a share, bringing the indicated annual rate to $1.20 a share. The regular dividend rate on common stock has more than doubled since 1964. Dividends on common have been paid continuously since 1910.

Corrugating medium and construction grade plywood are being added to the product line by January, 1968.

Great Northern Sets New World's Linerboard Record - Cedar Springs, Ga., November 16.

Great Northern Paper Company has established a new world's record for kraft linerboard production on its No. 1 machine with 1,297 tons of saleable board in a single 24-hour period, beginning at 7 a.m. on November 16. The previous high set by another company was 1,250 tons.

When the Company's No. 3 machine comes on stream later this month, and when the mill is operating at full capacity, Great Northern's Southern Division will be able to produce more liner and corrugating medium at that one site than any other mill in the country.
Paper production for five weeks ended 11/6/67...

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<th>Production</th>
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<th>Daily Avg.</th>
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<td>East Millinocket</td>
<td>38,671</td>
<td>1,105</td>
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<td>Millinocket</td>
<td>30,069</td>
<td>859</td>
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CEDAR SPRINGS MILL

Construction continues to progress steadily on Project 05. In Area 34, Stock Preparation, all stock systems have been flushed; and all that remains to be done is a few punch-list items. On No. 3 paper machine, Area 35, work is continuing on erection of fourdrinier base frame and press rolls and felt stretcher mechanism. All dryers have been erected, and the winder and lube oil systems are complete. Calendar stack and reel and the reel crane are 90 - 95 per cent complete. The Pulp Mill expansion and Continuous Digester expansion (Areas 33 and 36 respectively) have been completed.

EAST MILLINOCKET MILL

The high density polyethylene suction box covers being installed on the four old paper machines continue to show promise. These suction boxes are manufactured by Appleton Manufacturing Company.

The new IBM card system, installed in the Old and New Finishing Rooms approximately two weeks ago is working very well considering the complete change over from one system to another. Some minor machine problems have occurred, but have been corrected. To date, roll specification, shipment report, bills of lading, and paper production weigh-up have been connected to the computer operation. In the near future, IBM cards will be shipped with each roll of paper to customers who request them for their computerized record keeping.

A motor coil in No. 9 grinder motor burned out on November 2. The burned out motor coil was bypassed as a temporary measure until the motor was put back on approximately eleven hours later.

The outside regular groundwood tank was operational November 1 after tile lining the inside was completed.

Piling out of peeled softwood was completed October 30 with 88,836 cords piled out for winter use. This compares with 80,000 cords piled out last year.

Grinder parts have started to arrive at the mill for No. 13 grinder line.

A total of 1,128 summer visitors toured the East Millinocket plant during the summer period June 12 to September 6. Of the 31 states, 5 Canadian provinces, and 4 foreign countries represented, New York State had the greatest representation with 216 visitors. A touring bus service from New York was making the plant a regular weekly stop on its way to Canada.

GREAT NORTHERN PLYWOOD CORPORATION

A lot of progress has been made in the construction of the Plywood mill since it was reported in your October, 1966, Newsletter that an approximate area 2,000 feet long, 500 feet wide had been cleared and levelled.

Since last month's reporting, the following progress has been made: the rebar for the steam vat rear
wall is complete and forming for the roof has begun. The entrance slab at the steam vats has been completed, and the channel face has been placed at the doors. The chemical storage tank has been sandblasted, primed, and erected. The pipe bridge at the dryers is now complete as is the glue loft structural steel. The dryer roof is 95 per cent complete, and the steel between the dryers has been erected. The motor generator sets in the tray building are being installed and the dryer control console has been relocated. A portion of the equipment for the package boiler from McBurney Stoker Equipment Company has recently been received and unloaded on the job site.

**MILLINOCKET MILL**

From the Coating Mill . . . . Five years ago, November 13, 1962, the first sheet of coated and supered paper came off the coater at the Millinocket mill. At the close of the 1963 fiscal year, 8,814 tons of coated paper were produced. For the fiscal year ended October 1, 1967, 67,822 tons of coated paper were produced.

The consolidated record section of the Stores Department moved, effective October 1, from the East Millinocket mill to its permanent home in the New Stores Building at Millinocket. This was the final phase of occupancy of the new building and the Stores Department is now operating from the new facilities.

Along with the installation of new vending machines supplied by the Canteen Service Company throughout the Millinocket mill, a new and centralized in-plant feeding area has been opened. Located in the old Store Room, this new cafeteria has two interior walls of panelled maple with opposite walls painted blue and white. The concrete floor has been tiled and a dropped ceiling with flourescent lighting installed. New tables with stools attached permits easy housekeeping. All in all, it makes a very neat appearing, pleasant, and clean area for crews to eat their meals.

A total of 973 summer visitors toured the Millinocket mill between June 5 and September 4.

The people visiting the mill represented 31 states, 3 Canadian provinces, and 3 foreign countries.

**Generator Failure-McKay Station** . . . . During the load rejection test on the third unit at McKay Hydro Station, the jumper bars between the rotor poles were displaced in such a manner that they came in contact with the stator windings and skived off an 1 1/2" section of insulation on every winding. The displacement of the jumper bars took place when the rotor was speeded up to 420 r.p.m. Since the machine is guaranteed to run safely at runaway speed, this is a standard procedure in testing turbine generators. Job completion was originally scheduled for November 17. With the added delay, the estimated date of completion is now December 22.

On Monday, November 13, the Great Northern Paper Company opened its campus recruiting season at the University of Connecticut at Storrs, Connecticut. U. Conn. is the first of 25 colleges which will be visited in the Northeast, South, and Midwest sections of the country in the corporation campus recruiting program. Campus recruiters are: R. W. York, Education and Training Director, R. E. Byron, Staff Assistant, and M. H. Holt, Industrial Relations Assistant.
WOODLANDS DEPARTMENT

NORTH

A total of 481,000 peeled cords of poplar and softwood have been produced as of November 1. This volume represents 44,000 cords of poplar and 437,000 cords of softwood on a scheduled volume of 662,000 cords. Twenty-five per cent of this volume has been delivered by truck and rail.

The NESCO Portable Slasher has arrived at Millinocket and will be in production the latter part of this month.

Foundation work at the Portage chip plant is nearing completion. Principal conveyor sections have been installed, and it is expected that buildings will be erected by early December.

All Company cutting operations are well past the halfway point with many approaching their contract volume.

The Tibetan wood cutters continue to do good work. They have been on a piece rate basis for the past six weeks.

Recently, Thubten Jigme Norbu, brother of the Dalai Lama of Tibet, lectured at Fort Kent State College. Our Tibetan group had the opportunity to attend this lecture and visit with Mr. Norbu.

The Canadian government has shown some interest in the Tibetan labor source. A representative from the Canadian Department of Immigrations and Labor has been in Ashland to talk with the Woodlands Superintendent and the Tibetan workers.

The Company's Recreational Information Centers have been kept busy. From May 15 to November 5, 15,365 persons passed through Twenty-Mile Recreational Information Center; 11,000 of these people recreationists.

During the period of October 15 to November 5, 1,800 hunters were registered. Game count was 122 deer and 19 bears. Comparison figures for the two Aroostook Information Centers are not available at this time.

SOUTH

Southern Division Woodlands, in cooperation with the Personnel Department, has begun a contest to promote safe driving among pulpwood truck drivers who deliver wood to the Cedar Springs mill. For a seven-week period, cash prizes will be awarded to the winning drivers. Drivers and their loads of pulpwood will be judged on such factors as General Appearance of Load, Condition of Load Binders, Stacking of Wood, and Safety Features of Truck and Trailers. On the basis of past experience (a total of 25,000,000 miles being driven during the past four years without a fatal accident), it is expected that a lot of prizes will be awarded.

Pulpwood shipments to the mill for fiscal year 1966-67 amounted to 521,161 cords of roundwood and 94,135 cords of chips, totaling 615,296 cords. This is broken down into 477,976 cords of pine roundwood, 85,763 cords of pine chips; 43,185 cords of hardwood roundwood and 8,372 cords of hardwood chips. Of the total cords shown above, 404,110 were delivered to the mill by truck and 211,186 by rail.

The formal opening of one of the Company's newest pulpwood concentration yards, located at Comer, Alabama, was held on November 9. Invitations were extended to twenty-five community leaders in Eufaula, Comer, and Clayton, Alabama.
tour of the installation was given, with the yard operation being explained by R. C. Wakefield, Troy Area Superintendent. Speaking to the guests at a luncheon in Eufaula, James W. Richardson, Woodlands Manager, emphasized why the Company selected this location and also the economic impact of this installation on the economy of the area within a 30-mile radius.

Southern Woodlands now has 15 pulpwood concentration yards in operation and plans to open three more during this fiscal year to meet additional wood requirements. When the Company has 18 machined wood yards in full production, 25 per cent of the total mill requirements is expected to be purchased through these yards with 75 per cent coming from yards or chip mills owned by independent suppliers and wood coming directly from woods to mill.

Tree planting preparations are in full swing; planting season to commence around December 11. Two million seedlings will be planted this season on 2,750 acres of Company land. Practically all planting will be done by contractors except planting sites too rough to be planed by conventional equipment. These will be planted by Company crews with special equipment designed to plant in rough terrain. After this planting season, over 32 million seedlings will have been planted on Company-owned or controlled timber land.

The inventory of plywood logs continues to grow in anticipation of the operation of the Great Northern Plywood mill. Problems with log size and quality are being worked out by Woodlands Department and Plywood officials.

Three Woodsman Knock Off 210.48 Cords of Wood in a 45-Hour Week. . .

Three Great Northern woodsmen have found that there is more than one kind of "green" in the Maine woods. They earned more than $518 each last week cutting pulpwood near Jo-Mary Lake.

The three men, working as a team, piled up 210.48 cords of four-foot wood during the regular five-day, 45-hour work week ending Friday afternoon. At the current $7 per cord rate with overtime after 40 hours, the three-man crew was able to establish a Maine woods record of more than $1,555 earnings.

Lawrence Lizotte cut the trees and removed the limbs and tops, George Lizotte operated the skidder between the stump and the yard where Ernest Roy cut and piled the pulpwood. The three men live at Green River, N. B.

Scaler Robert Arnold at the Company's camp at Jo-Mary has reported that all the wood was cut between daylight Monday morning and mid-afternoon Friday during regular working hours.

Company officials say that the production record was established in an excellent stand of spruce with a high yield per tree.

Daniel Garrity of Brewer is foreman at the Jo-Mary operation, about 30 miles west of Millinocket.

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Some lumberjacks in Canada commute from Portugal. They arrive in spring and fly home when the weather turns cold.
TRANSPORTATION

The Newsprint Committee, representing the Eastern Railroads Claim Conference, met with the Transportation Department, Northern Division, on October 18. Following a discussion on mutual problems, the group made a tour of the East Millinocket mill.

This Committee has the responsibility of locating causes of newsprint claims, and recommending improvements in transit handling to reduce damage. They observed winding, wrapping, handling, and loading procedures at the mill and were favorably impressed.

180 tons of Great Northern paper destroyed in fire. . . . On October 20, while loading a shipment of paper bound for India, a fire broke out on the vessel which was docked at Searsport, Maine. At the time it was discovered, approximately nine hundred tons of paper had already been loaded.

The vessel was taken to Boston where fire-fighting equipment for vessel fires was available. The hold which was on fire contained 180 tons of Great Northern paper.

Prior to arrival at Searsport, the vessel had been dry-docked to repair damages resulting from a collision. It is believed that a welding spark smoldering in a cotton bale was the cause of the fire.

Safety Regulations--Carry-on Baggage. . . .Government safety regulations issued by the Federal Aviation Administration, effective October 24, 1967, limit carry-on baggage and related personal belongings to items that can be stowed under a passenger's seat. Exempt from these regulations are a lady's pocketbook, or handbag, and a reasonable amount of personal clothing, and reading material.

All other carry-ons, including brief cases, umbrellas, hat boxes, cameras, musical instruments, binoculars, walking sticks, and packages must be of such dimensions that they be securely stowed under the passenger's seat.

In view of the government restrictions, other items not meeting the physical dimensions for under seat storage can be accommodated as baggage, in the heated, pressurized and ventilated cargo compartments of the aircraft, subject to tariff regulations.

Curtailment of production at the Cedar Springs mill. . . . No. 2 linerboard machine went on a 5-day production schedule effective November 13. When No. 3 machine starts up the latter part of this month, plans are for it to operate on a 5-day schedule also.

No. 1 machine continues to operate on a 7-day schedule with no foreseeable plans for curtailment.

Coater Shutdown--Millinocket mill . . . Due to a shift in grade mixture and a coated paper inventory adjustment, it was necessary to put the base-stock machines (No. 7 and No. 8) on uncoated grades of paper. As a result, the coater and the super-calendars were down for one week beginning November 13.

CAN WE RESPOND. . . .is what President R. A. Haak was talking about in the last paragraph of his November 2 letter "To Participants in the Incentive Profit Sharing Plan."

"Next year, as I am sure all of you know, will be an extremely challenging one for any company in the paper business, and especially for Great Northern Paper Company. Many new machines will come into production for the first time this coming year, and competitive pressures on prices and in the area of quality and service will be considerable.

It would be my hope that the organization can respond to these challenges, so that we can again in good conscience recommend to the Directors at the end of fiscal 1968 another substantial contribution to the Plan."
RESEARCH AND DEVELOPMENT DEPARTMENT

New Testing Equipment for Quality Control. . . An automatic color-brightness tester, manufactured by the Martin Sweets Company, Inc., Louisville, Kentucky, has been purchased for the Quality Control Paper Testing Laboratory. The instrument measures TAPPI standard brightness, tristimulus color values, and abridged spectrophotometric color values. Great heed permits readings as fast as test specimen can be changed. Digital readout shows readings at a glance and printed tape gives a permanent record. This instrument will increase the efficiency for testing for these optical properties of paper.

As another step in the continuing effort to have as precise and accurate testing as possible, a Twing-Albert inkometer has been added to the Quality Control Graphic Arts Laboratory. The inkometer is a precision instrument that gives a numerical reading of the ink consistency or "stickiness" of all lithographic or printing inks which contain no volatile thinners. Tests are made under dynamic conditions closely resembling the conditions that exist on the ink-distribution system of the press during printing. The inkometer is used to measure the ink consistency of all the inks used in the various printability tests done in the lab. With better control of ink consistency, another testing variable will be minimized.

Evaluation of ink from pressrooms that have picking, ink trapping and associated problems could also prove very valuable in tracing down the source of the problem.

Sulphite Pulping By-Products Program. . . For the past several months, the Analytical Research Group has been working on this program, and it is hoped that some useful products can be developed from the spent liquor. Products which have been investigated so far as adhesives and lignosulfonate dispersants.

Research on an adhesive has progressed well and a plywood adhesive has proven successful in the laboratory. Arrangements have been made to try the plywood adhesive on a pilot plant scale at Syracuse University, probably during the second week of December.

Lignosulfonate dispersants are presently being sold by other companies for dispensing dyestuffs, cements, gypsum board, oil and water emulsions, and many other applications.

Laboratory work in the pilot plant has produced some dispersant products from magnesium-based spent liquor which are equivalent to some of the present commercial dispersants.

We're Buying A Lot of "Hay". . . This was the remark made by an employee; and it was followed by a question that is frequently asked at this stage of the program - namely, where do we stand with the Hay system as a base for a formal salary administration program for exempt employees?

The program was announced February 17, 1967 - nine months ago today, November 17. Since that time, twenty-four job analysts have conducted more than 225 individual interviews, preliminary to preparing job descriptions. The evaluation committees have held approximately twenty 1-and 2-day meetings to review and evaluate the 225 positions as set forth by the approved job descriptions. The remaining positions, roughly 125, are in process; i.e., they have been assigned to the job analysts with a deadline of December 31 for completion of approved job descriptions. This will be followed by 2 or 3 wind-up meeting of the evaluation committees in January after which the program will be fully operational.
ON BEING A DEPARTMENT HEAD

Every business concern requires efficient management of its daily work, intelligent administration of its financial affairs, and competence in dealing with men and women. More businesses fail, say the authorities, because of management oversight or shortcomings than from any other single cause.

The manager must have competence in managing not only things and people but situations. He needs to practice certain fundamental principles of good administration.

There are three management levels in business: top management, which makes policy; middle management, which carries out policy; and supervisory management, which has charge of the working force.

The department or branch manager is somewhat like the helmsman on a ship. He receives the sailing course from his superiors, then he stands sure-footed at the wheel, easing the spokes this way and that, using a mixture of expertness, craft and guile to keep his ship on course.

It is impossible for a person to manage a department efficiently unless he knows the big picture of which his department is part. The manager of a technical or engineering or clerical subdivision of a company needs to know the principles of business, if he is to fit his department into it. He must know precisely what the executives expect of him in the way of operation and effort toward a definite objective.

Department heads should be consulted during the making of plans affecting their departments, and they should be given the authority needed to carry out the projects.

Business will be done smoothly and competently when functions are clearly set out for each management position, and kept up to date.

"Function" includes responsibilities, authority, and relationships -- responsibilities to the firm, authority in the department, and relationships with other departments. These must be known to workers.

LEADERSHIP

The manager belongs to one of the world's scarcest species: the leader. Everyone on his staff has a practical stake of the most concrete kind in the quality of his leadership.

Leading a group to an understanding of a complex problem and securing its co-operation in working it out is one of the highest forms of management, and most rewarding. It stamps you as a person of influence as well as of action.

A bustling manner and a commanding voice are not evidences of good leadership. The leader does not say "Get going!" He says "Let's go!" He leads all the way, always a step in front. As Wilferd A. Peterson wrote in The Art of Living: he carries a banner, not a whip.

A dictator may point, with some justification, to certain advantages in his system, such as speed of action and vigour in execution, but the factors against acceptance of dictatorship far outweigh the benefits. Instead of winning people to his side the dictator plays upon feeling of unease, anger, apathy and despair. He has no friends but who are friends for fear.

The competent manager is custodian of the firm's interests. He has technical qualifications, a broad intellectual outlook, a high sense of honour, and appreciation and understanding of human relationships. He is not only a clever man, but a superior person.

Men who have the mental and moral strength required for good leadership have sincere tolerance of other people's race, color, creed, nationality and idiosyncrasies. They do not, on the other hand, tolerate in themselves such traits as grouchiness, impatience, temperamental outbursts, prima donna attitudes, arrogance, favouritism, or inconsistency.

(Continued next page).
One of the critical qualifications for leadership is the ability to take substantial risks with reasonable equanimity. The manager cannot be submissive, depending upon others to lead him by the hand, or dilatory, waiting for the whip-lash of authority to goad him to action. His drive is within himself.

He is flexible. He examines and re-examines the performance of his department in the light of changing conditions. He grasps the essentials, decides what is to be done, makes clear to all concerned what he intends to achieve and how he will do it, and then sees that his workers get on with the job.

This demands poise, wisdom, suppleness of mind, courage, energy and determination, and the ability to keep going under frustration and disappointment.

The above article is printed with permission of the Royal Bank of Canada and will be continued in later issues of the Newsletter. Subjects to be covered on Being A Department Head will be: The Art of Management; Handling People; Something about Status; About Asking Questions; Decisions and Discipline; Morale; Something New Every Day; and So That Is Management.

"PERSONALITIES"

NEW EMPLOYEE

PETER W. MASSMANN joined Great Northern, New York office, effective November 1, as PACE Project Technician, reporting directly to Frank Dunne, Sales Coordinator. A 1967 graduate of Baruch Business School of The City College of New York, Peter obtained his BBS degree, majoring in Product Management. Prior to joining the Company, he was employed by the Chase Manhattan Bank as a Systems Analyst.

PERSONNEL CHANGES

RICHARD E. PICKERING was promoted from Assistant to Cost Engineer to Division Cost Supervisor, effective September 1. Dick has a BS degree in Business Administration from Husson College and has been with Great Northern since 1961.

ALBERT D. RALSTON, effective October 15, has been promoted from the weekly classification of Draftsman-Group II to Field Coordinator-Electrical, reporting to Harry Graves, Service Engineer. Al has been with the Company since August, 1965.

MANLEY T. JOHNSTON, effective October 1, was promoted from the position of Assistant to Cost Engineer to that of Cost Engineer, reporting directly to Waylon Lacey, Division Engineer, Cedar Springs. Manley has been with the Company since November, 1966.

TERMINATIONS

GERALD D. ADKINS, Accountant at Cedar Springs, resigned November 6 to accept employment with Hayes Aircraft at Ft. Rucker, Alabama.

ARTHUR C. ALLEN, III, Sales Trainee, resigned November 15 to accept a position with a brokerage firm in Boston, Massachusetts. "Clint" has been with the Company since July, 1967.

DEATH

ALFRED J. PARENT, Foreman-Roads for the Northern Division Woodlands Department in the Greenville area, died unexpectedly at his home on October 28. Mr. Parent had been with the Company since April, 1937.
HAPPY THANKSGIVING
FLASH ANNOUNCEMENT. . . At the meeting on October 18, the Board of Directors authorized a contribution of 10% to the Trustees of the Great Northern Incentive Profit Sharing Plan.

A new customer roll card service is currently being installed in the Millinocket and East Millinocket mills. This service, developed by the Administrative Services Department at the request of the Sales Department, involves attaching a punched interpreted tabulating card to each roll of paper shipped to a customer. These cards will be used by our customers for direct entry in their receiving, inventory and production control procedures.

The card attached to the roll will identify the roll as to grade, diameter, color, basis weight, size, roll number, net weight, etc. A second card is available, if requested by the customer, which will be mailed with the roll manifest. This second card, referred to as a manifest card, will contain shipping date and card number which are not in the roll card.

In addition to providing customers with the card described above, this system will generate computer prepared Daily Production, Roll Specification, Bills of Lading and Daily Shipment Reports for each mill.

A Standard Register Source Record Punch located at each weigh station will originate three punched interpreted cards in one operation. Two of these cards will be for the customer service and the third will be used for internal production reporting and inventory control. Information in the cards under the heading of "Mill Control Data" will provide mill management with control data concerning the rolls' manufacture.

The system is unique in that in most instances only one minute is allowed for originating the card set at the weigh station. Once the roll is on its way to the railroad car, it is too late for card attachment.

Concurrent with the installation of this system the IBM 357 Data Collection System is being removed from the Millinocket mill.

Log Deliveries to Plywood Mill Started

Great Northern's first activities in the plywood field commenced October 1 with delivery of the first load of pine plywood logs to Great Northern Plywood Corporation at Cedar Springs. Present plans are for Woodlands to gradually build up the plywood log inventory prior to mill operation scheduled for early December. Ultimate weekly consumption of one half million board feet will make our new plywood mill one of the largest consumers of sawtimber size trees within a 90-mile radius of Cedar Springs. Procurement of plywood logs has presented new challenges to Southern Woodlands in log length, size, and quality required for manufacturing plywood. While quality control of pulpwood has always been of prime concern to Woodlands, the quality specifications for pine plywood logs are even more rigid.

Great Northern Plywood General Manager, W. K. Hoseid has expressed satisfaction with the quality of plywood logs delivered by Woodlands thus far.
Paper production for fifty-two weeks ended 10/1/67 . . .

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<th>1966</th>
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<tr>
<td></td>
<td>Tons</td>
<td>Daily Avg.</td>
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<tr>
<td>East Millinocket</td>
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CEDAR SPRINGS MILL

Work is progressing steadily on Project 05. All areas are nearing completion with the exception of Area 35, No. 3 Paper Machine. The Pulp Mill is essentially complete with the exception of a few remaining punch-list items. All pumps, motors, refiners, and agitators have been installed and piping is 95 percent complete in the stock preparation area. The base frames for the fourdrinier section have been set as have the couch beam and couch roll. The frames for the first and second press sections have been set, and the second press section rolls installed. The roll handling equipment and winder are complete and are being checked out.

EAST MILLINOCKET MILL

Work on the fuel oil unloading trestle has been completed. This should make it safe and operable for at least the near future. Some of the carrying beams and other parts had to be replaced.

A hole in the sulphite pipeline was reported on October 11. Someone shot into the pipeline at the Rice Farm on the East Millinocket side of the river. Repairs were made to the line without shutting it down.

The two outside stock tanks have been insulated on the outside and the groundwood tank is presently being tiled on the inside.

A total of 84,500 cords of peeled softwood have been piled out for winter use as of October 16.

GREAT NORTHERN PLYWOOD CORPORATION

Construction progress has been slowed by a walk-out by sheet metal workers which occurred on Tuesday, October 10. They set up a picket line at the plywood plant entrance on Wednesday morning and continued picketing for the balance of the week. This is another jurisdictional dispute - this time between sheet metal and iron workers, over a job assignment relating to the installation of roofing over the veneer dryer. The contractor has taken the proper action as defined by Procedural Rules. The National Joint Board, Washington, D. C., has ordered the picket line removed and the men to return to work - an order which is thus far not being observed by the striking union.

As of this writing (Monday, October 16), the status remains the same. Iron workers have crossed the picket line and are working, but the other crafts (millwrights, carpenters, electricians, pipefitters, and laborers) have not yet done so.

Work is continuing in all areas on Project 06. Steel erection is continuing in the debarker area. The forming and pouring of the steam vat
wells and floor sections is continuing. The erection of the dryer roof steel is now complete and erection of the steam and condensate piping for the pipe bridge is continuing. The installation of the lay-up equipment is complete and erection of the saw line conveyors is continuing.

MILLINOCKET MILL

No. 10 Paper Machine Rebuild started up on Tuesday, October 3. On Wednesday, the machine was shut down in order to change the speed range of the first and second presses. Currently, the machine is running at a speed of 1020 ft/min. Only minor rework items remain. Included are such items as the installation of a valve on the suction white water line to aid in the control of basis weight, changing the slice lip, and increasing the height of the open headbox.

No. 8 Digester Installation .. .. A highpoint in the erection of the digester was reached early Saturday, October 14, with the successful completion of the hydrostatic test at 225 psi. This marked the completion of the shell erection by Pittsburgh-Des Moines Steel Co. The Stebbins lining foreman arrived on the job on Monday, October 16, and the first pieces of tile lining were placed on October 18. It is estimated that the lining job will require about five weeks. Our pipers began the erection of the liquor circulation piping on October 17. Completion of the piping is scheduled to coincide with the completion of the lining. The instrument control panel is now installed in the digester control room. The German-made top cover is now en route and is expected to be at the job by early November. Start-up of the digester is now scheduled for December 8.

In the three Maine camps where wood is cut and yarded in tree lengths to roadsides, labor productivity is one cord per man-hour. In the other camps where wood is not only cut and yarded, but sawed and piled, productivity is about .38 cords per man-hour. The tree-length wood at present is cut into four-foot lengths by a slasher, with a very good productivity rating. By the first of the year, some of this tree-length wood will be debarked and shipped without first being cut into four-foot lengths. The delivery of the slasher, which will be used in Millinocket, has been delayed due to labor strikes. Site preparation is now underway. Wood will arrive at this location in long lengths and suppliers will be paid on a weight basis.

The slasher that has been operating all summer at Portage siding has been moved to Umbazookskus and is slashing wood produced at the Guerette and Levesque operations.

All cutting camps are operating with normal crews and good production. Due to heavy rains and the potato harvest, trucking has slowed down considerably.

The bridge on Sourdnahunk Dam is being rebuilt and minor repairs are being made to the dam. Tourist traffic is heavy at this location during the summer months as this road leads to Telos and the campsites on the north side of Mt. Katahdin.

The chip plant at Portage is now 50 percent complete.

The West Branch Water Storage is now 41.5 billion cubic feet. This is 4.3 billion cubic feet above rule curve and 23.8 billion cubic feet above last year's level at this time. For the last five months, May 1 - October 1, precipitation was 6.94 inches above average.
WOODLANDS-SOUTH

Pettibone Slasher Model No. SLA-04, being experimented with at the Company's McRaeville wood yard, has been replaced by a new Model No. SLA-06. Performance of the original machine was disappointing as hourly production rate was below rated capacity. The new slasher has a radial cut-off saw which has improved daily production over the original and renewed our interest in the potential of slashers at outlying installations. Woodlands Logging Engineer is supervising this experimental operation in order to determine the most efficient complement of personnel and equipment for maximum production.

Two additional Company wood yards were opened during September at Brantley, Alabama, and Concord, Georgia. Pulpwood from these wood yards is needed to meet the additional wood requirements created by the outstanding operational performances of machines 1 and 2 during the last 40 days.

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A basic supervisory training session was held the week of October 1 at the Dothan Holiday Inn for twenty-three supervisors of the Cedar Springs and the Plywood mills. Organized into two groups, each section spent two days discussing typical front-line supervisory problems relating to qualities of leadership, discipline, communications, instructional techniques, cost control and grievance procedures. Mark Holt, Industrial Relations Assistant, Cedar Springs, led sessions on the supervisor's personnel problems. Russell York, Education and Training Director and Russell Byron, Staff Assistant of Central Personnel, Millinocket were the conference leaders for the other sessions.

The Great Northern Paper Company has received a Certificate of Recognition from the editors and publishers of THE SCORE, "for the planning, preparation and production of an Annual Report to Employees of high quality and unusual distinction during the year ending July, 1967." THE SCORE is a monthly report to management on developments and trends in employee-employer communications. Annual awards are made for outstanding company publications in this field.

As announced by J. F. Steedley, Assistant Vice President-Engineering (Effective October 1) --

The Central Engineering Department will be organized into two (2) divisional groups, Northern and Southern. Each of these groups will be responsible to the respective Division Engineer.

The Division Engineer, Northern will be D. O. Nelder; the Division Engineer, Southern, will be W. A. Lacey; both Division Engineers report to the Assistant Vice President-Engineering.

This change in organization will more effectively describe the functional responsibilities in our Department.

DID YOU KNOW . . . . . . . . . .

. . . that under the new life insurance system the Company is providing a total of $5,410,000 of free life insurance to approximately 535 exempt monthly salaried employees.

Based on the average age of the 535 employees, the $10,000 of free life insurance would cost each employee $310.80 per year if purchased at standard premium rates.

. . . that American business is paying a staggering $75 billion-plus each year for fringe benefits to workers.

That is four times as much as it pays to stockholders in dividends.

Fringe benefit costs are shooting up almost twice as fast as wages.
The Pioneering Research Section

The Pioneering Research Section is made up of two groups, the Process Dynamics Group and the Applied Mathematics Group. Both contribute in our efforts to make the new and unknown available for further development and use by the Company.

In principle, those problems that don't fit logically into the other sections of the department end up in Pioneering. In practice, they may start here but they frequently pass on to other groups in Research & Development or to the Engineering Department as both the problem and the possible solutions become more clear.

A recent example involving the Process Dynamics Group may give you a better picture. The Engineering Department requested assistance in the design of a chipper and drive motor to chip long logs. To complicate the problem, the chipper would be located far in the woods where the allowable peak loads on the electric utility would be limited. Since there isn't much experience to draw on for such a combination of circumstances, Pioneering Research was asked to simulate this on the analog computer. This was done and then various combinations of chipper size, number of knives, and motor characteristics were tried until the restrictions were met. This information went back to the Engineering Department which then specified and purchased the commercial equipment. They will also install test instruments so that they can verify the accuracy of the prediction.

When sensors or control actuators are not commercially available, the Process Dynamics Group will try to develop them. In an attempt to measure and control cross machine variations, they have developed two devices. One is the caliper profiler which has been in operation for a number of years. More recently a slice actuator was designed and built which remotely adjusts the individual slice screws and which also records the present position of these slice screws.

The Applied Math Group has also been at the front of new developments. Most of their work involves the application of digital computer techniques. For instance, they were instrumental in the introduction of critical path techniques in construction project scheduling. Now this is a standard mode of operation almost entirely under the direct supervision of the Engineering Department.

A more recent assignment was the programming for the Mill #1 quality control computer. This work began with some procedures suggested by Mill #1. The Applied Math Group first worked with the mill to confirm or modify the basic ideas. Then they worked with the Systems Department to determine what information would have to be available for records and reports. Finally, they concentrated on the task of writing the actual program.

An interesting feature of this program is that the computer converses with the computer operator. The computer checks for incorrect entries and when some doubt exist, it writes short messages and questions asking whether entries are correct or suggesting how the error can be corrected. All this is done because the input must be 100% right if the output is to be useful.

Now that the program is running, it is back in the hands of mill personnel to refine operating details and get the full potential from the installation.
PRAISES GALORE

"GOOD GIMMICK--Most little promotional gifts we get we can live without, but GREAT NORTHERN PAPER has one so good we're getting addicted. It's a metal calendar for wrist watch bands. Each is a single month, two-sided, one side silver, one gold color to match watches. Tabs on each corner bend easily around band. Great Northern mails them two months at a time. When they stop sending, we'll have withdrawal symptoms." Paper Age 9/67

"Unusual Promotion Pieces are coming from Great Northern Paper Company. One is a beautifully illustrated presentation of Joyce Kilmer's famous poem "Trees," the photographs taken on Great Northern woodlands in Maine. Another is a date-jotter calendar, complete with a tiny metal calendar easily attached to the band of a wrist watch. A new calendar is issued each month. Still another Great Northern idea: a booklet called 'The Wisdom of William Shakespere' subtly joined to the paper industry, and including portraits of famous Shakespearian actors and actresses of the past." Rice Barton Cellu-Letter

Great Northern congratulated for outstanding performance

James O. Lowe, Sales Manager, Pulp and Paper Industry, Southern Railway System, advised Reid Smith, Traffic Manager, Southern Division, that in connection with the Southern's new woodrack program, a random sample analysis of utilization of pulpwood cars was made and the performance of Great Northern at Cedar Springs in releasing cars was the best on the railroad.

During March and April, 1967 the maximum time that a car was retained on the Chattahoochee Industrial Railroad was eleven hours twenty minutes and some were released in nine hours. According to the Southern, if they could attain this performance at other mills, they are confident that this could increase the utilization of their woodrack equipment by one turn around per month.

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The Living Textbook. . . .

. . Some ten years ago, a group of educators and newspapermen decided that students entering the adult world should be prepared to use the chief source of current information, the daily newspaper. They decided concrete steps needed to be taken to assure more effective use of the newspaper as a tool of learning in the nation's classrooms. As a result, the Newspaper-in-the-Classroom service evolved.

Presently, six Maine daily newspapers sponsor this service and provide funds for a full-time Newspaper-in-the-Classroom coordinator who works out of the Maine Department of Education. Maine is the only state that provides this service to the schools through this means.

What does this coordinator actually do? He brings the program to the attention of the schools, talks with educators to determine how best to use the "living textbook" in their schools or classes, provides materials published on a national and state level, and helps the schools order their newspapers.

The schools order the newspaper for a specified period of time and pay three cents per copy. The schools usually pay for the papers although in some cases the students pay individually. Teachers from first grade through high school use this "textbook" to supplement teaching in just about all subjects.

The NIC program has caught on fast in Maine in the past few years. During the 1964-65 school year, 57,000 newspapers went to 61 schools. In the past school year, 152 schools subscribed to the program (64 elementary; 88 secondary) and used 217,000 newspapers.

This program not only helps students learn their school subjects, it also gets them accustomed to a valuable tool they will be using throughout their lives.
NEW EMPLOYEES

GERALD D. ADKINS, effective October 1, joined the Controller's Department - Southern Division as an Accountant, reporting to M. B. Robinson, Manager of Accounting. Gerry received his B.S. in Business Administration from Troy State College, Troy, Alabama, in June, 1967. His previous employment was with General Foods Corp., Maxwell House Division, Jacksonville, Fla.

ARTHUR D. DUNLAP, effective October 2, joined Great Northern as a Senior Engineer, reporting to F. W. Lindsay, Chief Design Engineer. Dave is a 1956 graduate of West Virginia University with a B.S. in Chemical Engineering. He joins us from West Virginia Pulp & Paper Company, Luke, Maryland.

PERSONNEL CHANGES

MICHAEL J. GALLO, effective October 1, was promoted from Assistant Electrical Superintendent to Electrical Superintendent, Millinocket mill, succeeding Leon Cousins, retired. Mike has been with the Company since 1945, progressing from an electrician to the supervisory ranks.

WILLIAM P. BURKE, effective October 1, has been promoted from the hourly classification of Leadman in the Electrical Department, Millinocket mill to Electrical Foreman, reporting to Mike Gallo, Electrical Superintendent. Bill has been with the Company since 1942 and with the Electrical Department since 1946.

WILLIAM L. DEWITT, effective October 1, was promoted from the hourly position of Machine Tender to Tour Foreman in the Paper Room at the East Millinocket mill. Bill has been with the Company since July, 1955 and has worked in the Paper Room since February, 1956.

JAMES E. DENTREMONT, effective October 1, was promoted from Assistant Buyer to Buyer in the Purchasing Department at Millinocket, reporting to J. W. Dobson, Manager, Purchases and Stores, Northern Division. Jim has been with the Company since June, 1949.

Effective October 1, the following have been promoted to Tour Foremen, Paper in the Millinocket mill, reporting to C. D. Bears, Paper Mill Superintendent:

CLARENCE P. ALBERT, who has been with the Company since February, 1947.

BERTRAM A. DOYLE, who started with the Company in August, 1947.

DONALD P. McGREEEVY, who started with the Company in August, 1952.

Of special interest is the fact that each of these men started in the Paper Mill Department and remained there throughout their service with Great Northern. Each started as a Fifth Hand, progressing up through the ranks, Albert and Doyle attaining the Machine Tender's level in October, 1964, and McGreevy in August, 1965. Combined, they represent a total of fifty-five years of service in the Paper Mill.

ROBERT A. MACKIN, effective October 1, was promoted to Foreman - Stores at the Millinocket mill, reporting to R. Robinson, Superintendent of Stores. Bob has been with Great Northern since 1948, progressing from the clerical section of the Millinocket Stores Department.
JOSEPH R. GOODY, effective October 1, was promoted from Forester to Staff Forester, a newly created position, reporting to R. E. Clifford, Manager of Woodlands - Northern Division. Joe has been with the Company since 1960.

LESTER W. HAZELTON, effective October 1, was promoted from Logging Engineer to Superintendent, Operated Wood, for the Woodlands Department - Northern Division. Les will be reporting directly to R. E. Clifford, Manager of Woodlands.

EDWARD A. LUMBERT, effective October 1, was assigned the title and responsibilities of Administrative Assistant in the Woodlands Department - Northern Division. Ed will remain in the Bangor office, reporting to Messrs. Maines and Clifford. He will continue to be responsible for budgeting and cost control, in addition to his new responsibilities.

HAROLD A. GRANT has been promoted from Systems Analyst to Budget Supervisor, reporting to P. F. Yacavone, Assistant Controller. In his new capacity, Pete will assume the duties presently being performed by Robert F. Bartlett. He is a native of East Millinocket and has been with the Company since 1963. This change will take effect on or about November 1.

RAYMOND L. CAULEY, former Insurance Clerk, has been promoted, effective October 1, to the position of Insurance Assistant at the Cedar Springs mill, reporting directly to T. H. Flanagan, Manager of Insurance, Millinocket. Ray has been with the Company since December 9, 1963.

PATRICK N. CARMICHAEL, former Cedar Springs Assistant Area Superintendent, has been promoted to Logging Superintendent for the Plywood mill. Pat's experience with loggers within his former area of responsibility will be most helpful in performing the duties of his new assignment.

PAUL J. LYNCH, retroactive to July 1, 1967, has been promoted from a weekly Clerk classification to Critical Path Scheduler, reporting to P. I. Firlotte, Project Engineer, in the Central Engineering Department, Millinocket. Paul has been active in this position since January 9, 1967. He joined Great Northern in April, 1950.

TERMINATION

R. EUGENE DAUGHTY, Power and Steam Supervisor at Cedar Springs, resigned October 15 to accept employment with MacMillan Bloedel at their new mill in Pine Hill, Alabama. Gene had been with the Company since February, 1963.

RETIREMENT

RAND A. DUNHAM, M.D. is retiring after more than 42 years of dedicated service to the Great Northern Paper Company. He first came to the Company in May, 1925, as Physician in the East Millinocket mill, a position he held for the entire period. "Doc" and Mabel are at home at 42 Mt. View Terrace, Rye, N. H. 03870.

DEATHS

CHARLES J. McNAMARA, an Assistant Foreman, Finishing at the East Millinocket mill until his retirement in July, 1958, died September 16, 1967. Mr. McNamara joined the Company as a Clerk in the Finishing Room June of 1930.

WILLIAM J. R. JARDINE, a retired employee of the Madison mill, died September 7, 1967. Mr. Jardine held the position of Assistant Foreman, Finishing at the time of his retirement and left the Company with 48 years of service.
GNP OPENING OVERSEAS OFFICE

On July 17th, Frederick V. Ernst, Export Sales Manager, and his family became residents of Paris, France. Fred will be working on-the-spot in Europe for the next two years to expand and solidify the Company's overseas sales program. He will operate from his office in Paris to all of the major European market areas as well as to the United Kingdom.

The stationing of a Great Northern man overseas represents a major innovation in Great Northern's dynamic program to achieve maximum sales efficiency.

J. H. Heuer, Vice President - Operations, has announced the award of a 3-year University of Maine Pulp and Paper Foundation graduate fellowship to William J. Frederick, Jr. of Bangor, Maine.

A graduate of Bangor High School and of the University of Maine this year, Frederick is a pulp and paper student with a degree in chemical engineering. In high school he was the recipient of several honors and a leader in many activities.

The fellowship which has been awarded to him is for graduate work leading to a doctoral degree in chemical engineering. It is one of three such awards amounting to $9000 made by the Pulp and Paper Foundation Scholarship Committee each year. The other two recipients continued from awards in 1965 and 1966 are Wesley A. Olmstead of Charleston, and Delmar R. Raymond of Farmington.

The Operations Department - Northern Division officially kicked off their Profit Improvement Program this month and profit improvement commitments have been made totaling $1,388,400.

This program has been tailored after a very successful plan developed by the Pigments Department of Dupont Company. The secret of Dupont's success with this program has been the idea of each individual taking on the responsibility of doing something about a specific area of cost.

Teams were formed of various mill departments and each team has held brainstorming and evaluation sessions. From these sessions evolved each participant's individual commitment.


In addition, the Purchases and Stores Department has committed themselves to an overall savings of $500,000 for the coming year.


For the full story, see attachment to this issue of your Newsletter.
Paper production for forty-nine weeks ended 9/10/67 ... 

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CEDAR SPRINGS MILL

Construction is progressing in all areas on Project 05 - No. 3 paper machine. The continuous digester has been completely insulated and the piping is 95% complete in the Pulp Mill area. All work on the NSSC tile chests and towers has been completed with the exception of the agitator drive motors in the stock prep area. Piping is also 95% complete in this area. The paper machine area is the area in which the majority of the work remains. The basement enclosure has been completed and the setting of the winder frame, reel frame, calendar frame and last dryer frame is continuing. Steam, condensate, stock and lube oil piping is progressing smoothly and installation of vacuum piping has begun.

CHATTahoochee Plywood MILL

Construction continues to progress steadily. The erection of the precast steam vat walls is continuing and 16 of the 27 panels are now in place. The knife grinder has been set in place and grouted and the erection of the roof steel for the dryers is continuing. The remaining caissons for the pipe bridge have been poured as have the foundations for the condensate tank. Fabricated steam and condensate pipe has also been erected on the pipe bridge.

EAST MILLINOCKET MILL

Insulation and tile lining of the two large outside stock tanks is progressing steadily. The work is being planned on a two-shift basis to minimize downtime and its effect on mill operation. These tanks were installed about 40 years ago, and now the inside walls are badly contaminating the pulping process.

The trial Robalit flatbox covers on No. 2 paper machine have not increased wire life. In fact, these covers will wear out a stick-on wire patch in 12-16 hours. It has not been determined what factors or substances on these covers cause the clinched portion of the patch to wear so rapidly.

The first void detector has been installed on No. 4 paper machine. Other detectors will be installed on each of the other three paper machines in the Old Paper Room. Not only is it the function of the void detector to disclose slime holes in the sheet but also the number of slime holes in a reel of paper.

Approximately 68,350 cords of softwood have been piled out for winter use; and before the piling operation is completed, which should be about November 10, approximately 88,000 - 90,000 cords of peeled softwood will be in the two wood piles.
MILLINOCKET MILL

Happenings in the Wood Room . . . During the Labor Day shutdown, the new R-3 drum feed belt was installed. Also starting up after the holiday shutdown was the new digester filling system. Calibrations and tests are being made on the new chip weighing device. The annual overhaul of No. 3 drum, along with the installation of a new outlet section, has been completed and the drum is now running. At present, No. 2 barking drum is down for the same job.

In the Coater Plant . . . A second fountain coating head was installed in the No. 2 coater position on the Labor Day shutdown. This coating head is basically the same as coater No. 1. However, with a minimum amount of shutdown time, coater No. 2 can be changed to a roll application type coater. The coating machine has become much more versatile and efficient because of this installation.

In the Paper Mill . . . The last of the open type headboxes in Great Northern Paper Company has been dismantled. No. 10 paper machine did not start up after the Labor Day shutdown and a completely new headbox and fourdriner are being erected. This machine is scheduled to start up on Sept. 30.

In the Steam Plant . . . Conversion of #3 boiler to burn bark is now in its third week and work is progressing satisfactorily. Ash sluices have been dug and poured. Work for the stoker foundations is up and should be poured within a few days.

The header, downcomers, and bark conveyors are in place, and work on welding the tubes to the header is in progress.

The existing duct-work from the boiler to the air heater has been dismantled and the dust collector is presently in the process of being assembled.

The Annual Open House Program for local residents and tourists was held at the Millinocket mill on Friday, August 18.

The two areas of the mill that drew many comments from the visitors were the barking drums in the Wood Room and the automatic finishing machine in the Finishing Room.

Refreshments were available for everyone visiting the mill.

The National Junior Achievement Conference at Bloomington, Indiana, was attended by Linda Gagnier, Millinocket; Debbie Bishop and Tony Chavarie, both of East Millinocket, the week of August 21, leaving Millinocket August 18 and returning August 27.

The week was spent attending general meetings, discussion periods, and workshops. On Wednesday evening 25 Achievers, out of a group of 175 that auditioned, participated in a talent show before an audience of 2200. Tony Chavarie won first place, playing a drum solo.

Mr. Donald Billingham of Research and Development, Analytical Group, chaperoned this group. Don is going into his third year as a Junior Achievement Advisor.

This is the tenth year that Great Northern Paper Company has sponsored Junior Achievement in the Millinocket/East Millinocket area. Over 30 high school students will be participating in the program this year.

American Management Seminar . . . At a 2 1/2 day seminar on Modernizing the Pension Plan, E. N. Grindle, Benefits Director, recently acted as a discussion leader for the Company. Mr. Grindle feels he benefited more than the many participants in learning of the extent of benefits provided by other companies, how the benefits are administered, comparative costs, etc. The other two discussion leaders were E. M. Nawrocki, Manager of Employee Benefits, United Fruit Company and H. E. Dreyer, Personnel Officer for Benefits at MIT.
Experimental projects now under study by the Division of Forest Engineering are: 1. A study of reproduction on the lands that were cut clean in 1965 and 1966 by the Beloit Harvester. Preliminary indications are that natural reproduction was very good. Further studies of the same lands will be made each year for the next few years. 2. Studies are being conducted on the densities of various softwood species on Company lands. Like people, no two trees of the same species are exactly alike and there are noticeable differences in density of trees selected in different townships, indicating that a difference in soil types is reflected in tree density and growth. 3. Tree genetics is a growing field. Foresters locate strong, healthy mother trees, gather the seed, and turn the seed over to the tree nursery in Greenbush. The trees started from these seeds are closely watched to see if they will develop the good characteristics of the parent tree.

The West Branch Drive cleared Ripogenus Dam and is now below Pockwockamus Falls. There has been a heavy rear to pick but the drive will be over by the end of the month. A small crew is working on booms and piers at the head of Chesuncook and preparing landings for next year's drive. Water conditions for the drive were the best in several years. The "William Hilton" is now in dry dock for the winter. Necessary repair work is being done so she will be ready for another hard year.

As of now we have produced 50% of the current year's cut. This is about the same percent for September as in past years. Production will drop off for the next four weeks as the Aroostook potato harvest invariably attracts many pulp cutters.

Know Your Benefits

The Family Deductible... It has provoked many questions; and since it is uniform with all employees in the Maine operations and monthly salaried employees in the Georgia operations, it is hoped that you, as a member of Management, will develop an understanding sufficient to answer questions as they arise.

Following are a few of the actual questions (and answers) that have come up on this new Family Deductible feature of your group insurance.

Q. Will the insurance pay anything if a single member of a family incurs $100 worth of medical expense?
A. The Family Deductible does not nullify the $50 Deductible. Neither can a single family member work off the entire $150 Family Deductible. In this instance, the $50 Deductible would be applied; and payment would be made at 80% ($40) on the remaining $50. Bear in mind, however, that charges paid on the 80% basis cannot be applied toward either Deductible.

Q. If five members of a family had medical expenses of $30 each, for a total of $150, would this satisfy the Family Deductible?
A. Yes, and any additional expenses during the calendar year would be paid at 80%.

The annual Employees' Golf Association Labor Day Golf Tournament was held at the Blakely Town and Country Club golf course. A total of 55 golfers participated. In the evening a dinner and dance was also held at the Blakely Town and Country Club with 110 people in attendance. Awarding of trophies and prizes was made following dinner.

Winners were as follows:
Best golf score, Milton Williams, Transportation Department; Championship Flight, Jim Malsberger, Woodslands Department; First Flight, Jack Ricketson, Mill Manager; Second Flight, Jerry Perkins, Transportation Department; Third Flight, Dave Crum, Wood Yard; and Fourth Flight, Ben Cooper, Maintenance Department.
RESEARCH AND DEVELOPMENT DEPARTMENT

Upgrading the quality of 40 lb. Jetblade L grade. . . . A year ago October, the Sales Department requested that an improvement be made in the quality of this grade shipped to McGraw-Hill, Incorporated. The purpose was to retain the business we already had as well as encourage additional business with this firm.

Eight trial orders, totaling 1057 tons, have been made. All of the paper was printed 2-color letterpress by Williams Press in Albany, New York, for the publication "Engineering News Record." The Sales Department reports that our efforts have been rewarded with better customer satisfaction due to improved appearance and improved printing characteristics. Three of the modifications made to obtain the quality improvement were: going to a bluer color, bleaching the basestock to 3 points higher in brightness, and supering 3 points higher in gloss level. These changes have since been incorporated as standard specifications for all coated grades, 40 lbs. and heavier. The letterpress sheet made for McGraw-Hill, Incorporated differs from the now standard letterpress sheet in that it has a slightly higher basestock brightness level and an additional 0.5 lbs. of oven dry coat weight is applied.

New Innovation in Printing. . . . A new innovation in gravure printing is now being tried by a few gravure publication pressrooms and is being watched closely by the entire industry. The method is the GRI (Gravure Research Institute) process which electrostatically assists in the transfer of fluid gravure ink from the printing cylinder to the paper. With the GRI electrostatic assist, a charge is put on the impression roll covering. The field from this charge extends through the web and induces an opposite charge on the ink. Then, under the influence of this electrostatic field existing between the roll covering and the ink and cylinder, the ink is drawn to the top of the tiny ink dot wells into contact with the paper web. Being able to make the ink go to the paper, instead of trying to force the paper into the dot wells to the ink, allows for lighter impression pressures which are desirable for better press runability.

Great Northern is also watching this development closely because the success of the process will have an effect on the marketing of our gravure papers. This process should help paper manufacturing by making the printing possible on rougher grades of paper by the gravure process. The highly polished, smooth, level surface which is now required for good gravure printing, but often difficult to obtain with our high speed paper machines, will become less critical. Also, by reducing the high printing pressures now used, this will reduce the number of paper breaks in the printing press.

There are many questions as to what the innovation will mean to the paper supplier—how our current gravure grade lines will respond to this process, and what we can do to our paper to aid this electrostatic assist in the transfer of ink. To help answer these questions, meetings have already taken place between our Sales, Operations, and Research people, along with an ink maker and George Carl, recent Production Manager of Fawcett Publications and now a retired, well-known, and highly regarded expert in the gravure industry. Great Northern plans to work with GRI, ink manufacturers, and the printing companies in active programs to assure that we will be taking maximum advantage of this new development.
Pulp and Paper Foundation Gives Eighty-nine Awards.

Eighty-nine scholarships, fifth year grants and graduate fellowships amounting to $40,700 have been awarded for the fall semester by the University of Maine Pulp and Paper Foundation to students at the University of Maine who are training to enter the pulp and paper and allied industries.

John H. Heuer, Vice President - Operations, of Great Northern and Chairman of the Foundation Scholarship Committee, said that this is a record in both the number and amount of awards made by the Foundation since it was organized in 1950.

Of the 65 scholarship recipients, 20 are seniors, 19 are juniors, 8 are sophomores and 18 are freshman, all of whom plan to enter the pulp and paper and related industries. Included in the awards in addition to pulp and paper students are some registered in chemistry; chemical, civil, electrical, and mechanical engineering; forestry; and engineering physics.

In addition to fifth-year students in all the major departments in the College of Technology, four were made to students in business and mathematics in the College of Arts and Sciences. The amount of these grants was $1,500 for Maine residents and $2,100 for students from other states. The difference covers the larger tuition paid by non-residents.

All of these awards, which are for the fall semester, will be continued for the spring semester subject to maintaining the required scholastic grades established by the university for scholarship eligibility.

The Pulp and Paper Foundation is a non-profit corporation, the chief purpose of which is to interest young men in, and to cooperate with the university in training them for, the pulp and paper and allied industries.

"PERSONALITIES"

NEW EMPLOYEES

ROSS A. MILLER, effective August 28, joined the Treasury Department as Manager of Credit and Collections, reporting directly to Donald E. York, Treasurer. Ross graduated from Colgate University and received his Master's degree from New York University. His previous employment was with County Trust Company in White Plains, New York.

GEARRY L. RANGER, effective September 5, joined Great Northern as Manager of Internal Auditing, reporting to P. F. Yacavone, Assistant Controller. He will assume the duties and responsibilities of the position vacated on June 1, 1967 by Charles Oliver, now Plant Accountant for East Millinocket. Gearry received a BA degree in Accounting from the University of Maine in 1961. He has been employed for the past six years in the Boston Office of the international public accounting firm of Arthur Andersen & Co.

C. JACKIE FRITH, effective September 5, joined the Southern Division Controller's Department as Accountant, reporting directly to Robert Colvard, Cost Accountant. A graduate of Florida State University, Jackie received his BS in Accounting. Prior to joining Great Norhern, he was employed as Research Assistant by the Board of Regents, Tallahassee, Florida.

DAVID L. THERIAULT, effective September 11, joined the Company as Systems Analyst, reporting directly to K. R. Veazie, Senior Systems Analyst. Dave is a 1960 graduate of the University of Maine with a BA degree in Economics. He joins us from Aetna Life & Casualty Company where he was employed as a Programmer Analyst. His immediate assignment with Great Northern will
be on the conversion team for the
new computer system now on order.

WAYNE L. MANGELS, effective
October 1, will join the Company
as Director of Market Research in
the New York office, reporting to
L. G. Kewer, Vice President-Planning.
Wayne received his Bachelor of
Science degree in Business Adminis-
tration from Duke University and
his Master's degree from Western
Michigan University where he majored
in Marketing. Previous employment
includes Meridith Publishing Co.,
Des Moines, Iowa; KVP-Sutherland,
Kalamazoo, Michigan; and when KVP-
Sutherland merged with Brown Com-
pany, he transferred to New York
City and was later promoted to
Manager, Market Research.

PERSONNEL CHANGES - NORTHERN DIVISION

ALBERT N. BENAR, effective
August 1, has joined the Process
Dynamics Group of the Pioneering
Section in the Research and Develop-
ment Department as Senior Research
Engineer, reporting to Paul Hubbe,
Pioneering Research Supervisor.
Since August 16, 1966, Al has been
a Senior Engineer in the Electrical
Engineering Department at Millinocket.

HILTON R. CHASE, effective
September 1, was promoted from
Junior Research Technologist to
Research Technologist in the Quality
Control Group, Research and Develop-
ment Department. Bud has been with
the Company since 1958.

OSWALD POUND, effective September
1, has been promoted from Area Fore-
man to Assistant Maintenance Superin-
tendent, reporting to A. Embleton,
Maintenance Superintendent. Ozzie
has been with the Company since 1942,
progressing from a piper to the
supervisory ranks.

ROBERT GATES, effective September
1, was promoted to Material Engineer,
reporting to O. Pound, Assistant
Maintenance Superintendent. Bob
has been with Great Northern since
1955, progressing from the clerical
section of Plant Engineering to his
most recent position, as of January,
1967, of Acting Material Engineer.

JOHN E. O'DONNELL, III, Budget
Analyst, reporting to R. F. Bartlett,
Manager of Accounting, Millinocket,
has transferred to the Southern
Division effective September 15,
but will continue to report to Mr.
Bartlett. Jack was employed in
September, 1966, in the Budget
Department and has been assigned
primarily to Southern Division projects.

WARREN E. DENBOW, effective Sep-
tember 18, has been promoted from
Foreman-Stores to Assistant Buyer,
reporting to J. W. Dobson, Manager,
Purchases and Stores, Northern
Division. Warren has been with Great
Northern since August, 1966, and his
first position was Engineering
Assistant in Central Engineering,
Millinocket.

FREDERICK A. BLOMBERG, Systems
Analyst, reporting to K. R. Veazie,
Senior Systems Analyst, will transfer,
effective October 1, to the Cedar
Springs office to better serve the
growing requirements of the Southern
Division in the systems area. Fred
joined the Systems Department in
1964 and prior to that, was on the con-
version staff for the 1440 computer
system.

ROBERT F. BARTLETT has been pro-
moted from Budget Supervisor to the
position of Manager of Accounting-
Northern Division, reporting to P. F.
Yacavone, Assistant Controller. Bob's
duties will include functional respon-
sibility for general accounting, billing,
cost accounting, and central typing.
He has been with the Company since
June, 1963. This change will be
effective on or about November 1.
K. EARL DURDEN, Manager of Accounting, Northern Division and former Assistant Manager of Accounting, Southern Division, has accepted a newly created position of Assistant General Manager of the Chattahoochee Industrial Railroad, reporting to C. F. Fischer, III, Vice President and General Manager of the Railroad. This change is to be effective on or about November 1.

PERSONNEL CHANGES - SOUTHERN DIVISION

WILLIAM H. SPRAGUE, effective August 1, was promoted from the position of Paper Mill Tour Foreman to Assistant Superintendent-Paper Mill, reporting to Wayne Taunton, Paper Mill Superintendent. Billy has been with the Company since August, 1963.

CLEON LOTT, effective September 1, was promoted from the position of Pulp Mill Tour Foreman to that of Pulp Mill General Foreman, reporting directly to Owen Fussell, Assistant Pulp Mill Superintendent. Cleon has been with the Company since September, 1963.

BOBBY R. HAMRICK, effective September 1, was promoted from an hourly Machine Tender classification to the position of Paper Mill Foreman, reporting directly to Clarence Gandy, Assistant Paper Mill Superintendent. Bobby has been with the Company since September, 1963.

PHILLIP F. MAYNE, effective September 1, was promoted from an hourly Digester Operator classification to the position of Pulp Mill Tour Foreman, reporting directly to Owen Fussell, Assistant Pulp Mill Superintendent.

IDUS M. COOPER, effective September 14, was promoted from an hourly Wood Scaler classification to Assistant Head Scaler, reporting to Hoyle McLendon, Head Scaler, Southern Division Woodlands. Idus has been with the Company since November, 1963.

(As announced by J. F. Marquis, Director, Purchases and Stores), effective September 1 --

J. W. DOBSON, Manager, Purchases and Stores, Southern Division, has been promoted to Manager, Purchases and Stores, Northern Division.

T. M. KNIGHT, Assistant Manager, Stores, Northern Division, has been promoted to Manager, Purchases and Stores, Southern Division.

E. D. FAIRLEY, Assistant Manager, Purchases, Northern Division, has been named Purchasing Agent, Northern Division.

R. R. ROBINSON, Buyer, Northern Division, has been promoted to Superintendent-Stores, Northern Division.

Because of the time required to become familiar with new and increased responsibilities, all of the above individuals will report to their new location on or before November 1.

TERMINATIONS

HAROLD O. REESE, Financial Analyst in the Controller's Department, resigned July 31.

WILLIAM H. DAVIS, Technical Assistant - Pulp Mill at Cedar Springs, resigned September 1 to accept employment with Gilman Paper Company. Bill has been with the Company since June, 1966.

MICHAEL C. FOGGIA, Associate Engineer, Central Engineering, Millinocket, left the Company, effective September 8, on military leave of absence.

JAMES LOWE, Junior Quality Control Technologist, left Great Northern September 15 to further his education at the University of Maine.

RETIREMENT

LEON E. COUSINS, Supt.-Electricity, Millinocket mill, will retire October 1 with 32.9 years of Company service. During this time, he has made many friends at both mills who wish him many happy years of retirement.
PAPER
Great Northern Logs Records

DESPITE a general downturn in the paper industry, $50,000,000-assets Great Northern Paper Company has done well. After bumbling along for several years the company staged a remarkable comeback in 1965 after acquiring full interest in Great Southern Land & Paper, previously 50.2% owned. Since then the company has launched a $50,000,000 modernization & expansion program which has resulted in a sales increase of 33% since 1964 and a three-fold earnings jump.

Last year alone profits shot up 50% to a new high of $12,500,000 or $4.36 a share while sales rose 11% to a record $123,900,000. Figures for the first three quarters this fiscal year were equally encouraging with sales up 7% and earnings up 11% to $3.55 a share. Some Wall Street estimates earnings for the year ending October to be as high as $4.75 a share but president Robert Arnold Haak is reluctant to comment on this figure. (This Robert is not to be confused with Robert Haack, new president of the Big Board.)

Papermaker Haak allows "this year will be better than any year in the history of the company. We have ambitious plans for maintaining a steady rate of growth for the company. Our ability to achieve our goals will depend on long-range planning and diligence in carrying them out than on a period of temporary prosperity."

Chairman & chief executive Peter Standish Paine adds: "At present demand for the products of our northern mills is firm. We do not expect demand for linerboard to keep pace with increased capacity and further curtailment in this segment of our business may be necessary. The overall outlook for our fourth quarter is for a continuing improvement in sales and earnings over last year."

Bob Haak, who started with the company in 1934 as a $15 a week office boy, moved up through the ranks until he reached the top spot in 1966 when Peter Paine stepped into the chairmanship upon the retirement of veteran papermaker Richard G Croft (IR, Nov 3, 1965).

Great Northern is one of the largest manufacturers of newsprint in the US but in the last few years has diversified into specialty papers and linerboard. The breakdown for fiscal 1966 is: newsprint 35%, linerboard 28%, specialty printing papers 37%. Although at one time Great Northern relied 99% on newsprint, president Haak points out: "Although we have gone into other areas, the actual production of newsprint has not changed."

Putting out newsprint since 1900 at its Millinocket mill on the Penobscot River in Maine, Great Northern now has two additional operations—one seven miles away in East Millinocket and the other 1,300 miles away in Cedar Springs, Ga. The three together produced a record 1,019,000 tons of paper & board last fiscal year, with shipments of linerboard gaining 16% and specialty printing papers and newspaper up 9%. These figures were achieved despite heavy construction in the South and the severe Northeastern drought in 1966 which short-circuited hydroelectric power at the two Maine plants.

A major part of the company's plant investment this year has gone into the Cedar Springs plant for a new linerboard machine which began operation in April and will add an annual capacity of 238,000 tons. Another huge machine due this Fall will corrugate 105,000 tons of board. Together with older paperboard facilities "these will make it possible to supply the boxmaker with everything he needs."

Besides making box material, Great Northern will produce plywood for the first time this year. The almost completed plant in Cedar Springs will be operated by a wholly owned subsidiary. Bob Haak points out: "Plywood has historically come from the West Coast and transportation costs have added to its price. We wanted to trim the cost by saving on transportation and the natural place to look was east of the Mississippi. We found the trees in our Georgia woodlands were suitable for making plywood, in addition to creating fuller utilization of each log after our linerboard operations. There is fire-hot competition in plywood and Bob Haak knows it.

This idea of fuller utilization has stirred the possibility of a plywood operation in Maine, where the company owns 2,300,000 acres of woodland—11% of the entire state. Chairman Paine relates: "While investment emphasis in the past two years has been on developing the earnings potential of our southern properties, greater use of our Maine woodlands is a constant objective." Studies are under way to expand present plants to realize the full potential of the vast woodland acreage. Also in the works is a plan for a Florida newsprint mill which will begin operation in 1970.

Reflecting all these developments are the 2,677,000 shares of "GPP" stock which recently traded on the Big Board near 48. This is far above the 1962 low of 12 and the highest ever.
**Imported Workers Line Up for Jobs Americans Shun**

By JOHN M. FENTON

ASHLAND, Me.,—Six Young Tibetans who went into the deep woods north-west of here six weeks ago to impress their American employers with their willingness to buckle down to the drudgery of cutting pulpwood.

It is expected that the next six months will provide a true test of the Great Northern Paper Company's experiment in trying to solve an acute labor shortage in the woods.

The company tried recruiting skilled lumberjacks as far south as Louisiana last year. Of 38 signed to come north, only 25 showed up and none lasted as long as a month. Most of them were Negroes, but a company spokesman says that a core of white lumberjacks was responsible for "poofing off" taeces that ended the experiment.

In addition, of the 500 to 600 prisoners on the company's employees payroll five years ago, only 263 are listed today. Other factors assisting recruiting are military conscription because of the Vietnam war and easier jobs at higher pay in other industries. A putative lumberjack can average about $50 a week on piecework.

But the Tibetans, although slight of build and almost as silent in manner, are willing and willing. Exile in India, following the Communist Chinese take-over of Tibet in 1959, offered little prospect for a satisfactory life for refugees such as the six in the woodlands here.

Dr. Ernest Dale, a director of the Tibet Foundation and a member of the faculty of the Wharton School of Finance and Commerce at the University of Pennsylvania, started to work with Great Northern for two years in a joint effort to help the Tibetans brought over. The employment was approved by the Department of Labor.

If the arrangement continues to work out, several hundred others may be brought over. Phoatype Phonedom of the office of Tibet in New York has estimated that about 20,000 Tibetans have left their homeland in recent years, but most of them have been in the southwestern United States. The United States has granted 6,000 for 3,000 of the refugees to be relocated here.

About 50 students are already in the country.

It is expected that the other day when a visitor to the Great Northern lumber camp came upon the Tibetans just before a break at 11 A.M., Phoantage Dicky Khan, 21 years old, was clearing his chin saw on a pile of pulpwood and reached for his chain saw with the aim of a man glad of a rope glint, breakfast, in the compound at base, was six hours.

"The work is hard, it is pointed," said the Tibetans, "the climate cold."

Mr. Khan and one of his companions, along with Clifford Moreau, 57 years old, a lumberjack of French-Canadian ancestry, sought shelter beneath a rained-in tree in a small clearing.

They offered to share their black tea, cold meat and bread with the visitors.

The food, said Mr. Khan, is little different from that in Tibet, although the meat there would be from the pig rather than a beef cow. He said that they can sometimes get really little, leftover rice was eaten in Tibet.

The terrain in Aroostook County, where the pulpwood operations are conducted, were somewhat different from that of Tibet. Mr. Khan said in a series of monosyllabic answers to questions. He and the others handle English adequately, if not fluently, since their education rests off in the presence of American foresters.

In the lumber camp, about two weeks away, the Tibetans lived in one of a series of bunk houses. They have their meals in the kitchen and sleep there. They apparently get along well with the North Americans, despite their utter lack of French-Canadian or more American graces. They are not exactly in the style of the dogs of the camp. Their wandering spirit has been lost.

"They are good boys and they already are learning how to do a tree, although they can be rated as quickly as they learn sometimes," he said.

Most of the Great Northern operations are mechanized, but Mr. Khan says the Tibetan men are good with their chains on sailing ships, the apprentice lumberjacks use bows to drag or "twitch" logs from the cutting site to a crude multile on which the logs are reduced by chainmen to four-foot lengths for piling in cord lots, 4 feet by 4 feet by 4 feet.
In the Company's Interim Report to Stockholders for the 40 weeks ended July 9, 1967, Mr. Paine, Chairman of the Board, reported that the overall outlook for the fourth quarter is for a continuing improvement in sales and earnings over last year.

"Earnings for the first forty weeks of the fiscal year amounted to $10,157,127, or $3.55 a Common share after providing for dividends on the Preferred Stock. In the corresponding period of last year, earnings were $9,147,799, or $3.20 a Common share. The investment tax credit reflected in these earnings totals $1,576,000, or 59 cents a Common share as compared with $1,331,000, or 50 cents a share for the corresponding period a year ago.

Sales in this period were $100,633,777, up 6.7% from the first forty weeks of fiscal 1966. Shipments were 803,102 tons, 2.5% higher than the same period a year ago due primarily to the tonnage from our second linerboard machine at Cedar Springs, Georgia, which had a highly successful startup on April 20, 1967.

The Cedar Springs mill was shut down on June 26, 1967, for ten days in order to bring production into line with incoming orders. Similar curtailments were taken by a majority of the mills producing linerboard. At present, demand for the products of our Northern mills is firm. We do not expect demand for linerboard to keep pace with increased industry capacity, and further curtailment in this segment of our business may be necessary.

The third machine at Cedar Springs, Georgia, which will produce corrugating medium, remains on schedule for startup in the fall of this year. Construction of our plywood plant, which also is in Cedar Springs, Georgia, is proceeding according to plan with completion scheduled for November, 1967."

The J. E. Sirrine, Co., consulting engineers of Greenville, South Carolina, have issued Part I of their report dealing with the ventilation in the machine room areas of the Millinocket and East Millinocket mills and have suggested measures for improving the situation.

This report is presently being reviewed by Management and Central Engineering. Part II, which is an estimate for this job, will be submitted later.

Engineers from this same company are now working on a similar report for the screen rooms and sulphite areas. This report is scheduled for submission to the Company by the end of August.

"Maximizing Instrument Benefits Short of Computerization" is the title of an article by Maurice McLean, Instrument Engineer, Central Engineering, Millinocket.

This paper analyzes the reasons why maximum benefits are not being realized from instruments and suggests procedures for improvement.

This article is in the August issue of American Paper Industry.
Paper production for forty-four weeks ended 8/7/67 . . .

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CEDAR SPRINGS MILL

No. 3 paper machine... Progress continues to proceed in all areas. The control room in the chip unloading system is 95 percent complete and the rail chip unloading pit has been completed. All steel tanks in the tank farm have been erected. Eighty-five percent of all motors and pumps have been set in the stock preparation area and piping in this area is approximately 85 percent complete. Erection of the primary cleaners has begun and the pumps and motors for both the wire and couch pits have been set. The broke conveyor is 95 percent complete and setting of the dryer frames and rolls is continuing.

CHATTahooCHEE PLYWOOD MILL

Construction continues to progress steadily. Dryer erection is continuing and the erection of the press charger and unloader is 90 percent complete. The erection of the second tray system and the 500,000 gallon fire protection tank has also started. The pouring of the precast wall panels, main building floor slabs and chipper building floor was completed this period.

The Plywood staff moved into their new office building on July 24th of this period. Lightning struck the new office building Saturday night, July 29th, causing an estimated $3,000 damage.

EAST MILLINOCKET MILL

No. 8 grinder motor, which has been running for over a year with patched-up stator coils, received a new lease on life July 29th with the installation of a new stator. The new stator has a Class B thermelastic insulation system with a 60 degree C. rise, as compared to the old stator's 40 degree C. rise. This should allow getting full output from this grinder without fear of degrading the insulation due to excessive temperature rise. Patched-up stators on Nos. 7, 8 and 10 grinder motors have now been replaced with new stators, with the original stators still performing well on Nos. 9, 11 and 12.

Robalit 61 suction box covers on No. 2 paper machine have not indicated an increase in wire life to date.

The polyethylene wear strips on "C" conveyor return have increased the life of the chain. Very little wear has been noticed on the barrels of the chain.

MILLINOCKET MILL

In the Paper Mill... The new Black Clawson twin hydrodisc refiner for No. 8 paper machine has been successfully started. Both coating basestock machines are now equipped with on-machine disc refiners.
Happenings in the Woodroom... The new outlet section for No. 3 drum has been received from Canadian Ingersol-Rand and is presently being installed. The drum arrived in four large sections via railroad flat car and is being welded here in the Woodroom. The Brun gauge, for measuring chip weight on the chip belt from the silos to the digesters, is being evaluated. When this gauge is operating, it will be possible to measure directly the weight of chips to each digester.

In the Sulphite Mill... The rebuilt Black Clawson chemifiner has now been started and has been running successfully on sulphite tailings. To date the rebuilt machine has done a good job at shive production.

The unsuccessful hot stock screen trial has been completed and the Impco screens have been removed.

In the Coater Plant... Preliminary work has been started for installation of the second fountain coating head. Installation is scheduled for the Labor Day shut-down. The Ronningen-Petter filters have already been installed in conjunction with the new head.

The Cuttler-Hammer void detector, which was removed from No. 9 paper machine, has been installed on the coater ahead of the wind up and is now operating.

In the Finishing Department... The foreman's office has been moved from the Billing Department down to the operating floor of the Finishing Room.

Newsprint consumption for the first half of 1967 set a new record, climbing up to 4,514,478 tons from 4,456,350 tons in first half of 1966.

Advertising Age, 7/31/67

All railroads in the United States applied to the Interstate Commerce Commission for authority to increase their freight rates. The Commission has authorized publication, effective August 19th, of rates which will increase rail revenues and shippers cost by approximately 3 percent, although this figure does not apply uniformly to all commodities.

The increase is substantially in line with the application, but rates are subject to revision and the ICC will hold hearings in Washington early in October.

It is estimated the new rates will cost Great Northern Paper Company approximately $700,000 per year. Roughly divided, $300,000 for the Cedar Springs mill and $400,000 for the Maine mills.

The IBM 1130 Computer, located at the Millinocket mill, was put into operation August 14. It will be used for "control charting" important test results from the paper machines, coater, and pulp mills. The purpose of control charting is to supply paper machine crews with better information when they have to make changes to bring specifications back on target.

At present, only four paper machines are being checked. Other machines will be rapidly picked up as soon as the computer operators become more skilled.

Computer results are available to paper machine crews through the closed-circuit television setup.

The West Branch Water Storage is now at 39.9 billion cubic feet. Rains have been fairly frequent so that total storage is about 7 billion cubic feet below the long-term average storage for this date. This is considerably better than recent years and has permitted Woodlands to tow wood booms across the lakes with only minor difficulties.
WOODLANDS NOTES

The six Tibetans, who are being trained at the A. Milliard camp in Northern Maine, are making good progress. They are proving themselves willing and able workmen; and everyone connected with the program feels they will become qualified pulpwood workers.

Production in all nine Maine camps is up to expectations. At present, there are 360 men in the camps, 288 of which are production workers.

Good news was received that the Bangor & Aroostook Railroad was adding 100 new pulpwood cars to their fleet. The shortage of pulpwood cars has held up shipments and raised havoc with loading crews. Crane operators have had to leave loading jobs and go on construction work to complete their work week. Pulpwood truckers have also lost time because of this situation. In Aroostook County there are far more shipments to off-the-line points than two years ago. Shipments to off-the-line points lengthens the turn around time and further aggravates the shortage of pulpwood cars.

Foundation work for the new chipper plant at McDonald Siding in Portage is underway. Machinery and parts for the plant are coming in nearly every day by rail and truck. Possibly by this time next year, chip shipments will fill all the needs of the mills.

Progress on the drive has been excellent. Some 140,000 cords have been sluiced through Rip Dam and the balance of 15,000 will be out by the end of the month. Rip has had a full head of water all summer and this will make it easier to pick the high rear that was left during the low water years. When the rear is picked from McKay Station down, the extra water needed could help the water level in the lower lakes.

For the first six months of the year, the Woodlands Department - Northern Division, is enjoying the lowest accident frequency rate it ever had. A frequency of 10 or less for the year is a distinct possibility. Woodlands' foremen realize that carelessness is not a cause of accidents - it is only an alibi. When safety rules are enforced by enthusiastic foreman, the result is a low accident frequency.

Pulpwood Consumption Keeps Growing. . . Maine forests yielded more than 2.75 million cords of pulpwood in 1966, an increase over the 1965 harvest of 18 percent according to the annual summary of timber cut issued by the forest commissioner.

The 2,765,898 cords cut last year (GPN Co. participation 600,000 - 700,000 cords) compared with 2,352,750 cords cut in 1965 and included all species, hardwood and soft, produced for pulp and paper manufacture.

Increased mechanization in pulpwood handling, consisting of long-log skidders and conversion of logs into chips, is credited by industry spokesmen for the 413,148 cord gain in production in the face of a continuing shortage of skilled pulp cutters.

There was also a gain of 22,000 cords in the volume of pulpwood chips recovered from Maine sawmills which furnished the pulp and paper mills with 149,050 cords which otherwise would have gone into waste and slabwood.

In pulpwood production, Aroostook County led all the others with an output of more than 566,000 cords. Somerset County turned out more than 480,000 cords for second highest production followed in order by Penobscot, Piscataquis, Washington, Oxford, and Franklin.

Aroostook also led in the production of both soft and hardwood logs. The north country's woodlands yielded more than 100 million board feet of softwood for manufacturing purposes and 43 million plus of hardwoods.
Cedar Springs mill runs gamut of handling systems. Combining several different materials handling techniques into a single, harmonious materials handling system requires imagination as well as engineering know-how. Both are evident at the Company's Kraft linerboard mill at Cedar Springs, Georgia.

The $35 million addition, part of a two-year, $50 million expansion program, has incorporated in the addition, systems for handling pulpwood logs, pulpwood and hardwood chips, bark, coal, paper broke, and red-hot limestone.

Each of these systems is designed to serve a specific function. At the same time, each is compatible with the other, providing a smooth, even flow of different materials into various phases of the plant's processing departments.

Pulwood logs arrive at the mill by both rail and truck. From the rail cars, logs are removed by a log rake into a flume fed by water from the nearby Chattahoochee River. Logs arriving by truck are removed by a crane and dumped into the same flume. The rapid moving stream carries the logs to the foot end of a jack ladder.

From the jack ladder, logs are transferred into a bifurcated chute that diverts them into two barking drums. From the drums the debarked logs are dumped through double chutes onto a slider belt conveyor that carries them to a 15-knife chipper.

Oversize chips rejected by vibrating screens pass onto a horizontal belt conveyor operating at 100 f.p.m. to a rechipper. Accepted chips drop through the vibrating screens onto a 125 foot long belt conveyor leading to pneumatic conveyors that stockpile the pine chips. Both reject and accepted chip conveyors are equipped with suspended electromagnets to remove tramp metal.

Stockpile areas are equipped with two 33 inch wide, 85 foot long drag feeders operating at 135 f.p.m., each handling 25,000 cubic feet of pine chips per hour. Chips are dragged from the bottom of the stockpiles to a 42 inch wide, 345 foot long belt conveyor that transfers onto a 400 foot long belt conveyor which transfers onto a 200 foot long belt conveyor leading to a digester feed conveyor equipped with a tripper that feeds 25,000 cubic feet per hour of pine chips to the digester tanks.

Bark carried by the flume stream past the jack ladder is removed from the water by a 60 inch wide, double-strand chain and wire belt conveyor. This conveyor deposits onto a vibrating screen that dewateres the bark.

The bark from the barking drums is conveyed by a system of belt conveyors through a bark screen and hog and discharged to a storage area. From there it is reclaimed as needed and fed to the boiler rooms for use as fuel.

Hardwood chips are obtained from southern lumber mills by rail car. The new hardwood chip storage and handling equipment includes a single-drum car puller which positions the rail car over a track hopper.

Chips are dumped from the rail cars with the aid of a heavy-duty car shaker mounted on a traveling type car shaker hoist. A double-strand drag chain feeder carries the chips to a pneumatic system that delivers them to the stockpile. Hardwood chips are reclaimed by two drag chain feeders which feed belt conveyors and a pneumatic system leading to the pulp processing system.

The expansion also includes an addition to the plant's coal handling system and limestone handling system.

The annual outing for Company supervisory personnel was held at the Rice Farm at Millinocket on August 10. More than 225 people attended the outing, including several retirees, sales trainees, J. Richardson, Manager of Woodlands in the South, and Messrs. Haak, Hellendale, Heuer, Willets, Carena, Dunne, Jarvis, and Grennon of the New York office.
When Great Northern Paper Company built new steam generating plants several years ago, it became economically advantageous to burn residual fuel oil which is bought to Searsport by tankers and to East Millinocket and Millinocket by railroad. Fuel oil handles easily and has proven relatively trouble free; however, there are some problems with the burning of fuel oil which may be of interest.

Petroleum or crude oil is a hydrocarbon mixture which has collected in underground pools throughout the earth. This oil is collected and transported to refineries where it is heated. All lighter hydrocarbons are taken off to become gasoline, jet fuel, kerosene, butanes, propanes, lubricants, waxes, etc., while the heavier hydrocarbons remain. Although there are processes which distill off all liquids leaving a solid coke, the more common refining process leaves a heavy viscous liquid which can be heated and burned as a fuel oil or "cut" to a uniform viscosity for sale as No. 6 fuel or Bunker "C," which is the type Great Northern uses.

Going back to the origin of petroleum, the oil picks up traces of minerals with which it is in contact underground. These minerals, in general, do not distill over in refinery processes and are concentrated in the residual or "bottoms" of the refinery vessels. Since removal of these trace minerals is prohibitive for the sale of fuel oil, we have the following materials present in varying amounts: sulphur, sodium, silica, iron, nickel, barium, magnesium, aluminium, lead, zirconium, zinc, calcium, vanadium, etc. Of these, sulphur might be as much as 2 1/2 percent; whereas, the total of others, classified as ash, might be 6 percent or so.

These elements may seem minor, but their effects on the metal and retractive surfaces in our boilers do present an expense problem since the action of the minerals, if and when they deposit, determines whether we have to replace corroded metals, spalled or broken refractory, or spend considerable time chipping and breaking rock-like deposits throughout the gas passes.

During the several years of operation, there have been varying degrees of corrosion throughout boiler cold-end surfaces due to sulfuric acid formation as a result of SO₃ formed during the fuel oil combustion process, combining with water and attacking any accessible metal surfaces. We have also had considerable amounts of granite-like slag formed in the boiler gas passes as a result of our ash mixture. Inherently, many of the minerals found in the fuel oil ash have melting point of 3000°F. or so, which is comfortably above the furnace flame temperature of 2600°F. or 2700°F. This means that the ash particles would stay dry and would accumulate in hoppers for easy removal. Vanadium pentoxide and sodium sulphate, however, melt at 1275°F. and 1625°F. respectively. In a normal boiler furnace flame, ash with these materials will be sticky and will form dense slag accumulations throughout boiler gas passes. This slag can of course cause unscheduled outages of boilers for cleaning, and more important, is a hard unpleasant material to remove. Chipping hammers are necessary to break the material; and since many boiler passages are confined or restricted, workmen in general find this cleaning process painful.

For several years Great Northern Paper Company has experimented with available fuel oil additives which would assist in reducing these problems associated with sulphur, sodium and vanadium in the fuel oil.

Since large east coast utilities, burning residual fuel oil, have the same problems and were attempting to find solutions, it has been possible to take advantage of recent developments in this field.
Steam Department - Northern Mills
Cont. . . .

In April of 1966, a large east coast utility released information about a finely powdered magnesium oxide (2 micro-size average) which was suspended in light oil (diesel oil) and when pumped into the fuel oil stream ahead of burners in a ratio of 1 part magnesium to 1 part vanadium would provide a dust coating of magnesium throughout the boiler passes starting with the furnace. Consequently, the sticky compounds would be dried so that the slag buildup problems would be eliminated. The ash formations would then be light, crumbly material which could be cleaned easily and would not accumulate to cause unscheduled shutdowns. In addition, some slight over-feed of MgO would prevent formation of SO3 from SO2 so that corrosion of metals would be reduced or eliminated.

With confirmation from several utilities that MgO additive is actually reducing cleaning and corrosion problems and is economically justified, we have been testing a magnesium oxide additive in the East Millinocket boilers for several months and have recently started using the same additive in the Millinocket boilers' fuel oil.

As so often happens, the men doing the work on the equipment provide our answers and the masons and mechanics, who worked on the East Millinocket boilers this summer after several months of this MgO/A10 additive feed, found the work much easier with less irritation and much less physical exertion than during previous boiler cleanings.

We are hopeful that we are making a distasteful job easier and are also improving reliability and economy of our steam plants through this recent development.

"PERSONNELITIES"

NEW EMPLOYEES

THOMAS W. LOCKETT, effective July 15, joined Chattahoochee Plywood Corporation as Sales Manager, reporting directly to Ward K. Hoseid. Tom is a graduate of Clarion State College where he received his B.S. degree in Education. Prior to joining the Company, Tom was employed by Germain Lumber Corp. as Sales Manager for South-Ply, Inc. of Natchitoches, La.

WALTER W. WHEELER, Effective July 17, joined Chattahoochee Plywood Corp. as Master Mechanic, reporting directly to Bob Gardner. Walt was employed as a Plant Engineering Consultant for Olin Mathieson Plywood, Winnfield, La. prior to joining the Company.

MELVILLE A. GOULD, effective August 1, joined Great Northern as Assistant to the Manager of Insurance, T. H. Flanagan. A graduate of the University of Maine, Mel received his B.A. degree in Business Administration. Prior to joining the Company, he was employed as a field inspector for Factory Insurance Association.

ROBERT F. LARKIN, effective August 7, joined the Central Engineering Department, Millinocket, as Cost Assistant, reporting directly to R. E. Pickering, Assistant to Cost Engineer. Bob is a 1967 graduate of Ricker College where he majored in Business Administration and Economics.

PERSONNEL CHANGES

GERALDINE MOORE, effective July 1, was promoted from Junior Research Technologist to Research Engineer in the Paper Research Group at Millinocket. Gerry has been with Great Northern since July, 1964.
CHARLES B. GILMAN, effective July 1, has been promoted from Senior Engineer to Assistant Project Manager at the Central Engineering Department, Millinocket, reporting directly to Paul Firlotte, Project Manager. Charlie has been with Great Northern since November, 1965.

LARRY VAZNIS, effective July 1, was promoted from Assistant Supervisor - Materials & Stores to Supervisor - Materials & Stores at the Millinocket mill. Larry has been with the Company since October, 1956.

JOHN E. SEARS, effective July 1, has been promoted from Engineer to Senior Engineer at the Central Engineering Department, Millinocket, reporting directly to K. L. Fish, Power Systems Engineer. John has been with the Company since July, 1965.

JAMES LOWE, having completed his orientation program with the Quality Control Group, will assume the duties of Junior Quality Control Technologist, effective August 1.

GLENN WILEY, effective August 1, has been promoted from Senior Technician to Junior Technologist in the Analytical Group of Research and Development at Millinocket. Glenn has been with the Company since September, 1955.

CARL BERQUIST, effective August 1, has been promoted from Junior Research Technologist to Research Technologist in the Applied Mathematics Group of Research and Development Department, Millinocket. Carl has been with the Company since December, 1964.

ORRIN MERRILL, effective August 1, was promoted from Research Physicist to Process Dynamics Group Leader in the Pioneering Research Section of Research and Development, Millinocket. Orrin has been with the Company since October, 1965.

JAMES THOMPSON, Junior Research Technologist in the Pioneering Research Section, will transfer to the Southern Division, effective September 6. Jim will report directly to Joseph Labrasseur, Process Control Engineer.

EMERY E. ALLAIN, Controller, has moved to his new quarters in the New York office as of August 7.

TERMINATIONS

KENDALL G. HUNNEWELL, JR., Cost Engineer in the Central Engineering Department at Cedar Springs, resigned July 31 to accept employment with Ethel Corporation in Baton Rouge, Louisiana. Jerry has been with the Company since October, 1963.

MARSHALL BRUNDEN, Applied Math Group Leader, resigned effective August 11 to accept a position with Upjohn Company, Michigan. Marshall has been with the Company since September, 1963.

THOMAS LIBBY, Junior Research Technologist, will resign, effective August 31, from the Analytical Group of Research and Development. Tom is going to the Institute of Paper Chemistry, Appleton, Wisconsin, to work toward his PhD. He has been with Great Northern since November, 1965.

EDWARD HAWKES, Junior Research Technologist, will resign, effective August 31, from the Analytical Group of Research and Development to return to teaching at Millinocket Junior High School. Ed has been with the Company since October, 1955.

RETIREMENTS

GEORGE I. BOUCHARD, Plant Accountant for East Millinocket mill, retires, effective September 1, after 38 years of service. Prior to joining Great Northern in June, 1929, George was Principal of the Elementary School in East Millinocket.

NELSON E. SMITH, Tour Foreman-Paper, East Millinocket mill, will retire September 1 after 45 years of service. Nelson joined the Company in December, 1922, and has worked since then in the Paper Room.

A. E. GOURLEV, Purchasing Agent at Millinocket, is retiring with more than 40 years of service. Since joining the Company in April, 1927 as a clerk in the Boston office, he has completed many phases of purchasing responsibilities.

A host of friends wish George, Nelson and Ash many happy years of retirement.
LABOR RELATIONS - NORTHERN DIVISION

... The Company's offer for a 3-year Labor Agreement has been accepted by a majority of the Local Unions representing a large percentage of mill employees.

Increased rates and fringe benefits will be retroactive to July 1, 1967.

The Million Manhour Scholarship Committee has announced the following winners of Group I, after successful completion of a million man-hours on May 18th, 1967, at the Millinocket mill.

Jude Ippoliti, son of Mr. and Mrs. Neil Ippoliti, Millinocket, has been awarded a $500 grant. He is a Senior at Gorham State College, majoring in English.

Sally Inman, daughter of Mr. and Mrs. Donald Inman, Millinocket, is the recipient of a $1500 grant. An entering Freshman at Farmington State College, she will be taking Exceptional Teaching.

From unused funds previously awarded to Group I, an amount of $500 was awarded to Robert Taylor, son of Mr. and Mrs. William Taylor, Sr., Millinocket. He is an entering Freshman at the University of Maine, taking Engineering.

The unused funds previously awarded to Group III, an amount of $1500, was awarded to Michael Montgomery, son of Mr. and Mrs. Lloyd Montgomery, Millinocket. A Sophomore at Merrimack College, Andover, Mass., he is studying History.

As a follow up of the article in May's Newsletter, the six Tibetans landed atop the Pan Am Building July 7 to begin the adventure of their lives. Their purpose in coming here is to pave the way for a solution to an acute shortage of lumberjacks in the American north woods.

Lumberjacking is hard work. It is also lonely and cold work. The pay is good but not great, averaging $155.00 a week. Most American young men seem to find other fields of endeavor more to their liking. And the draft also helps to dry up an already skimpy labor market.

Great Northern over the past several years has launched several massive recruitment campaigns, none of which worked. Company executives reasoned that if they couldn't find lumberjacks in this country, they would have to look elsewhere. Who, they asked themselves, are used to working in cold, isolated and lonely mountains for long periods of time without supervision? Why Tibetans of course.

Great Northern negotiated with the Office of Tibet in New York for nearly two years to bring the six lumberjacks to this country. They recently left New York to begin a ten-week training course in the Maine woods. Their interpreter will stay with them during this period and teach them our language and ways, after which they go into the woods as full-fledged lumberjacks. If they like lumberjacking in our country, many other Tibetans may be coming over to work in the woods in the near future.
Paper production for forty weeks ended 7/10/67 . . . .

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CEDAR SPRINGS MILL

Progress on No. 3 paper machine is continuing in all areas. The continuous digester is being insulated and drive units are being set for the digester. The tile work on the wire and couch pits has been completed. The baseplates have been set and the erection of the dryers on No. 3 machine has begun. Installation of the Lamb-Grays Harbor roll handling equipment has also begun.

Considerable delay was experienced in restoring full power generation to the mill following the planned shutdown of June 25 through July 4, due to problems on both No. 1 and No. 2 turbine generators. Full generation was accomplished on July 9.

CHATTAHOOCHEE PLYWOOD MILL

Construction is progressing steadily. The mechanical erection of the hot press is now complete. The pouring of the floor slabs is continuing and the pouring of the steam vat wall is 50 percent complete. Installation of the dryer doors is 90 percent complete and internal dryer steam piping has begun. A decision to use a package boiler on the plywood mill was made this period, and this could affect the start-up date in that some of the steam piping will have to be redesigned.

The electrical contract was awarded this period to the G. R. Wood and Company, Inc. of Mobile, Alabama. They have arrived on the job site and have begun work.

EAST MILLINOCKET MILL

Piling down poplar wood for another year was started on Monday, July 10. Approximately 10,000 - 12,000 cords will be piled down.

The new stator for #8 grinder motor arrived at the mill July 15.

A new daily production record of 108.1 tons was established by No. 2 paper machine on June 19. The previous production record for this machine was 106.7 tons established November 24, 1966.

A new Venta-nip arrangement was installed on No. 6 paper machine at the third press section. Downtime work was completed in 36 hours, followed by a good startup. These Venta-nip arrangements are designed to remove moisture from the sheet.

Quotes are being received from Lamb-Grays Harbor Company for automatic sheet length cutoff and automatic sheet guide to guide body wrap around rolls. This automatic sheet guide would be combined with a leading edge gluer to glue the body wrap to the rolls.

These additional features would reduce roll wrapping by 20-30 seconds per roll. (Presently taking approximately 90 seconds to accomplish).
MILLINOCKET MILL

Final startup phases of the 275 TPD fine groundwood system have been completed. The primary, secondary, and tertiary screens, as well as the fine screens and accompanying centri-cleaners, are operating. Maximum capacity will be approximately 150 tons until all of the centri-cleaners have been transferred from the temporary reject system to the fine screen system. This system, when completed, will allow more machines on fine groundwood pulp thus upgrading our quality.

Hay Associates - Salary Administration . . . Thanks to the time, effort and teamwork of many people, progress of this project can be termed as being more than satisfactory --considering the amount of work involved, it is excellent!

A team of Job Analysts have been conducting interviews and preparing job descriptions since mid-April. Additional people to be assigned to the team, effective August 1, are Messrs. C. W. Anderson, Woodlands (CS); B. B. Appleton, Chicago office; D. Brooks, Woodlands (N); R. E. Byron, Central Personnel; J. E. Farmer, Central Personnel; D. G. Griffiee, Central Engineering; M. H. Holt, Mill Personnel (CS); P. D. Hubbe, Research and Development; T. W. Ludden, Controller's Department; and J. B. Rogers, Central Personnel.

There are two evaluation committees - the Senior Committee comprised of five Company officers, and the Junior Committee, which is made up of nine members of Management. These Committees have been meeting on almost a weekly basis since early May; and to date, they have evaluated more than thirty job descriptions prepared by representatives of Hay Associates and forty-five prepared by our own Analysts.

RAIL STRIKE . . .

Six shop unions (IAM) serving United States railroads were unable to come to terms with Management and were working without a contract. They pledged that there would be no work stoppage while Congress was considering legislation. When Congress recessed for ten days over the Independence Day Holiday, the unions served notice that their pledge would expire Midnight, July 15, and most all shop unions did "walk-off" at that time.

However, the men on the Boston and Maine, Maine Central, and Bangor and Aroostook Railroads remained at work. The Canadian Pacific and Canadian National were not involved.

On Monday, July 17, both Houses of Congress rushed through legislation which was signed by the President that evening. It is expected the bill will prevent railroad labor tieups until early in 1969.

All Great Northern plants entered this threatening period in a very comfortable position. While rail deliveries of paper could not have been made over the railroad lines on strike, it would have been possible to maintain plant operations for about a week. Each plant had about seven days supply of all bulk raw materials, and also had a sufficient number of empty box cars for loading during this period.

All truck lines serving the mills were asked to have as many trucks as possible available for shipment to customers requiring prompt delivery of paper.

Safety First . . .

While seaming a new dryer felt on No. 7 machine at Union Camp's mill at Savannah, Ga., five men were caught in the machine when it accidentally started up. They will all recover without permanent disability.

Canadian P & P Indus. 6/67
WOODLANDS NOTES

The Woodlands Department recently moved into new office facilities on the south part of the Administration Building at Cedar Springs. The new offices are consolidated into one suite of rooms which create a more efficient arrangement for the Woodlands Manager and his staff.

Twenty-seven miles northwest of Ashland, Maine, at the Alderic Milliard Camp, the era of the horse in woods cutting operations will soon come to an end.

This is the last woods camp in Maine backed by Great Northern Paper Company to have horses; and all signs point to this being the last year Great Northern will use horses even there. Consequently, another part of the old ways of woods work is about to disappear. The horses were used to pull felled trees to points where the trees were cut into lengths and piled. Mechanization has come to the woods with the horses being replaced by tractors and mechanical skidders which do this job in most Great Northern locations.

As a matter of fact, the entire woods industry has been revolutionized over the past 20 years or so. You can tell this when you look at the cabins or living quarters for the woods workers. These cabins look much like the cabins you saw along main highways before the motel became so popular. There are TV antennae on all of them and there is a separate cabin for showers and toilets.

Southern Woodlands initiated a price cut, effective July 10, on both groundwood and chips. This price reduction will average approximately 70 cents per cord or $1 dollar per ton of linerboard. Southern Woodlands has taken the initial step in reducing the manufacturing cost of linerboard.

After several months delay, a Pettibone Tree Length Slasher was delivered to the Southern Division Woodlands Department on July 13. This machine initially will be assigned to a Company operated wood-yard at McRaeville, Georgia, where it will convert tree-length logs into 6-foot pulpwood bolts. Performance of this machine will be closely watched and if it proves successful, likely other slashers will be purchased permitting the Company to become active in harvesting wood in long lengths.

During the 1966-67 forest fire season, the Southern Division has had 214 acres of timberland burned over by wild fires. Sixty acres burned on a tract held under a long-term lease and the origin of this fire was from a diesel engine on the L & N Railroad. Our claim for damages against the L & N resulted in a settlement of nearly $4,000 dollars being paid to Great Northern.

The West Branch Storage is now at 41.8 billion cubic feet. This is 73.3% of full storage and 7.2 billion cubic feet more than on this date last year.

Precipitation over the drainage area for the third month continues near normal which improves the water picture as compared to the last three years.

* * * * *

Great Northern Paper Company has established many firsts in the Paper Industry; among them is Papermaker Apprentice Training. This program, initiated in 1963, has graduated thirty-one of the only known Papermaker Apprentices in the world.

George McLaughlin at East Millinocket has the distinction of being the first employee from this Apprentice Group to be promoted to Tour Foreman. Congratulations, George, on a job well done for a young man of twenty-four.
Company Orders New Computer System

An order has been placed with IBM Corp. for a System/360, Model 40 computer at Millinocket and a System/360, Model 20 computer at Cedar Springs. Both systems are scheduled for installation in late fall, 1968. The type and size of the computer system was determined after a comprehensive review of present and future computer needs of all departments. This study was formalized in a report for management prepared by the Administrative Services Department.

The system includes local data processing equipment at Cedar Springs and New York with the central computer located at Millinocket. All three locations will be tied together by a high-speed communications network. The central computer at Millinocket will be a third-generation, large-capacity computer in the medium scale computer complex. The computer ordered for Cedar Springs is a third-generation, small-scale computer roughly equivalent in power to the present IBM 1440 at Millinocket, but without mass storage capabilities.

Highlight statistics on the Model 40 computer will help to point out its speed and capabilities:

1) The Central Processing Unit has 131,000 positions of core storage. (The 1440 has 16,000 positions.)

2) One character (digit, letter, punctuation mark) can be moved from one position in core storage to another in 1.25 microseconds vs. 11.1 microseconds for the 1440. (One microsecond = one millionth of a second.) At this speed multiplication of a 31-digit number by a 15-digit number can be accomplished in 473 microseconds or 1/2000 of a second.

3) Printing speed is 1,100 lines per minute; card reading is 1,000 cards per minute; and card punching is 300 cards per minute. (1440 - printing, 300 lines per minute; card reading, 400 cards per minute; card punching, 120 cards per minute.)

4) Four random-access disk devices (capable of 7.25 million characters alphanumeric storage each), and two magnetic tape drives provide mass storage for the system. These devices allow for approximately 50,000,000 characters of on-line storage to the system (1440 has 4,000,000 characters).

One of the more unique applications to be processed on the new computer is on-line order entry. A random-access file or order information for the Millinocket, East Millinocket, and Cedar Springs mills will be maintained on the central computer located in Millinocket. This information will consist of Master Customer data (now located on flexowriter master tapes in the Order Processing Department), and a file of open orders to be manufactured. The information in these files will be available to the New York offices during the normal business day for updating the open-order file for new orders received, inquiry into, and revision of the open-order file for changes to existing orders and inquiry by New York Sales on status of orders. The data on the files will be transmitted over private-line telephone tie between Millinocket and New York and displayed in New York by cathode-ray tube (television) and typewriter print out.

The on-line order entry application will have first priority to the central computer. This means that regardless of what application is being processed on the central computer (such as payrolls, accounts payable, etc.), whenever the Order Processing Department addresses the cathode-ray tube to enter or change an order, or to display information, the current application on the computer will be halted and instantaneous access will be given to the Order Department. This feature (multi-programming) is one of the more important characteristics of the Model 40. In our case, we will be able to process intermittent requests.
for data from the on-line order entry system, receive or transmit data to Cedar Springs' Model 20 computer, and run batch programs (such as payrolls) all simultaneously. Other on-line terminals may be added to the system as the need and justification arises.

The conversion project is now underway with the first step being to learn the capabilities of the new computer system and the programming languages. Members of the conversion group are currently attending a two-week course in Millinocket conducted by IBM instructors. The total project is estimated to require 10 to 12 man-years of systems, programming, and conversion effort.

At McKay Hydro Station the 30-ton stator for the third unit arrived July 10 at Greenville by rail. Merrill Transfer Company was engaged to unload and move the 15-foot diameter monster doughnut the last 40 miles by trailer truck over the Company road to Ripogenus.

The stator was unloaded from the railcar by using two 35-ton mobile cranes and placed on end in the low bed trailer.

Prior to the stator move, a group of road building "experts" inspected the bridges between Greenville and Ripogenus and beefed them up with additional shoring. A combined effort by Central Engineering, Merrill Transfer Co., and Woodlands personnel made it a smooth move.

Curious tourists had a field day with their cameras as they waited for the convoy to pass.

Because of the order situation, . . . International Paper has curtailed production in its southern mills making market pulp and linerboard. The Panama City, Florida mill and the Natchez, Mississippi mill were the units affected.

Paperweek.

Pilot Plant evaluation of centrifugal cleaners for cleaning bisulfite pulp proved very helpful when the decision was made to install cleaners for the bisulfite pulp used at Millinocket. Laboratory work had shown that small diameter cleaners (3") were considerably more efficient dirt removers than large diameter cleaners (6"). However, contacts with other mills indicated that conventional cleaners were more of an operational problem than large ones. Additional laboratory work here and mill contacts with users of a unique design small cleaner, the Radiclone, led to the conclusions that this type of cleaner would have minimal plugging problems and would remove dirt as efficiently as the other small cleaners tested. Radiclone cleaners have therefore been requisitioned and when operational, should provide the Millinocket mill with significantly cleaner pulp with a minimum of operational problems.

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The services of J. E. Sirrine, Co., consulting engineers of Greenville, South Carolina, have been acquired to study the ventilation conditions in all areas of the mills at Millinocket and East Millinocket.

A team of engineers from the consultants' office visited both mills during the early part of this month, and over a period of two weeks extensive field data on the operating characteristics of all existing air handling equipment, air flow patterns, temperatures, humidities, infiltration and egress conditions for both mills was obtained.

August 4th has been set as a deadline for the consultants to submit a report on their findings, together with estimates and proposals for setting up a ventilation system, compatible with today's accepted comfort standards.
The following seven Great Northern employees are attending the Paper Technology Program and Seminars of the Eighth Pulp and Paper Summer Institute at the University of Maine:

Bernard L. Theriault, Central Engineering; Ronald A. Baillargeon, Central Engineering; S. K. Dutta, Central Engineering; Winston Brooks, Operations; Charles H. Sheehan, Central Engineering; Robert J. Schneider, Jr., Research and Development; Robert L. Limatainen, Central Engineering.

This is a three-week program which began July 10 and will end July 28.

Of particular note is the fact that Great Northern Paper Company has the largest total registration of the participating companies.

It's not flying saucers.

The bright lights that can be seen shooting skyward when visibility is poor in the Millinocket area are runway-end identification lights that the Company has had installed at the municipal airport.

The Company Pilot at Millinocket, Dick Martin, terms the installation "a big safety factor," in that it increases a pilot's capability of picking out the runway and getting lined up for the landing by more than fifty percent. The lights are turned on when visibility is less than five miles.

The annual Great Northern Open Golf Tournament was held at the Hillcrest Golf Club in Millinocket over the 4th of July weekend (July 2, 3, and 4).

Dean Chase of Millinocket shot a 34, Tuesday, July 4, to capture a three-way, nine-hole playoff between former Stearns High School basketball teammates Tom Wentworth and Clair Grant. He won the green blazer after all three had shot 68's.

The three-day tournament drew 70 entries to Hillcrest's 5,400 yard, par 66 course.
there and in Exeter, New Hampshire. He is a graduate of Harvard University, having majored in English with a Dean's List standing.

H. RICHARD OILER, JR., effective July 10, joined Great Northern as a Sales Trainee, reporting directly to Russell W. York, Education and Training Director. Rick is a native of Charleston, West Virginia. He graduated from Miami University in Oxford, Ohio, under the Pulp & Paper School where his major was paper technology.

PERSONNEL CHANGES

WALTER E. MAYHEW, effective June 1, was promoted from the position of Development Physicist to Senior Research Physicist in the Research and Development Department at Millinocket. Walter will be working in the Product Development Section. He has been with the Company since June, 1964.

DAVID C. SMART, effective June 1, has been promoted from Junior Engineer to Engineer. Dave has been with us since June 14, 1965. He received his B.S. in Chemical Engineering at the University of Maine.

WILLIAM H. DAVIS, effective July 1, was reassigned from the position of Senior Mechanical Engineer in Plant Engineering, Cedar Springs, to the position of Technical Assistant - Pulp Mill. Bill will report to Jule Talley, Pulp Mill Superintendent and his primary duties will be in the operation of the neutral sulphite system in the pulp mill. Bill has been with the Company since June, 1966.

ROBERT W. COLVARD, effective July 1, has been promoted to the position of Cost Accountant, reporting directly to C. R. Chandler, Assistant Manager of Accounting. A graduate of Auburn University, Bob majored in Accounting and received his B.S. in Business Administration in August, 1965. Prior to accepting a position as Accountant at the Southern Division in September, 1966, Bob was employed by Foremost Dairies, Inc., as Office Manager at their Pensacola, Florida Branch.

GEORGE W. MC LAUGHLIN, effective July 1, has been promoted to the position of Tour Foreman in the Paper Room at the East Millinocket mill. George has been with the Company since June 13, 1961 and has worked in the Paper Room since that time.

JOSEPH E. FARMER, effective July 17, has been transferred from the Personnel Department, Millinocket mill, to Central Personnel, reporting directly to E. N. Grindle, Benefits Director. Joe has been with Great Northern since June, 1956 and has been with the Personnel Department since December, 1966.

RETURNING FROM LEAVE OF ABSENCE

FRANK PICKLE, Unit Forester, has returned to the Company after a six-month tour of duty with the National Guard. Frank is now living in Albany, Georgia, and will have both wood procurement and land management responsibilities in the Albany area.

TERMINATIONS

FREDERICK W. JONES, Cost Assistant in Central Engineering, Millinocket, resigned June 23 to accept a position with Sugarloaf Mountain, Corp., Kingfield, Maine. Ted has been with the Company since September 1, 1966.

MIR SYED, FAIYAZ ALI, ABIDI, Junior Research Chemist with the Analytical Research Group, Research and Development Department, resigned effective August 1, 1967.

RETIREMENT

WALTER T. BOUCHARD, Tour Foreman, Paper Room, Millinocket, will retire on August 1, after 33.4 years of continuous service. Walt became a Boss Machine Tender in 1952 and Tour Foreman in April, 1958.
Labor Negotiations at the Maine Operation. . . The Company and Signatory Unions have met in Bangor, Maine, and negotiated a three-year contract, effective July 1, 1967, to July 1, 1970, which incorporates changes in wages and fringes. The Conference ended at 7:00 p.m., Thursday, June 22, with the position that the Signatory Union delegates would unanimously recommend the Company package to their members.

Group III Scholarship Awards. . . The Million Manhour Scholarship Committee has announced the following awards:

Trudie Hawkes, daughter of Mr. and Mrs. Edward R. Hawkes, Mattawamkeag, has been awarded a $500 grant. A graduate of Mattawamkeag High, she plans to attend the University of Maine in the fall, majoring in Home Economics.

Ronald Whitehead, son of Mrs. Arline Whitehead and the late Harold Whitehead, Millinocket, is the recipient of a $500 award. A Junior at the University of Maine, he is studying electrical engineering.

Karen Slauenwhite, niece of Mr. and Mrs. Richard Madore, Millinocket, has been awarded a $1500 scholarship. She is a Freshman at Farmington State College, majoring in elementary education.

Group III reached their million manhours in February and have continued to operate without a lost time accident for a total of 1,351,750 hours as of June 22.

New Safety Record

Hats off to the Greenville Shop employees who in a period of over two years racked up a total of 216,000 manhours without a disabling injury! They were honored at a banquet held June 10 at the Squaw Mountain Inn. Shop Foreman, Ab Parent, was presented with a plaque by Edward Wall, Regional Superintendent of the Employer's Liability Assurance Company.

Another Record??

While Great Northern has been busy setting records for production, machine speeds, safety, etc., the following record, we believe, is well worthy of more than a passing note.

Douglas Smeaton, Senior Engineer in Central Engineering, Millinocket, has won his 3rd Bolton Award. He took 2nd place in 1963, won honorable mention in 1966, and this year walked off with top honors.

Congratulations, Doug!

The Bolton-Pima Award is sponsored by Bolton-Emerson, Inc. and the Paper Industry Management Association. Each year prizes are awarded to people in the pulp and paper industry in North America, submitting winning essays on specific subjects. This year's subject was "How Can I Improve My Industry's Image."

Great Northern's only other winner was Robert Witham, at the time Plant Guard at the East Millinocket mill, who won honorable mention in 1960.

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<th>Production:</th>
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<th>1966</th>
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<tbody>
<tr>
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<tr>
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<td>269,511</td>
<td>262,978</td>
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<tr>
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<td>208,857</td>
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<tr>
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CEDAR SPRINGS MILL

Progress on #3 machine is continuing in all areas. Masonry work on the rail chip unloading station has been completed. The washer vats, repulpers and both refiners have been set. Most of the ground and operating floors have been poured and the remainder is being formed. Tile work is continuing on the wire and couch pits. Approximately all the base plates for the No. 3 paper machine have been set and are being grouted. Erection of parts of the machine is expected to begin in the near future.

The new chip silo went into operation recently. This installation makes it possible to convey fresh chips from the screens through the silo to the digesters without going to the pile. The silo serves as a buffer for brief periods of unsteady flow. Bypassing the pile and cooking fresh chips increases byproduct recovery and permits time for bulldozer maintenance. Further flexibility in the system permits direct flow of chips from the screens to the digesters, bypassing both the silo and the pile, in the event of blower failure.

CHATTahoochee PLYWOOD MILL

Construction is progressing steadily on the plywood mill. The pouring of equipment foundations and building floor slabs is continuing. Erection of the hot press has begun and installation of the fans for the first half of the dryer was completed. The office building interior work is continuing, and the building should be ready for occupancy by the end of June. Bids have been received for the Electrical Contract and they are now being reviewed.

EAST MILLINOCKET MILL

A new period production record of 31,095.5 tons was established in the 9th period. The old record of 31,029.6 tons had been established in the 5th period, 1967. Also a new daily record of 112.4 tons for #1 paper machine was set on June 8th.

Paper Room. . . Work is progressing on all winders to upgrade the rolls. Many of the suggestions made by Markowski Associates, Inc., have been completed and others are progressing.

Construction of a new foreman's washroom has started. It will be located in the area once occupied by the Old Paper Room Foreman's office and tool room.

Grinder Room. . . Nos. 7 and 10 grinder motors are running well since installing new coils. During the hot weather they have reached a temperature of 85° C, compared with a maximum limit of 80° C before the new coils were installed.

Wood Piles. . . Pile out started April 20th, with 31,000 cords piled to date.
Old Finishing Room... The semi-automatic roll finishing equipment was started on the 4 to 12 shift May 16th. Debugging has progressed very well with paper from two, then three, and then all four machines being handled. The anticipated manpower reductions were accomplished as of 8:00 a.m. Monday, June 5th.

Slips that pass... If you noticed it in our last edition of Newsletter for Management Employees under East Millinocket mill news, we wish to print a retraction. We did not rebuild #7 machine at East. The last time we looked, there was nothing there... Recognition for the ensuing record of 1630 f.p.m. should be given to Millinocket.

MILLINOCKET MILL

The new Rader chip blowing system has been successfully started in the Woodroom. This system takes chips at 80-cord/hr rate and blows them into the three 250-cord chip silos. The chips are then blown through pneumatic tubing to a cyclone up in the Digester Building. These chips are then individually fed to different digesters through temporary wooden chutes while the chip lofts are being removed. When the chip lofts are removed, the new digester feed belt will be installed.

The new No. 8 digester has been received and is being erected by Pittsburgh Demoine Company.

All presently operating digesters are now equipped with Jamesbury ball valves in the flushing lines. This now means all digesters are mechanically packed with chips.

The new No. 3 Sulfite Washer has been successfully started up as well as the new high density stock pump to the sulfite storage tower. This 3rd washer is being utilized as a decker after the Cowan screens.

The yearly boiler overhauls have been started for the summer. We have completed No. 1 boiler and are now doing the repair work on No. 2 boiler.

The Millinocket mill reached 1,112,200 manhours before having a lost time accident when a tour worker slipped on a loading ramp on his way out of the mill at midnight. He suffered a cracked bone in his leg and is recovering nicely.

All million manhour scholarship applications for eligible sons and daughters of mill employees should be received by Central Personnel by July 14th.

* * * * * * * * * *

DEFINITION OF A SUPERVISOR...

A Supervisor is a man who has practically nothing to do except to decide what has to be done; to tell somebody to do it; to listen to reasons why it should not be done, why it should be done by someone else, why it should be done a different way; to follow up to see if the thing has been done, only to find that it has been done incorrectly; to point out how it should have been done; to conclude that as long as it has been done, it may as well be left where it is; to wonder if it is not time to get rid of a person who cannot do a thing right; to reflect that he probably has a wife and large family and that certainly any successor would probably be just as bad and probably worse.

(Anonymous)
IN THE NORTH WOODS

Water Conditions Improved . . .
. . . The West Branch storage is now at 42.1 Billion Cubic Feet. This is 73.8% of full storage and 2.2 Billion Cubic Feet more than on this date last year.

With precipitation continuing above average, the flow into storage is greater than the demands of the power system. Thus, the storage picture continues to improve.

The new sluice at Ripogenus Dam is now in use and is sluicing wood much faster with a substantial saving in water. To date, 56,000 cords have been sluiced with savings of 1,000 cubic feet of water per second.

The rear of the West Branch drive is now in Seboomook and should be out into the main river prior to the end of June. Progress has been excellent in spite of a late start due to a cold spring.

The Marcoux and Paquet camps were opened last week and the Caouette and Gosselin camps will open this week. This means that all Company camps will be in production by the end of this week.

A training school for cutters and skidder operators is being conducted at the Bartlett and Saucier camps. At present there are nine men in training.

The Tibetans who were supposed to have arrived the first of June have been delayed in India. At present, expected arrival date is indefinite.

The slasher that is operating at Portage has now sawed over 3600 cords of wood into four foot lengths. Performance has been excellent and the cost picture very favorable. All of the stockpiled logs have been cleaned up and the slasher is now operating on freshly cut wood. Without doubt more slashers will be operating next year.

Sales Department Meeting . . .
. . . A meeting of all Sales Department personnel was held at the Biltmore Hotel on May 25th. "Sales Planning" was the primary subject of the meeting. J. V. Carena, General Sales Manager, was acting chairman, and provided the introduction for the meeting.

J. H. Staples, Vice President, Sales, then spoke to the group about the urgent need for more disciplined planning by all members of the department if Great Northern Paper Company was to continue to enjoy a strong position in today's highly competitive market.

L. G. Kewer, Vice President, Planning, followed Mr. Staples with a comprehensive slide presentation of the Company's five year planning efforts that included explanation of how and why each department contributes to the overall corporate planning objectives.

H. Willets, Director of Marketing, then gave a detailed explanation of the Sales Department's role in this planning process with particular emphasis given the five-year forecast data and customer information forms that the salesmen will be answering in the near future.

J. P. DeMarrais, Regional Sales Manager, demonstrated, via a sample customer questionnaire, how the customer analysis form for Commercial accounts should be completed. He was followed by L. Rotar and M. A. Meyers, Newspoint Sales Representatives, who concluded the meeting with their personally authored, produced, directed and starring roles in a dramatization of -- "How to Conduct and Interview Requesting Forecast Data From a Hesitant Newspoint Customer."

David N. Martinson, Supervisor of Order Processing in the New York office, is attending Atlantic Summer School in Halifax, Nova Scotia, from June 11 until July 15.
11th Annual Accident Prevention Institute. . . The following Great Northern Supervisors are presently attending the Eleventh Annual Accident Prevention Institute held at Colby College, Waterville, Maine: Gordon Cook, Safety Supervisor, Millinocket; Howard Alley, Area Foreman, Millinocket; Gerald Caron, Area Foreman, Millinocket; Robert C. Boynton, Foreman, Engineering Services, Millinocket; Gordon Jarvis, Safety Supervisor, East Millinocket; Kenneth Bartlett, Foreman, Woodlands, Portage, Maine; and Louis M. Paquet, Foreman, Woodlands, Rockwood, Maine.

The 11th Annual Accident Prevention Institute is designed for Supervisors of all levels, and for those responsible for industrial accident prevention programs. Special emphasis will be given to technical developments and demands of everyday operations. Reduction in accidents results in less interruption of production and lower operating costs.

Great Northern Paper Building
$2.5 Million Pollution Control System
Cedar Springs, Ga. . . . A major expansion of treatment facilities for mill process wastes by Great Northern Paper Company will make the Chattahoochee a cleaner river.

The new mechanical treatment plant will lower the total waste load in the river by one-third even though the Company is doubling production in a $50 million expansion here, according to Bruce Ellen, Resident Manager and Assistant Vice President, Operations.

A huge clarifier--300 feet in diameter--and a 150-acre aeration pond with thirteen 50-horsepower aerators to add oxygen to the liquid are key components of the plant's $2.5 million treatment system. It is intended solely to improve effluent treatment and will not contribute to additional paper output, he said.

The new portion, scheduled for completion this spring, will amount to more than $1.5 million of the total cost. When fully operational, the additions will reduce the total biological oxygen demand (BOD -- a term used to measure mill effluent) by 70 per cent. The metered daily flow into the river will be well below the volume permitted, allowing the dissolved oxygen content of the river water to remain above the point specified by State regulations.

In operation, mill process waste from the pulp mill, paper mill and power boiler will be pumped into the clarifier where sludge is settled out. This material, which will be removed at approximately 3 per cent consistency, will be temporarily stored in an existing sludge pond while extensive tests are run to determine how and where it can be most efficiently and economically disposed of.

The clarified effluent will be discharged into the new aeration pond where it will be subjected to violent agitation, thus forcing oxygen into the effluent. The mechanical aerators, each capable of putting a minimum of 2500 pounds of oxygen a day into the effluent, speeds up stabilization and reduces "BOD." It then goes into a holding basin where it is metered into the river at a controlled rate according to water flow. The results promise to be good news for fish and animal life along the river.

Production Curtained at Cedar Springs
. . . Due to existing inventory conditions at the box plants and the fact that the box plants are shutting down for two weeks vacation the first of July, the Cedar Springs mill will suspend operations the period beginning 8:00 a.m. Monday, June 26, to 8:00 a.m. Wednesday, July 5. During this period, the week of June 26 will be designated vacation week for all eligible employees. Only those persons absolutely essential to the protection of life and property will work during this period.
Dielectric Heat Dried Cores... Preliminary tests have shown that rapid drying of our homemade fiber cores is possible with dielectric heating. In principle, dielectric heating is a means of generating heat within non-conducting materials by exciting the molecules with a high-frequency electrical field. As applied to our fiber core, the moisture in the core is the non-conducting material excited by the high-frequency field. On the most recent trial, a length of core was dried in approximately one minute and twenty seconds. Our proposed application is a series of dielectric ovens in line with our core winding machines between the winding material and cutoff saw, in order that cores at cutoff would be dried and ready for use. The presently used age-drying method requires storage of cores for a four to six week period. The major advantages anticipated with dielectric heating, as compared to age drying, are greater uniformity in drying and considerable savings in storage space.

Arrangements have been made for rental of a dielectric unit for further evaluation of this method and its effect on the physical and dimensional characteristics of our cores. Other applications of this drying method are also being considered.

Micro-photographs of wire failures. Within the past few months the Analytical Research Group has been taking photographs, through the microscope, of fourdrinier wires which have failed prematurely. The photographs, which are set at 60 power magnification, are usually 3" wide by 18" or 24" long. This allows for thorough examination of the failures, and the cause of the short wire life can be readily determined. Most of the failures have been traced to faulty manufacture of the wires. The photographs have played a big role in bringing faulty wires to the attention of suppliers; and as a result, the Company has been able to collect on several claims.

Profit Analysis and Control Evaluation. Trial computer runs of the Medium Range Profit Planning model have been completed and samples of a management report package have been reviewed with each member of the PACE Committee. During these reviews, several Committee members expressed immediate need for the use of the Medium Range Profit Planning systems to identify product profitability and to assist in evaluating capital expansion proposals. Plans are being drawn to determine how the PACE group can be most responsive with respect to these requests and to establish a time schedule for instituting the related reports on an interim basis pending development of a fully mechanized program. The team is in the process of updating the input data with the new pricing and forecast from sales, revised machine capability from operations and the latest costing data from the Controller's Department.

Slide presentations depicting the study areas of PACE projects were recently made to members of all three departments.

Scheduling procedures, developed by the team for trimming East Millinocket, continue to add to the mill's profitability. Since January the PACE least-cost scheduling program at this mill has resulted in the reduction of loss, due to trimm and side run sales, from 4% down to 2%. Currently PACE is working closely with Millinocket mill personnel to identify major problem areas, in particular, the operating and financial impact of paper machine grade changes.
SPORTS NEWS

E & R TWI-LIGHT GOLF LEAGUE

The duffers, slicers, hookers, etc. of the Engineering and Research Building have joined with 3 or 4 golfers to form a E & R Twi-Light Golf League. The League has been set up with six 4-man teams and several substitutes. It is hoped that the course will hold up under the beating that it is bound to take so that a 10-week schedule can be completed. Match play, with strokes determined by point differences between players, is held every Thursday night.

CHESS ANYONE?

Last 1966-67 season has witnessed the emergence of a new kind of fighting spirit within the Great Northern Paper Company: employees competing against each other across the chess board.

During the winter months, employees of the Central Engineering and Research Departments, covering a very broad spectrum of strength in the art and science of chess, from debutants to highly experienced players, completed successfully the first annual chess tournament. They were subsequently joined by newcomers who expressed their interest in the most effective way -- by moving up the "ladder" through challenge matches until stopped by stronger players.

The present standing is as follows:

1. A. N. Benar
2. D. C. Brown
3. A. M. Brown
4. D. C. Smart
5. R. Baillargeon
6. T. L. Griffin
7. J. Thompson
8. M. F. Hradel
9. R. M. Ramsdell
10. R. T. Ambrose
11. W. N. Cook
12. C. H. Sheehan
13. R. L. Litmatainen

The second annual tournament, open to all interested employees, will take place next Fall.

NEW EMPLOYEES

HAROLD O. REESE, effective June 2, has been employed in the newly created position of Financial Analyst, reporting directly to Peter F. Yacavone, Assistant Controller. Prior to coming with Great Northern, Harold was employed as Treasurer of Atlantic Company.

HENRY F. GREIG, effective June 12, joined Great Northern as a Sales Trainee, reporting directly to Russell W. York, Education and Training Director, during his six months training period. "Bud" is a graduate of Bowdoin College where he received his Bachelor of Arts degree.

EUGENE E. FLANDERS, effective June 19, has been employed as an Associate Engineer in the Central Engineering Department, Millinocket reporting directly to F. W. Lindsay, Chief Design Engineer. Gene is a graduate of Wentworth Institute where he majored in Thermodynamics and Fluid Mechanics and received an Associate of Engineering degree.

MICHAEL C. FOGGIA, effective June 26, will join Central Engineering Department, Millinocket, as an Associate Engineer, reporting directly to Harry Graves, Service Engineer. Mike is a graduate of Wentworth Institute with an Associate Degree in Engineering.

WAYNE HARVEY, effective June 19, joined the Company as Systems Programmer, reporting directly to K. R. Veazie, Senior Systems Analyst in the Administrative Services Department in Millinocket. Prior to joining Great Northern, Wayne was employed by John Hancock Mutual Life Insurance Company programming 1401, 1460, and 7074 Computer Tape Systems.

CARLENE P. HARVEY, effective June 26, will join the Company as Systems Programmer, reporting directly to K. R. Veazie, Senior Systems Analyst. Prior to joining Great Northern, Carlene was employed
by the Hunnewell Corporation in the Product Test Department.

RICHARD E. COLBURN, effective early July, will join Great Northern as Mathematical Analyst, reporting to William O. Wagner, Manager of Administrative Services. A graduate of Tufts University, Dick is currently a Lieutenant in the United States Navy.

PROMOTIONS

LOUIS T. BONGIOVI, effective May 1, has been promoted to the position of Scheduler in the New York Office for the East Millinocket mill, reporting directly to David Martinson, Order Processing Supervisor.

THOMAS L. GRIFFIN, effective June 1, was promoted from Senior Draftsman to Junior Engineer at the Central Engineering Department at Millinocket. A graduate of Franklin Institute, Tom has been with Great Northern since June, 1964.

DONALD L. BROWN, effective June 1, was promoted from Senior Draftsman to Junior Engineer in the Central Engineering Department at Millinocket. A graduate of Northeastern University, Don has been with Great Northern since May, 1966.

REGINALD L. SWEET, effective June 1, has been promoted from Senior Development Engineer in the Research and Development Department at Millinocket to Product Development Group Leader, reporting directly to Steve Kozlovich, Product Development Supervisor. Reg has been with Great Northern since June, 1960.

TRANSFERS

PHILLIP P. PAUL, effective June 1, was transferred from the New York office to the Northern Division Transportation Department in Millinocket where he will assume the title and duties of Traffic Supervisor. Phil will be reporting to J. D. Perkins, Acting Traffic Manager.

PAUL I. FIRLOTTE returned to Central Engineering in Millinocket the first of June in the position of Project Manager for existing and upcoming expansion projects. Paul has been Project Manager at Cedar Springs for the past 18 months.

HARRY E. GRAVES returned to Central Engineering in Millinocket after his assignment in Cedar Springs. Harry will assume the position of Service Engineer, reporting to Don Nelder, Chief Engineer.

WILLIAM H. SIMPSON returned to Central Engineering in Millinocket after his assignment in Cedar Springs. Bill will assume the position of Structural Inspector, reporting directly to Harry Graves.

TERMINATIONS

HUGH D. BROOME, JR., Mechanical Supervisor in the Woodlands Department at Cedar Springs, resigned June 2 to go into his own furniture business. Hugh has been with the Company since November, 1966.

DAVID L. WESTMORELAND, Unit Forester at Cedar Springs, resigned June 2. Dave has been with the Company since November, 1963.

RETIREMENT

THEODORE C. BROWN, Tour Foreman in the Wood Room, Millinocket, will retire July 1 after nearly 28 years of service with the Company.
Six Tibetans, after traveling half way around the world, are expected to arrive at Portage, Maine, late this month where they will be trained in skills and methods of present day logging before being assigned to specific jobs at one of Great Northern's Aroostook woods operations.

Employment of the six Tibetans is strictly an experiment. No one can predict how long they will elect to stay. They will be unfamiliar with northern Maine woods operations, but not unused to hard work in a climate even more rigorous than Aroostook's. Because all agricultural effort in their native Tibet has for centuries depended on human muscle power, with the assistance provided by their faithful yaks, they will have scant knowledge of highly mechanized modern woods work.

An industrial colony of exiled Tibetans has been started in Switzerland and there are several student groups in the Scandinavian countries. But any organized effort to bring more of the exiles to this country will await results of the Maine experiment with the Great Northern Paper Company.

Physical anthropologists are interested, too. Some of them claim that the racial characteristics of the Tibetans are distinctly related to those of the aboriginal North American Indians - not the same as those of the Han people who settled what is now China.

They're wondering if, after centuries, history is going to be repeated with the immigration of the Tibetans to America.
Paper production for thirty-two weeks ended 5/14/67 . . .

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NOTE: Cedar Springs' tonnage includes 11,389 tons, or an average of 456 t.p.d., produced on the new No. 2 machine since startup on April 20, 1967.

CEDAR SPRINGS MILL

With No. 2 machine in operation, there is an increased amount of construction activity on the No. 3 paper machine.

Structure steel erection and the building roof are complete; operation floor slabs in the machine room are 75% complete; and building siding erection is 50% complete. All major equipment is on the job site, including paper machine winder, reel and portions of the dryer section; and base plates are being prepared for installation on the machine track.

A Bailey Continuous Freeness Analyzer went into service on No. 1 machine at Southern Division on May 10, 1967. This is a Research and Development project and will be evaluated by mill technical and operating personnel.

An explosion took place at about 11:45 a.m. Wednesday, May 10, in a 150 lb. steam header at No. 2 paper machine. Six construction employees of the general contractor on the expansion program were injured. One employee has since died, three are on the critical list and two are in satisfactory condition. Emergency first aid was given the injured at the plant, and they were promptly rushed to nearby hospitals.

Request for ambulance service brought excellent cooperative response from Blakely, Georgia; Dothan, Alabama; and Donalsonville, Georgia.

A comprehensive investigation is being conducted to determine cause of the explosion, and an estimate of damage is being prepared. Production on No. 2 paper machine was resumed on Friday, May 12.

Immediately after the explosion, representatives of newspapers, T. V. and radio stations came to, or called the plant for details. A centralized news release control was set up in the Personnel Department to provide the news media with proper and consistent information.

CHATTahooCHEE PLYWOOD MILL

All building foundations are now complete; building steel is all erected with the exception of the chipper building; and the administration building is ready for occupancy.

Equipment foundations are progressing, and the erection of the dryer components has started.

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Atlanta, Georgia, originally was an Indian trading post called . . . . (believe it or not) Standing Peach-tree!!!
MILLINOCKET MILL

The new stores building is essentially complete; and the transfer from old stores to new stores will commence on June 5 with the moving of electrical stock, which will be followed by mechanical items, etc.

It's been a May "field day" for visitors . . . Sixty sixth grade students from the Granite Street School toured the mill on May 2, and an additional 60 from the same grade and school made the tour on May 3.

On May 10, sixty sixth graders were received from the Katahdin Avenue School. All three groups of local students were recipients of soda pop and G.N.P. Co. pens as souvenirs.

From Kennebunk, Maine, came 100 band students on May 13. This group was in the area for an exchange concert with Stearns High School.

A delegation of 17 millwrights and pipers from Fraser Paper Co., Ltd., Madawaska, Maine toured the mill on May 15.

Then, on May 17, a delegation of thirty-five students from Oakfield Community High School toured the mill. The visitors received token gifts of key chains and pocket calendars.

Three (3) Lascopener machines have been installed in the semi-bleach kraft hydropulper system. These machines were installed in conjunction with the projected use of Georgia-Pacific (St. Croix Div.) semi-bleached kraft. This particular pulp is characterized by small fiber bundles which are difficult to open up under normal pulping conditions. The Lascopeners have proven to be a successful device to do the job of making this pulp acceptable for our paper machines. Three runs of 3, 6 and 19 tons have been made and a large 500 ton run is now being contemplated.

EAST MILLINOCKET MILL

"Small Machines 1-4" established a new 24-hour record of 420.4 tons on Friday, May 5. The previous record was 416.7 tons on November 20, 1966. This, in turn, contributed to a new mill weekly record of 7,927.8 tons for the week ending May 8. Previous record was 7,912.0 tons for the week ending April 17, 1967.

The "grind" in the Grinder Room . . . Two motors in the old grinder room have been converted from 40 to 60 cycle power. This will allow for purchased power to supplement the power shortage and low water conditions.

No. 7 grinder motor that failed on March 29 went back into operation on May 6 after installation of new coils.

A purchase order has been placed with Montague Machine Company for one complete grinder line (#14) less motor and pulpstones.

In the old Finishing Room . . .

. . . The semi-automated roll wrapping system was put into operation on May 17, which was a good two weeks ahead of the originally scheduled startup date.

A new vacuum roll clamp truck has also been received and put into operation. The new truck is an electric powered Elwell-Parker unit with a Little Giant vacuum roll clamp featuring a new type front mounting with four rubber pads. The pads, combined with the new mounting arrangement, allow for handling rolls of paper ranging from 32" up to 42" in diameter. The unit also features an automatic pressure control that stops and starts the vacuum pump within specified limits. With a few minor changes, the unit has performed well and has been well received by the operators.

No. 7 paper machine rebuild was completed after a 10-day shutdown,
and was started up at a new all time speed record of 1630 fpm. The major jobs completed during this shutdown were as follows: Couch pit repulper; Venta-nip 2nd press; rearrangement of centri-cleaner piping; dryer and dryer gear allignment; metal to metal flanges in fan pulp system; and 1st press felt run change.

No. 4 paper machine operated at a speed of 1500 fpm on a recent run of 5.0 pt. Novel News, which is a record speed for production of Novel News at Millinocket.

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Research and Development reports . . . . We presently buy two types of corn starch to make the various coatings we put on paper. Laboratory work and a mill trial on one coating formula have shown that it is possible to eliminate one type of starch. The solids concentration of the coating is changed to keep the other properties constant. If we have similar results on the three remaining coating formulas, we can reduce ordering, handling, and demurrage problems by using only one type of starch.

J. H. Heuer, Vice President, presided on a student industry discussion panel at the University of Maine on April 21 during the 17th Annual Open House Research Days program. Mr. Heuer is Chairman of the University of Maine Pulp and Paper Foundation Scholarship Committee.

Water in the Maine West Branch storage basins is now at 28.8 Billion Cubic Feet (BCF), which is 50.5% of capacity and 1.9 BCF below last year on this date.

Although precipitation for the year remains much below normal, it has been above average for the month of May to date and, combined with the snow melt, has produced an increase in storage.

Formal Recreation Plan outlined . . . . After much study and many revisions, the Company's Recreation Plan has been adopted. This plan sets forth policies and administrative procedures for recreational development on Company timberlands and, although flexible, establishes specific guidelines and zoning for controlled use. The zoning into broad use classes is modification of recommendations in the Outdoor Recreation Resources Review Commission report of 1962. It maintains most of the present day uses through multiple use classification of most of the timberlands.

Perhaps the primary purpose of the plan could be defined as being a guideline for all future recreational development and uses on Great Northern's woodlands in Maine. It allows for the broadening of our present lease program, but at the same time places certain restrictions and controls on shore properties.

In order to coordinate and control road and land use, manned gates will maintained by the Company this season. The three locations will be: "9 Mile" near Ashland, "20 Mile" near Pittston, and Portage at MacDonald Siding. In addition, the Maine State Park and Recreation Commission will man a gate at the Round-Pond-Chamberlain thoroughfare. Visitors at these locations will be interviewed to obtain information for use in future recreational planning. It is the Company's desire to further improve its recreational assets through the proper implementation of this plan.

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The Many Uses of Paper . . . . Pampering Box. Jack Tar hotels in the south and west U. S. have put paperboard to a new use. Check in and in your room you'll find a bleached-white paper carton with a printed message - Prepare to be pampered. Inside the 3 1/2 x 6 x 1/2" paper box: a 5-mil polyester pouch holding a 4-oz. martini!!!
Water Pumps . . . Every day we see trees and accept them as common place; yet, a tree is far more than commonplace.

That which we do not know, we cannot appreciate. We know water is tremendously important to trees just as it is to human life. The water we know is absorbed by billions of tiny hair roots growing just back of the root tip of the rootlets or root cap, which constantly grows, foraging for more moisture to be absorbed by the tree. What happens to this mineral laden moisture and how does the water get into the roots—through the water conducting tubes of the tree—and up into the leaves to be manufactured into food?

This operation is completed only because all trees have powerful water pumps. A big conifer (pine or hemlock) can lift 500 buckets of water 10 stories every day. A 200 foot Douglas fir will pump about 13 gallons per hour from the ground to its uppermost needles.

A tree actually has two pumps, a thrust pump in the roots being one. This is the pressure caused by the billions of hair roots absorbing moisture from the particles of the soil in the ground. We call it capillary attraction. It is the principal of oil running up the wick in an old-fashioned oil lamp, and the same force that makes blotting paper work.

The Root Pump sucks the moisture from the ground and forces it upward with a thrust of 30 pounds per square inch. It would actually take 300 pounds per square inch to lift sap to the top of the tallest trees. The inside of a tree or sapwood with its innumerable little empty spaces (cells) arranged into series of tubes is ideal for capillary attraction to go into action.

This theory only explains how water gets into the hole of the tree in the first place. The tiny threads and tubes of the roots absorb the water and push it along into other minute tubes in the lower part of the tree trunk.

This, then, is the point at which a second pump takes over. We can call this one the pull pump. It is known as osmosis and passes the water conducting tubes until it reaches the top of the twigs or leaves.

It appears that this great water works relies on cohesion in a column of water. From rootlets to leaves, runs an unbroken "rope" of water, woven out of countless threads. Pull on the top of this by evaporating water out of the leaves, and you simply pull up more water by its own rope. Thus, throughout every tree or plant, every single twig, bud and leaf is connected by unbroken threads of water with roots. A mammoth Sequoia (Redwood) tree lifts water over 350 feet with the same efficiency and ease as does a plant a few inches tall.

It is very necessary that these pumps be efficient. A majestic elm or sturdy giant oak can give off by transpiration over 2,000 barrels of water during a normal growing season. That is approximately 15 barrels a day.

The water which is pumped up the tree is used to carry raw material, in the manufacture of protoplasm, and in the maintaining of a cooling system. A tree requires 1,000 pounds of water to make a single pound of food.

* * * * * * * * * * *

Newsprint price advance and some editorializing on it . . . It looks as if the new newsprint price will stick. The increase is $3 per ton or just 2% of the current sales price. This is only the second increase in ten years for a total rise in sales price of under 6%. Newspapers in the country have discussed stream pollution at length but they are loath to pay the newsprint mills a fair price which will help carry the cost of cleaning up their effluent.

— Paper Trade Journal/April 24, 1967
The North Branch drive, although late, is off to a good start. Over 30,000 cords have been sluiced thru Big Bog Dam, and all of the wood landed on, and along the lower North Branch by Dumas and Paquet is now in Seboomook. Sluicing thru Seboomook will start before the end of the month. Low water conditions at Chesuncook will make driving a little more difficult. However, with the late season, we expect the water there will rise several more feet. The situation at North Twin is serious. Storage has increased very little, and a much greater depth of water is needed before the tow boat Harkness can be launched and used. What is needed all around is a good three inches of warm rain. All records indicate that this has been the coldest spring in over ten years.

All Aroostook camps are now operating, though a great deal of time has been lost due to rain and snow storms. The Bartlett and Saucier camps are cutting tree-length wood which will be trucked to MacDonald Siding and processed at the chip plant. The Milliard camp will cut four-foot wood this year. This wood is loaded onto rail cars at Moody Siding. The Guerette camp will cut tree-length wood, and this will be cut into four-foot lengths by the new Nesco slasher and dumped into Umbazookskus Lake.

The slasher finally arrived after taking over two weeks to get from Montreal to Portage. Due to its width it was only moved during daylight hours and on so-called local trains. At one bridge there was only three inches of clearance. You can well imagine what could have happened had the load shifted two inches and hit the bridge at 40 miles per hour. Within 24 hours of its arrival at MacDonald Siding, the slasher was unloaded, odd parts attached, and wood was being sawed. This machine, with a four man crew, has been sawing up to 150 cords a shift. So far we have been very pleased with the machine and its potential. People in the Millinocket area will see a similar machine in operation in the Little Italy area before the summer ends.

All the major components for the chip plant are now on order. This plant will be located at MacDonald Siding and will debark and chip tree-length logs. The target date for start-up is August 15; but due to slow deliveries, this date is somewhat doubtful.

After much controversy, legislation has been approved which will allow the state to spray with D.D.T., and other chemicals, an area near Oxbow that is heavily infested by the spruce budworm.

CITY NEWS -

J. Paul DeMarrais, Regional Sales Manager, was guest lecturer on April 24 at the Printing Industries of Metropolitan New York printing classes being conducted at the Center in New York City. Topic of discussion was the groundwood printing paper trends, developments, and application.

Great Northern Specialty Sales was represented on May 5 at the Magazine Publishers Association meeting in Philadelphia by William L. Shaughnessey. Magazine production problems and their relationship to current post office rulings and rate changes were analyzed and discussed in detail.

Great Northern was represented on May 10, 11 and 12 at the Web Offset section of Printing Industries of America meeting in Chicago by J. P. DeMarrais, C. L. Nystrom, N. C. Lyon and T. N. Pendleton from the Sales Department. Industry problems and developments were discussed and much valuable market and product information was obtained.
Charles D. Tiedemann, Manager of Newsprint Sales, has announced the first year results of the Preparatory Scholarship Program for carrier boys of our various contract newsprint customers.

Scholarships this year were awarded to six young men for their junior and senior years. The candidates were chosen by a process of elimination. Each contract customer submitted the names of two carrier boys who were required to take the Secondary Scholastic Aptitude Test. The results of the tests were forwarded to us, and the top 15 boys were then invited to spend a weekend at Wooster School, Danbury, Connecticut. Here the boys were interviewed by the Selection Committee consisting of the Director of Admissions at Brown University, the Registrar at Princeton University and a member of the school faculty.

The winners of this year's program are as follows: Daniel Meek, The Valley Independent, Monessen, Pennsylvania; Robert Rivoir, Jr., Post Publishing Company, Bridgeport, Connecticut; Mark Lee Bowman, The Plain Dealer, Cleveland, Ohio; Bruce Hudzik, Passaic Daily News, Passaic, New Jersey; Richard Frank, Post Publishing Company, Bridgeport, Connecticut; Robert Poole, Columbia State-Record, Columbia, South Carolina.

In effect, the Newsprint Scholarship Program was successful in placing 6 of the 15 finalists in Prep Schools.

Great Northern pays the cost of one scholarship, and various interested prep schools pay the balance of the tuition and the expenses. Since so many of the newspapers and prep schools have indicated an interest in this program, we intend to continue it next year and, hopefully, expand it to place 10 to 15 boys in Prep Schools.

"PERSONALITIES"

NEW EMPLOYEES

RAYMOND E. WILLIAMS, effective April 10, has been employed as a Traffic Coordinator assigned to the New York Office. Ray was formerly a Salesman with Central of Georgia Southern Railway.

PERSONNEL CHANGES

JOSEPH G. LEBRASSEUR, was promoted on May 15 from the position of Process Engineer to that of Acting Process Control Supervisor, reporting directly to Jack Ricketson. Joe graduated in 1962 from the University of Maine with a B.S. degree in Engineering Physics. After graduation he became associated with Great Northern and had been working in Millinocket until January of this year when he was transferred to the Southern Division.

L. R. "CHUB" BARTLETT, effective May 1, was transferred to the office of R. J. Shinners, Resident Manager and Asst. Vice President-Operations, to fill the position of Technical Staff Assistant. Chub's previous positions have included assignments at the Madison Mill and Process Engineer at the Millinocket Mill until his promotion to Superintendent-Pulps in September 1963.

RICHARD J. MORRISON, effective May 1, was promoted to the position of Foreman, Millinocket Garage, succeeding Edal Grantham, retired. Dick attended Ricker College and has an Associate degree in Liberal Arts. He has been employed with the Woodlands Department since 1950 in various clerical positions.
"PERSONALITIES"

CHARLES P. MOSHER, effective June 1, has been promoted to Salesman reporting to George L. Nystrom, Midwest Regional Manager. Charles graduated from Northeastern University with a B.S. degree in Chemical Engineering and from the University of Maine with a 5th year Certificate in Pulp & Paper. He has been with Great Northern since July, 1961, starting with the Research Department as a Project Engineer. He and his family plan to leave Millinocket on May 25, and will be settled at 803 Skyline Drive, Barrington, Illinois shortly after the 1st of June.

CHARLES L. OLIVER, effective June 1, has been promoted to Plant Accountant at the East Millinocket Mill. He will work with Mr. George I. Bouchard, who will be retiring in August of this year. Charlie graduated from Husson College with a B.S. degree in Business Administration. He has been employed in the Controller’s Department at Millinocket for the past seven years in various capacities; his latest position being Supervisor of Internal Auditing.

WESLEY A. NASH, effective May 29, will return to Great Northern as a Junior Engineer in the Central Engineering Department - Northern Division. Wes joined Great Northern as Junior Engineer after his graduation from the University of Maine in June, 1966 with a B.S. degree in Civil Engineering. Since September 1966, Wes has been on an extended leave and will receive his M.S. degree in Civil Engineering.

WILFRED E. WRIGHT, effective April 1, has been promoted to the position of Assistant Buyer in the Purchasing Department - Northern Division.

ROBERT C. MACKENZIE, effective May 1, has been promoted to the position of Material-Area Engineer at the East Millinocket Mill. For the past nine years, "Mac" has been Chief Clerk in the Plant Engineering organization.

RETIREMENTS

JAMES A. MCLEAN, will retire on June 1, with 33 years of Company service. A native of Millinocket, he graduated from the University of Maine in 1933 and joined Great Northern in 1934. Since his first assignment in what was then the Bureau of Economy to his last assignment as Manufacturing Coordinator, he has successfully fulfilled many operating responsibilities and made a host of friends who wish him many years of happy retirement. Jim and Mrs. McLean have settled at 20 Somerset Street in Old Town, Maine.

MAHLON C. SPRUCE, Supervisor-Materials & Stores, will retire on June 1 after completing more than 42 years of Company service. Mahlon graduated from the Lee School of Commerce in 1924, coming directly to Great Northern as a stenographer. Barring any unforeseen climatic changes in Millinocket, Mahlon will pursue his greatest hobby - gardening. A host of friends wish him many years of happy retirement.

TERMINATIONS

RICHARD T. CURRAN, Process Control Supervisor-Southern Division, resigned May 15, to accept a position with Merck & Company, Rahway, New Jersey. Dick has been with the Company since 1963.

BILLY J. RAINES, Power House Foreman-Southern Division, resigned May 1, to accept employment with St. Regis Paper Company, Monticello, Mississippi. Billy Joe has been with the Company since 1963.

J. V. C. LEBEAU, Traffic Manager-Northern Division, resigned effective July 1, 1967. In the meantime and until a permanent replacement has been named, Mr. LeBeau’s duties and responsibilities will be assumed by Mr. C. F. Fischer, III and/or Mr. J. D. Perkins.
The No. 2 linerboard machine started up April 20, 1967. This brings to near completion Project 04 of the Southern Division expansion program.

The No. 2 machine is a Beloit 280" wire machine with a designed speed of 2500 f.p.m. It will produce linerboard ranging from 26 to 42 pound weight. The No. 2 machine is similar to the first machine, with the exception that it is shorter and has a mechanical drive in lieu of an electrical drive. Major equipment and systems installed with the machine included:

Increased capacity to the raw water supply system; expansion of the wood yard included the addition of new log handling and de-barking facilities, additional screening and shipping capacities and various belt and pneumatic chip conveying systems.

The pulp mill was expanded and major equipment installed included four digesters, three base stock washers, three refiners, four stock screens and a new tank farm.

The stock preparation area was expanded with the addition of base and broke storage towers, refiners, and a second white water saveall and associated equipment.

The power plant has been enlarged to house a new recovery boiler, power boiler and turbo generator. A 6-effect evaporator system has been added to the recovery process to supply the new recovery boiler. The liquor making system was expanded with the addition of a new lime kiln and caustizing equipment.

The waste treatment area was expanded by the addition of a new liquor treatment lagoon and aerators. The existing lagoon will now be used for liquor holding.

In order to handle the increased production, a new finishing and shipping building was constructed, along with expanded shop facilities.

The design and engineering was provided by J. E. Sirrine Company of Greenville, S. C. The general contractor was Babcock & Wilcox Company of Barberton, Ohio, and the electrical contractor was Duncan Electric Co., of Chattanooga, Tenn.

The Central Engineering Department of Great Northern's Southern Division provided supervision, and coordination of design, engineering and construction. Equipment securing was a coordinated effort between the Central Engineering, Production and Purchasing Departments.

Project 05 - No. 3 Paper Machine . . . Construction is progressing well on No. 3 paper machine. All areas which apply jointly to the No. 2 and No. 3 paper machines started at least in part with the No. 2 machine.

Structural steel, equipment foundations and floor slabs in the machine room are being installed.

Project 06 - Chattahoochee Plywood Mill . . . Building foundations are virtually complete, and buildings are about 80% complete. Construction activities are progressing satisfactorily, and new office building will soon be ready for occupancy.
Paper production for twenty-eight weeks ended 3/16/67 . . .

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CEDAR SPRINGS MILL

The Crude Tall Oil Acidulation Plant has been placed in operation and has produced satisfactory oil for several weeks.

This plant receives soap skimmings from the black liquor evaporation process and converts them to crude tall oil which is shipped to customers who refine the oil for use in the paint industry. The installation will give a higher by-product return than soap.

The natural gas installation, which has been in operation both on the lime kilns and the boiler ignitors for some time, is now complete.

A closed loop cooling system for the pulp washer drive magnetic couplings is now in operation. This was installed to provide more efficient cooling and to inhibit corrosion. An anti-freeze type coolant is used.

Extensive repair work was done recently on the No. 1 Recovery System, primarily in the electrostatic precipitator and related ductwork. In addition to straight repair work, the ductwork leaving the precipitator was lined with concrete by guniting and insulated to extend the life of the ductwork.

The underside of the precipitator roof was relined with lumnite cement, also by guniting.

These repairs were made possible by downtime available in the interim period when only No. 2 Recovery was needed.

A Fatal Accident. . . .At about 8:30 a.m., Friday, March 31, 1967, a construction worker was killed on the expansion project. While performing insulation work by a beam over the dryer section of #2 paper machine, the construction employee was struck by an overhead travelling crane operated by another construction employee.

An illegal picket line was set up by construction employees on Saturday, March 18th, in the Carpenter-Millwright Local Union out of Columbus, Georgia. Issue involved an 18-man reduction of millwright work force by Babcock and Wilcox. Construction ceased on plant and plywood projects, and the picket line remained in effect on Monday and Tuesday. This picket line was illegal and against the wishes of International Officers and Business Agents of all construction Locals on the projects. Construction was resumed Wednesday morning.

EAST MILLINOCKET MILL

The piles of winter wood were used up on Saturday, April 15, at which time the mill started taking in wood from the river.

Installation of the new roll wrapping machinery for #1-4 paper machines is progressing quite well. Major portions of the machinery are in place. The steel slat conveyor is ready for trial run. Electrical work is under way with some major components yet to be received.
A condensate filtering system is nearing completion. This system will filter all the paper mill return condensate for small iron particles which have been concentrating in the boiler water and causing tube failures.

The last tube failure resulted in No. 1 boiler being down 28 1/4 hours beginning at 5:35 p.m., Sunday, March 19. No. 2 turbine was off the line for 38 1/2 hours, and No. 2 paper machine was down for 29 1/4 hours. The old steam plant was light-loaded during this failure.

Nos. 7 and 10 motors failed in the new grinder room at approximately 8:00 p.m., March 29. Following installation of a new stator coil, No. 10 line was put back into service on April 16. No. 7 is expected to be ready for service about the middle of May.

The failure of these grinder room drive motors has made it necessary to pulp hundreds of tons of purchased broke and groundwood in order to keep the mill operating.

MILLINOCKET MILL

Happenings in the Wood Room. . . . All the rough wood from the outside pile is being brought in so that a wood checkoff may be run. The pile was reduced to a minimum of 957 cords as of Monday, April 17, and will be entirely consumed by April 24.

Sections of the C-3 chip conveyor are being replaced during scheduled shutdowns on the day shift. This flight conveyor feeds the chip screens and has been giving trouble on emergency conditions at night.

In the Groundwood Area. . . . Good operating performance of the new No. 4 Dorr-Oliver disc filter has allowed for removal of some of the old gravity groundwood deckers in the screen room. Installation of the new centri-cleaners for fine groundwood is proceeding well. The steel work is up, many of the cleaners are hung, and the pipe is being run (the Groundwood Superintendent and Chief Engineer of Cox Newsprint recently visited this area).

The sulphite mill established a production record of 200 cooks in the second week of April. This was a total of 3,326 tons for the week.

To stabilize pulping conditions in the hydropulper at East Millinocket, the Millinocket mill has been pulping up the purchased sulphite requirements over and above its own production. This has allowed for the pulper at East to be used solely for groundwood and thus supplement the groundwood loss incurred by outages of the two 6000 h.p. grinder motors.

The need for hand culling of broke has been eliminated in both the paper mill and the coater plant. All cull rolls to be put to the beaters are transferred to the hydropulper area in the Sulphite Department where the roll splitter cuts them up. The paper is then pulped in the single hydropulper and pumped to the appropriate broke tank.

In the Coater Plant, good progress has been made toward eliminating the problem of wet edges. The deckle slides on the fountain head of No. 1 coater were pulled out to the maximum. The inlet holes directly under the old deckle position were plugged so as to allow coating color to flow out over the edges of the backing rolls. This lubricates the backing rolls and prevents the blades from wearing into the soft rubber adjacent to the hard (black diamond) edges. It has produced a marked decrease in wet edges of jumbos delivered to the supercalenders.

In the Finishing Area. . . . 1100 tons of Western Electric di-
rectory were removed from storage and loaded for shipment during the past two weeks.

Representatives from Toledo Scale, IBM, and Great Northern Paper Company met to resolve the problem resulting from improper information appearing on the IBM production, bill of lading, and specification sheets. Recommendations have been made, and a trial is in progress.

The annual F.F.A. Forestry Field Day, sponsored by Great Northern Paper Company - Southern Division plant at Cedar Springs, was won by Pelham High School for the fifth consecutive year. The events took place at Kolomoki State Park with eleven Southwest Georgia High Schools competing. It is conducted similar to a track meet with ten (10) competitive events. Fundamentals and techniques of good forestry practices are taught by the Vocational Agriculture Departments at their local high schools, and events such as these offer tests for the knowledge gained through the awarding of cash prizes to the winners of the various events.

Pelham High School, the winning chapter, was presented a winning cash award by J. P. Harper, Assistant Woodlands Manager, and Warren Garrett, Area Superintendent for Great Northern Paper Company.

The events were judged by personnel of pulpwood dealers, Georgia Forestry Commission, the University of Georgia and consulting foresters.

The Spring 1967 edition of MAINE, the new quarterly magazine produced by the Department of Economic Development, contains an article on "The Bangor Tigers," famed river drivers in the 1800's. The article is illustrated with three pictures provided by Great Northern -- a driving scene and two aerial photographs.

A group of 37 retired Millinocket Mill employees and their wives recently completed a Defensive Drivers Course at the Engineering and Research Center in Millinocket.

This was the first class in Millinocket, and drew much attention in driving circles, inasmuch as this was a group whose driving experience spanned many years; yet the participants found much value in the course.

Course participants were: Mr. and Mrs. Charles Barr, Joseph Bartlett, J. Adelard Bilodeau, A. F. Beaulieu, Mr. and Mrs. Fred Boddy, Andrew Carlstrom, Mr. and Mrs. Chauncey Boddy, Mr. and Mrs. Clyde Folsom, Mr. and Mrs. Ralph Gerry, Mr. and Mrs. Scott Hinge, Hastings Howard, Herbert Johnson, Mr. and Mrs. Charles Larlee, Mr. and Mrs. Herbert Larson, Mr. and Mrs. True MacFarlane, Mr. and Mrs. Daniel McQuarrie, Francis Montgomery, Goodsell Peters, Mr. and Mrs. Roy Perrow, Mr. and Mrs. Hally Plourde, Mr. and Mrs. Hubert Poirier, Edward Scott, William Thorndike, Robert Watson.

Student Instructors conducting sessions were Chester Tweedie of the Engineering Department of Great Northern; Harold Gallant, East Millinocket Police Department; James Linscott, Carpenters and Joiners Local, East Millinocket; and John Oliver, Papermakers Local, Millinocket. Trooper James Reeves of the Maine State Police conducted the final session.

Directors of the program were Arthur Michaud and John Reif of the Company's Personnel Department.

No serious inconvenience was experienced by the recent truck strike and lockout. Some badly needed inbound materials were delayed, and a number of truckloads of paper were tied up in truck terminals. However, the early settlement permitted deliveries to be made before operations were interrupted.

A rail strike was threatened at the same time, but legislation was rushed through Congress and postponed the threat until May 2nd.
WOODLANDS NOTES

Considerable progress has been made in preparing the site for the new chipper plant which will be located at McDonald Siding in Portage. About ten acres of land have been cleared so that there would be ample room for the chipper plant and log storage.

The Nesco slasher that will be used at Portage for two months prior to being moved to Umbazooskus, has been shipped and should be operating prior to the end of the month. A supply of tree-length logs has been stockpiled for the machine.

The Sherman Lumber Co. is installing a debarker and chipper at their Sherman Station location. This is expected to be in operation by late summer. Producers in that area are being urged to change from four-foot operations to tree-length and to sell to Sherman who in turn will sell chips to the Company. By Fall, chips from four sources should be supplying a substantial percentage of the chips needed at the mill.

The master plan for public recreational use of Company lands will have been completed prior to the next Newsletter. A summary of this plan will be put into booklet form and be available for distribution to the public. Also, within a week or two the Company's policy as to which roads will be open to the public and the location of toll gates will be made public.

W. W. (Jack) Ricketson, Mill Manager at Cedar Springs, was recently elected President of the Blakely Town and Country Club. Already busy with the plant expansion at Cedar Springs, Jack faces a project underway at the Blakely Country Club where a considerable expansion of the club's facilities will be started shortly.

RESEARCH AND DEVELOPMENT

Astroprint is the grade name for the highest brightness uncoated printing paper which Great Northern produces. Its brightness level is about 70-72 G.E. as compared to 66-68 for Jet Printing and 61-63 for Publication.

Astroprint was originally developed about four years ago for letterpress printing. Quality was upgraded by the addition of a much higher than normal amount of clay. Growth has been steady but slow up to a level of about 1350 tons produced in Fiscal 1966.

During the latter part of last year a program was initiated for the development of Astroprint suitable for web offset printing, the most rapidly expanding segment of the graphic arts industry. We now have a sheet which has been successfully printed in fairly large volume on black-and-white web offset presses.

Improvements in a considerable number of manufacturing techniques are responsible for this success. The production of brighter and cleaner sodium base bisulfite has certainly helped appearance. Bleach response increases on-the-machine have also helped even though production rates have increased (with a consequent decrease in reaction time). The Millinocket mill has engineered a good system for the wet end spraying of starch to increase top side surface strength. The use of high brightness fillers at good retention rates now allow us to produce economically higher brightness at lower filler levels which also helps pick resistance.

Year to date figures show Astroprint shipments are 75% above target which is significantly higher than any other grade. This is a direct result of marketing the product for both letterpress and offset applications. We intend to extend the grade line to include rotogravure Astroprint within the calendar year.
Great Northern Reports Record
Sales, Earnings: N.Y. - April 19.
Directors of the Great Northern Paper Co. at a meeting Wednesday authorized a quarterly dividend payment June 12 of 30 cents a share on common stock to stockholders of record May 19. Previous dividend payment for the same period was 25 cents.

The directors also voted a preferred stock dividend October 3 to stockholders of record September 1 of 20 cents.

Great Northern also reported record sales and earnings for the period.

Earnings were $5,765,000 or $2.02 per share of common stock after preferred stock dividends. Earnings for the corresponding period of 1966 were $5,339,000 or $1.87 a share.

Sales in 1967 have been $58,936,000, up 5.9 per cent from 1966. Shipments of newsprint were 468,186 tons, substantially higher than a year ago.

Board chairman Peter S. Paine reported that the three company mills were operating at near capacity.

Paine said "The second linerboard machine at Cedar Springs, Ga., is due to start up later this month. This will add 700 tons daily to our capacity."

Paine also stated that "This will improve our competitive position in the lighter weight board field. A third machine to produce corrugating mediums is scheduled to come on steam in the Fall of 1967."

Meetings have been held in New York, Cedar Springs and Millinocket to acquaint officers, management and department heads with the Hay program. Great Northern people assigned to work with Messrs. Nolan and Anderson are Miss Elizabeth Center and Messrs. J. J. Egan, E. N. Grindle, E. A. Lumbert, J. F. O'Handley, J. W. Reif, H. M. Williams, Jr., P. F. Yacavone, and R. W. York. These people, including Messrs. Nolan and Anderson, will be conducting direct interviews and writing job descriptions on a sampling of positions ranging from chairman of the board to president, vice presidents, managers, superintendents, engineers, tour foremen, secretaries, etc. This sampling assignment is scheduled to be completed by late June, after which further descriptions will be written for all jobs.

The job descriptions will ultimately be used in an evaluation process by committees consisting of officers and management people, with the assistance of Hay Associates. Ed Grindle will be the secretary of this committee and will be in charge of coordinating the entire program. If you have any questions, please direct them to him.

Great Northern will be among the companies featured by FORBES magazine later this year when a special 2-page, full color "house ad," designed to sell other advertisers on using the medium, appears in print.

The theme of the ad is "Why do you suppose (company name) selected FORBES to carry (x pages) of its new advertising program."

Two Great Northern advertisements have already appeared in FORBES this year: paperback book paper (January 1) and kraft linerboard (April 1).

A third ad, devoted to lightweight coated paper, is scheduled for the June 1st issue.

Interviews and Job Descriptions - Salary Administration - Hay Associates... Two Hay representatives, Edmund F. Nolan and Robert E. Anderson, have been assigned to work with Great Northern people in developing and improving salary administration practices for monthly salaried employees.
Cold weather in Maine has prevented any significant amount of water run-in from the Winter snow park.

Below normal precipitation was eased somewhat by a storm on April 17-18 that left a water content of 1.19" in the Pittston area and a little more than a third of an inch in the Ripogenus-Millinocket area. However, there is a deficiency of 4.22" for the year to date which, converted to usable water, represents 12.8 Billion Cubic Feet or a little more than presently needed to fill the North Twin reservoir.

Storage now totals 8.7 BCF, which is 17.9 BCF below rule curve.

The Insurance Department, which has been located in the Bangor Office for a number of years, has been moved to the Administration Building in Millinocket, Maine. The Insurance Manager, Thomas H. Flanagan, moved into the new quarters on March 27th. He will administer all Company insurance programs with the exception of group insurance.

The group insurance and hourly pension programs will continue to be handled by the Benefits Director in the Central Personnel Department, with Charlie Parsons and Valre Burgess assigned to the processing functions.

McKay transmission line was taken out of service on Saturday, April 15, to remove catenary aircraft warning lights from service. Rifle bullets had penetrated coils to cause an arcing condition which was affecting TV reception through the area and had been traced to this transmission line area by combined efforts of Bangor Hydro and Great Northern Paper Company personnel. New parts will be installed at a later date. This vandalism, besides causing interference, has severely damaged two lights costing approximately $1200 each.

The PACE Committee presented its first Progress Report to the Executive Committee on March 14.

Dave Sullivan, Partner, Arthur Andersen & Company, opened the meeting with a review of the original charter and scope of the PACE program. A color slide presentation of the areas of study in both short range trim program and medium range profit planning was conducted by Jim Heerenmans, Manager, Arthur Andersen & Company. The report of the results of the team's initial undertaking, improving the trim at East Millinocket, was given by Frank Dunne, Project Leader. It was also pointed out that the East Millinocket scheduler is currently using guide lines in trimming that were developed as a result of the computer test.

A timetable of six weeks was set for a trial run of the medium range planning model using sales, operating and financial department data that is currently available. The results of this run will be discussed with each department to determine where improvement in the accuracy of the input data is required.

Future potential uses for the medium range planning model were pointed out through questions by Mr. Paine and Mr. Haak. It was generally agreed that the medium range profit planning program will be a valuable tool in Great Northern's management decision making in the future.

The Project Team concluded the report by stating that the cooperation and efforts of various departments contacted to date have resulted in the project currently being ahead of schedule.

NEW EMPLOYEES

ROBERT E. GARDNER, effective April 17, became General Superintendent of the Chattahoochee Plywood Corporation. Bob was formerly in charge of production of Weyerhaeuser's Plywood Division at Plymouth, N. C.
NEW EMPLOYEES

JERRY N. LIVINGSTON, effective March 10, joined the Woodlands Department at Cedar Springs as Unit Forester, reporting directly to R. C. Wakefield. Jerry graduated from the University of Georgia where he received his B.S.F. degree in Forest Management.

PATRICK L. MCADAMS, effective April 1, joined the General Transportation Department at Cedar Springs, as Traffic Analyst reporting directly to Jerry Perkins. Prior to joining the Company, Pat was employed by International Paper Company of Mobile, Alabama.

PERSONNEL CHANGES

JACK COLSON, effective April 1, was promoted from the position of Mechanical Foreman to that of Mechanical Supervisor, reporting directly to C. D. Phillips. Prior to joining the Southern Division in June, 1963, Jack was employed by Bowaters Southern Paper Company at Calhoun, Tennessee.

WILEY HUNTER, effective April 1, was promoted from an hourly Mechanic classification to the position of Mechanical Foreman, reporting directly to Jack Colson. Prior to joining the Southern Division in September, 1963, Wiley was employed by Rayonier, Inc., at Fernandina Beach, Florida.

DONALD E. BRANK, effective April 1, was promoted from an hourly Mechanic classification to the position of Mechanical Foreman, reporting directly to Jack Colson. Prior to joining the Southern Division in August, 1963, Don was employed by Tennessee River Pulp and Paper Company at Counce, Tennessee.

JOHN BISHOP, effective April 1, was promoted to Junior Salesman, Newsprint Sales, Chicago Office.

John has been with the Company since June, 1964, starting in the Research Department at Millinocket.

CLYDE WHITE, effective April 12, was promoted to the position of Plant Accountant, reporting directly to B. P. Ellen, Resident Manager. In order not to overburden the Accounting Department, it is contemplated that the transfer will not be completely effected until June or July. Clyde has been with the Southern Division since May, 1964, prior to which he was employed in the Accounting Department of St. Joe Paper Company.

JOHN W. REIF, effective May 1, will transfer to the Cedar Springs mill as Personnel Assistant, reporting directly to William E. Lloyd, Manager of Industrial Relations. John is a graduate of Bemidji State College in Bemidji, Minnesota, and prior to coming with Great Northern on a full-time basis in 1966, spent 3 years in the Criminal Investigation Division of the U. S. Army.

RETIREMENTS

C. W. MONTGOMERY, Supervisor - Materials, Purchases and Stores retired March 1, 1967, with nearly 26 1/2 years of service. Chick spent most of his years as Superintendent of Construction where he was involved in many major expansion and modernization programs connected with the Maine operations. A host of friends extend their very best wishes for a happy retirement.

EDAL G. GRANTHAM will retire on May 1st after 25 years of Company service. Edal has been Foreman of the Woodlands Garage at Millinocket since 1942, and has successfully fulfilled the many responsibilities of the job and made a host of friends who wish him many years of happy retirement.
Sons of East Millinocket employees have been awarded scholarship grants in reward for the mill's recent million manhour safety achievement. David R. Michaud, son of Mr. and Mrs. Delmont J. Michaud, Sr., is recipient of a $500 grant. Dave is a Junior in Business Education at Washington State College, Machias, Maine.

Stephen A. McLaughlin, son of Mr. and Mrs. Roland E. McLaughlin, is also recipient of a $500 award. Stephen is a Junior in Electrical Engineering at the University of Maine in Orono.

Carter R. Stratton, son of Mr. and Mrs. Ralph E. Stratton of Medway, has been awarded a $1,000 scholarship. Carter is a high school senior who is presently aiming toward a medical career.

The scholarship committee is composed of the Reverend Delbert Wyse, representing the community; Mr. Emmett Stevens, Chairman of the Commercial Department at Schenck High School; Mr. John Hackett, Guidance Counselor, also of Schenck High School; Mr. Raymond Paoletti, representing the unions, and Mr. John B. Rogers, Director of Personnel Administration, representing the Company.

Great Northern improvement is identified. . . .'Coater head change improves sheet profile at Great Northern" is the title of an interesting article in the March 13 issue of Paper Trade Journal.

The Cedar Springs mill has added to 5th Period production records reported last month for the Maine mill.

During the 4-week period, the mill set a new record with average production of 1,024 tons per day. The previous record was 1,019 tons per day during the 12th Period of 1966.

The 5th Period daily average also represents a new period total record of 28,664 tons, which supersedes the previous record of 28,186 tons for the 7th Period of 1966.

"Canadian Firm Ups Newsprint Cost $3 a Ton. . . .Montreal (AP) - Consolidated Paper Corp., Ltd. has announced an increase of $3 a ton in the price of its newsprint in Canada and the United States effective July 1.

'Increased costs have made the adjustment essential,' a company statement said.

A company spokesman said the present price of consolidated newsprint in eastern Canada ranges between $125 and $135 a ton, with higher prices for more distant delivery.'

Price hike excites Southern papers . . . .The Southern Newspaper Publisher's Ass'n have been broadcasting far and wide a telegram expressing their concern at a possible increase in the price of newsprint in the South.


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CEDAR SPRINGS MILL

No. 2 Paper Machine. . . . The Recovery Boiler and Turbine Generator are now on line. The Causticizing Area has been completely checked out under operating conditions. The Woodyard and Pulp Mill are nearing completion with check out to be started. The paper machine is progressing steadily. Check out will start on the reel, winder and roll handling equipment this month.

No. 3 Paper Machine. . . . The machine track, drive aisle, and tending aisle concrete work is progressing rapidly. Tile work is in progress on the buffer chests, machine chest and saveall chest. Concrete plank has been installed on 70% of the roof and building siding has been started.

CHATTAHOOCHEE PLYWOOD MILL

Erection of the pre-fabricated building for the plywood mill is rapidly progressing. The General Contractor is now on the job site and has begun work on equipment foundations. A new panel lay-up system has recently been purchased for the plywood mill.

MILLINOCKET MILL

The speed-up modifications to No. 8 paper machine continue to produce results. On March 5, the machine attained a speed of 1602 f.p.m.; and on March 11, a new tonnage record was established with production of 144.6 tons of coater base stock.

The broke close-up system for the wet and dry ends of No. 7 and 8 paper machine has been completed and put into operation. This improvement provides increased storage capacity for base stock broke and permits the machines' requirements of kraft pulp to be retained in the system.

A new filtered water system has also been completed and will be put into operation as soon as enough piping tie-ins have been made to the machines. The new system will provide for increased flow at higher pressure, and will reduce maintenance and horsepower requirements.

** * * * * * * * * * * *  **

Great Northern Board Sales has announced that James L. Bellis has been named Director, Board Sales. Jim has had 20 years of experience with Union-Camp Corporation where his most recent assignment was Assistant Manager, Container Board Sales.

Rod L. Hickey who spent 3 years with International Paper Company, principally as Eastern Sales Representative in the Container Board Division, assumes the role of Sales Coordinator, and will be responsible for all customer phone contact and administration.
WOODLANDS NOTES

Sap Time in Maine...Now that cutting and hauling have been completed in the Pittston Farm area many of our seasonal employees are preparing for the annual maple sap harvest. In this area there are 54 sugar camps on company land—mostly on the following towns: T.5, R.18; T.5, R.19; T.6, R.18; and T.7, R.18. Some of these camps have been operated by three generations of the same family. For the use of the land and trees, the Company charges the producer 2c for each sap bucket that he hangs. A small operation is one with 1,000 sap buckets; the largest has 10,000, with most camps running about 3,000 buckets. Last year the producers hung a total of 183,000 buckets.

Each producer has a camp in which he and his crew live, a hovel for his horses and a building for the evaporator. Within the last few years the horse has been gradually displaced by tractors and even a few snowmobiles. Each producer hires from two to five men to help him gather the sap and cut the necessary fuel wood. The producers all sell to a cooperative on the Canadian side. The cooperative in turn sells the high-grade syrup to retail outlets. A good deal of the syrup is shipped to Vermont in 55-gallon drums. Here it may be repacked into smaller containers and sold at roadside or it may be made into candy. Some of the syrup is further processed into maple sugar and is shipped to tobacco companies who use it for flavoring.

Weather is the key factor in this business. Operators start late in March and usually end about the 20th of April. For sap to run you must have freezing nights and warm days. When temperature at night drops to 20 and moves up to 45 by mid-day, there will be a heavy sap run. As a general rule, it takes from 40 to 50 gallons of sap to make 1 gallon of syrup. There is a lot of hard work involved, but its a slack time of the year for the men when they look forward to the three or four weeks pay they will get.

Then, of course, there are many sugaring-off parties held each year, and you really haven't lived until you attend a French Canadian sugaring-off party. Better go on a diet for soon it will be pancake and syrup time.

With four feet of snow in the woods the cutters decided they had had it, and all have left for their homes. Hauling is practically complete and its safe to say no wood will be left behind. Due to crowded conditions at some of the sidings, some wood was left at one camp. However, this wood is on a summer road and can easily be moved to the siding when there is room for it. In all there are some 90,000 cords of wood piled down at rail locations. This will take care of the Millinocket mill until fresh or river wood is available.

The first of our two Nesco portable slashers should arrive in Ashland before the end of the month. Tree-length logs have been stock piled at McDonald siding; and the slasher will be used at this location until July, at which time it will be moved in to Umbazooskus and slash wood produced by two camps. We anticipate production of 15 cords per hour from a four-man crew. We anticipate that tree-length logging and use of slashers will increase labor productivity by 35% with greater savings possible as crews gain experience and machines are improved.

During the mid-February cold snap a temperature of minus 37 degrees recorded at Pittston Farm, resulting in a lost-time injury case when one employee was hospitalized with a well-frozen toe.

Deer have taken advantage of the plowed woods roads and have been quite plentiful, assuring hunters of another crop this fall.
The Woodlands section meeting of the Canadian Pulp and Paper Association in Montreal was attended by Dave Brooks, Eugene Putnam, Robert Leadbetter, Henry Deabay, Leo Thibodeau and Al Ingalls.

Responsibilities within the Southern Division Woodlands have recently been re-aligned by Woodlands Manager, James W. Richardson. Added responsibility is being placed with field personnel to make our organization more efficient and give field personnel more flexibility in handling problems.

The initiation of a formalized sales training program has been announced by J. Paul DeMarrais, Eastern Regional Manager. Sessions will be conducted monthly. The first meeting was run in conjunction with the Central Personnel Department using program teaching and tapes supplied by the Xerox Corporation. These meetings will supplement the Information Sessions.

Commercial Sales Department has announced that the new price book, completely rewritten and formally printed, has been bound and distributed. The contents, in addition to pricing information, include specifications for bulking, basis weights, and finish. It also contains descriptions of each grade including applications, competitive advantages, and limitations.

Twenty-six inches of snow within three days crippled the Rigby Yard in Portland, Maine. This, coupled with a wreck which tied up the Hoosac Tunnel in the Berkshires for ten days, seriously handicapped rail transportation in and out of Maine. Shipments in both directions were delayed, and the car supply became very tight.

Penobscot River Dissolved Oxygen Calculations. . . . As various alternatives are studied for chemical recovery and pollution control at our northern mills, it is desirable to estimate the effect on dissolved oxygen levels in the river. Using a mathematical model of the Penobscot developed by the Water Improvement Commission, our Applied Math Group of R & D wrote a computer program which calculated the oxygen level. The program plots these levels on a graph as a function of time and landmarks along the river.

Quality Control Computer for Mill No. 1. . . . An order has been placed with IBM for an 1130 computer system at Mill No. 1. This system will be designed to accept the quality data as it is generated in the mill laboratories. The most recent values will be compared with previous tests and with targets to indicate whether processes are under good control. Control charting techniques that are presently used successfully on a few variables will be extended to many more.

Quality data will also be summarized by machine, grade, and order. Once the values have been entered in digital form, it is not necessary to transcribe them again. Instead the IBM 1130 will punch summaries into cards. These can then be used by Data Processing Department to generate reports directly. The Applied Math Group of R & D as well as the Systems Department are involved in the design and programming.

The Red Cross Bloodmobile will visit the Southern Division mill on March 15. All employees and their dependents are covered for any blood needs under the Early County Blood Program. We expect to have over 100 employees donate blood, so that the program can be continued another year.
A snow survey on March 15 showed plenty of depth, but water content was approximately 2" below average for this time of year. Results were based on sampling of the following locations which are scattered over the 1,880 square miles of West Branch drainage area.

<table>
<thead>
<tr>
<th>Location</th>
<th>Snow Depth</th>
<th>Water Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millinocket</td>
<td>31&quot;</td>
<td>7.0&quot;</td>
</tr>
<tr>
<td>Millinocket Lake</td>
<td>31</td>
<td>6.7</td>
</tr>
<tr>
<td>Hurd Pond</td>
<td>26</td>
<td>6.0</td>
</tr>
<tr>
<td>Crawford Pond</td>
<td>38</td>
<td>5.25</td>
</tr>
<tr>
<td>Ragged Lake</td>
<td>28</td>
<td>7.0</td>
</tr>
<tr>
<td>Ripogenus</td>
<td>34</td>
<td>5.5</td>
</tr>
<tr>
<td>Sourdnahunk Lake</td>
<td>34</td>
<td>8.0</td>
</tr>
<tr>
<td>Lobster Lake</td>
<td>24</td>
<td>5.75</td>
</tr>
<tr>
<td>Chesuncook Village</td>
<td>29</td>
<td>5.5</td>
</tr>
<tr>
<td>Umbazooksus Lake</td>
<td>28</td>
<td>6.0</td>
</tr>
<tr>
<td>Caucongmooc Lake</td>
<td>37</td>
<td>8.5</td>
</tr>
<tr>
<td>Loon Lake</td>
<td>37</td>
<td>8.0</td>
</tr>
<tr>
<td>Russell Pond</td>
<td>39</td>
<td>10.5</td>
</tr>
<tr>
<td>Elm Pond</td>
<td>39</td>
<td>10.0</td>
</tr>
<tr>
<td>Seboomook Dam</td>
<td>27</td>
<td>6.0</td>
</tr>
<tr>
<td>5th St. John Pond</td>
<td>38</td>
<td>9.75</td>
</tr>
<tr>
<td>Dole Pond</td>
<td>38</td>
<td>7.0</td>
</tr>
<tr>
<td>Long Pond</td>
<td>39</td>
<td>7.0</td>
</tr>
<tr>
<td>Pittston</td>
<td>31</td>
<td>7.25</td>
</tr>
<tr>
<td>Penobscot Lake</td>
<td>32</td>
<td>7.75</td>
</tr>
<tr>
<td>Jones Pond</td>
<td>31</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Average: 32.9 7.21

These conditions, coupled with average precipitation, should produce a probable runoff of 60.0 billion cubic feet (BCF) of water between now and July 1. Add present storage of 11.9 BCF and total water available becomes 71.9 BCF. Deduct from this estimated requirements of 25.8 BCF between now and July 1; and if all the average and probable factors materialize, total storage on July 1 should be in the area of 46.1 BCF, which would be 5.9 BCF below rule curve operation. . . keeping in mind that nature does not always perform according to the "law of average."

The Job Hazards Analysis program that originated in the East Millinocket pulp mill, as reported in our Newsletter of November 13, 1966, was so well received by Mr. Gerald DeWors, Safety Engineer of Employers' Group Insurance Company Limited, that he requested the program be presented to the Massachusetts National Safety Council in Boston. Arthur Michaud and Richard Goodridge presented this program to them at their Safety Conference on March 2, 1967.

Great Northern product loses its identity. . . The new March 1967 telephone directory for the Bangor area includes Millinocket and East Millinocket areas and a number of Great Northern listings, but there is nothing to identify the fact that the paper within its covers was produced on No. 1 and 2 paper machines at Millinocket. The new directory was printed in Lowell, Mass., by the Courier Citizen Co.

Safety has gotten off to a good start this year at the Southern Division mill. The Departmental Safety Contests, in which the four crews in each Department compete against each other in terms of Doctor Care Injuries, were very successful last year and are being continued this year. In addition, a new contest has been started in order to call attention to our disabling injury frequency rate. The goal is to better the 1966 frequency rate of all mills belonging to the Southern Pulp and Paper Safety Association, which was 5.15. If this goal is attained, some lucky employee will win a color T. V. set at the end of the year. A safety thermometer has been placed in the time card entrance to keep everyone posted on our frequency rate.
NEW EMPLOYEE

DAVID PARKER, effective March 13, joined the Research and Development Department, Millinocket, as a Junior Research Technologist, reporting directly to Paul Hubbe, Pioneering Research Supervisor. Dave graduated from the University of Maine where he received his B.S. degree in Engineering Physics. Prior to coming with Great Northern, he was a math and science teacher at Brewer High School.

PERSONNEL CHANGES

GLENN ERNEST, effective March 13, has been transferred to Ozark, Alabama as Unit Forester under the Troy Area. Glenn has been with Great Northern for nearly two years, having been formerly employed by International Paper Company at Jaspar, Florida.

CHARLES R. GRANTLAND, Assistant Traffic Manager, will transfer from the Southern Division to the Northern Division, effective April 1, where he will report to J. V. C. LeBeau, Traffic Manager. Charles is a native of Delaware. He joined the Southern Division in December, 1965, after having spent 13 years in increasingly responsible positions with Gulf, Mobile & Ohio Railroad in Mobile.

RESIGNATIONS

JAMES FRANK PICKLE, Unit Forester in the Woodlands Department at Cedar Springs, resigned February 17 to enter military service.

JULIUS D. BLANKENSHIP, Staff Electrical Engineer in the Central Engineering Department at Cedar Springs, resigned February 28 to accept a position in the Engineering Department of Vanity Fair Company at Monroeville, Alabama.

WILLIAM R. WHILDEN, Unit Forester in the Woodlands Department at Cedar Springs, resigned March 3 to establish his own pulpwood business.

JOHN J. THIBODEAU, Commercial Salesman in the Chicago Sales Office, resigned effective March 15. John has been with the Company since 1962.

ADAM GNIAZDOWSKI, Assistant to the Vice President-Planning, has tendered his resignation, effective March 24, to accept a position in the Education Division of the Xerox Corporation in New York. Adam has been with the Company since March, 1959.

DONALD W. BAIL, Director of Personnel, will resign effective April 15 to accept a position as Plant Superintendent at the Maine Medical Center in Portland. Don has been with Great Northern for 20 years.

RETIREMENT

ARTHUR J. BILODEAU, JR., Tour Foreman-Paper, Millinocket, retires this month with best wishes of his many friends. Arthur has been with the Company since March 13, 1930.

CORRECTION

In last month's list of Personnel Changes, we disregarded the supervisory level of the Research and Development organization in announcing the promotions for Messrs. Dale K. Phenicie, Marshall N. Brunden, Robert M. Leavitt and Orrin H. Merrill. These gentlemen do not report direct to Technical Director, V. F. Mattson. Dale reports to Quality Control Supervisor P. H. Welch, Marshall and Orrin report to Pioneering Research Supervisor P. D. Hubbe and Bob reports to Research Supervisor R. C. Johnson.
Company progress and employee efforts result in new production records for Maine mills. Following are five areas of new records for the 4-week period ending February 19, 1967:

Two Mills Combined...56,905 tons of saleable production; previous record 54,611 tons - 4th Period 1966.

Millinocket Mill...25,875 tons of saleable production; previous record 25,755 tons - 11th Period 1966.

East Millinocket Mill...31,030 tons of saleable production; previous record 30,604 tons - 2nd Period 1967.

Coater Plant...6,025 tons of Saleable production; previous record 5,907 tons - 8th Period 1966.

Sulphite Mill...12,722 tons; previous record 12,539 tons - 1st Period 1967.

More than 100 members of Great Northern - Southern Division Management attended a meeting at Blakely, Georgia on January 23 at which Peter S. Paine, Chairman of the Board, was principal speaker.

During Mr. Paine's talk he used charts to illustrate the favorable financial effects from acquisition of the Southern Division and to review the source and use of funds for capital programs over the past five years.

Mr. Paine expressed confidence in the future with plans for further capital programs directed toward greater growth and prosperity for the Company and opportunity for its employees.

Mr. Paine also described his recent trip to Soviet Russia and showed interesting slides taken in Russia during his visit there.

For the first time...On February 16, 1967, Group 3 in the Millinocket area reached One Million Manhours without a lost-time injury. This group is composed of the Engineering Service crew and all personnel employed in the Administration and Engineering and Research Buildings. Applications will be available immediately for the $2,000 scholarship which will be awarded to children of these personnel. The scholarship winner should be announced in approximately eight weeks.
Paper production for twenty weeks ended 2/19/67 . . .

<table>
<thead>
<tr>
<th>Production</th>
<th>1967</th>
<th>Daily Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cedar Springs</td>
<td>123,000</td>
<td>979</td>
</tr>
<tr>
<td>East Millinocket</td>
<td>148,052</td>
<td>1,078</td>
</tr>
<tr>
<td>Millinocket</td>
<td>115,308</td>
<td>844</td>
</tr>
<tr>
<td></td>
<td>386,360</td>
<td>2,901</td>
</tr>
</tbody>
</table>

CEDAR SPRINGS MILL

Project 04 - No. 2 Paper Machine . . .
The Recovery Broiler has been blown down and the final tie-ins have been made to put it on the line. The final check out is being made on the Turbine Generator. The Causticizing Area is nearing completion and is scheduled to start up this month. The Pulp Mill will be ready for startup in early March. No. 2 Paper Machine is progressing rapidly with hood erection started.

Project 05 - No. 3 Paper Machine . . .
Structural steel for the No. 3 Paper Machine building is nearing completion. The concrete work has been started on the machine track.

CHATTANOOCHEE PLYWOOD MILL

The site for the Administration Building has been cleared, and foundation work and assembly of the main plywood plant structure are in progress.

Jamison Construction Company has been awarded the prime contract involving machine foundations and erection; steam, hydraulic and air piping; steam vat construction; office building; and fire protection systems, including underground pipelines.

Delivery of the plywood press has been completed, and additional equipment items are expected in the immediate future. These deliveries will peak in late March to early April.

EAST MILLINOCKET

Appropriately named is an "Eat-Rite" hog that is being installed in the new grinder room for shredding the butt ends of pulpwood sticks that are unsuited for the conventional method of grinding.

Improved wire life is a continuing part of mill efforts to reduce operating costs. Evaluations of high density polyethylene forming board covers and suction box covers from various suppliers has been underway during the past year. Appleton ULEX 2000 suction box covers are presently being evaluated on No. 1 machine; and in the near future, a Robalit 61 forming board will be evaluated on No. 6 machine.

A new daily production record of 1,188.2 ton was established on Tuesday, February 7. Previous record was 1,186.6 tons on January 16, 1967.

MILLINOCKET MILL

In addition to period production records in the mill, coater and sulphite areas, 24-hour records were set and broken during the 5th Period. On January 31, the record was set with 1,003.0 tons of saleable production, but was superseded on Feb. 19 with a new record of 1,054.9 tons.
An interesting sidelight. . .
The Beacon Journal of Akron, Ohio, part of the Knight Newspaper Group, became a new customer to Great Northern on January 1st of this year and a renewed acquaintance for their Pressroom Foreman, John Brennan, who tells us this is the first time he has printed on Great Northern paper since 1925. At that time Mr. Brennan worked for the Akron Press, a Scripps paper that has since been discontinued.

Great Northern's 1965 Annual Report won an "Award of Special Merit" at the recent Exposition of Printing held at the Commodore Hotel during Printing Week in New York, January 17-20. Although more than 10,000 entries were submitted (it took the judges three months to review them all), only 200 were considered "sufficiently distinguished" for the award. Great Northern was one of the companies so honored.

Said the Wise Aristotle: "All men by nature desire to know."
Not necessarily to know the many changing "facts" reported by scientists or newspaper reporters or the next-door neighbor. Aristotle meant that a well-occupied mind wants to understand, to discover and to learn.
The businessman who can read and doesn't is no better than the man who can't read. To either, all doors are closed except those which can be seen or heard.
Lincoln, reading the Bible, Euclid, Bunyan, Blackstone and others by the light of a flickering fireplace, built concepts which have moved the world. But he read with his eyes open and his mind fully awake, seeking out what the authors had to say to him.
A man doesn't stop growing until he stops reading good books. (Condensed from Library World, Nov. '66)
WOODLANDS NOTES

New Woodyard Construction. . . Woodlands in the South continues to hum with activity as new woodyards are built in preparation for logging for the second linerboard machine. These woodyards are strategically located 60 to 120 miles from Cedar Springs mill and serve as concentration or focal points for local pulpwood purchases. Pulpwood is delivered to these woodyards in small truckloads of 2 1/2 to 3 cords where the wood is scaled or weighed and mechanically unloaded onto either a railroad pulpwood rack car or a pulpwood trailer for delivery to the mill.

At present, nine Company-owned woodyards are in operation in Alabama and Georgia. Three additional yards are scheduled to be opened March 1 and are located at DeFuniak Springs, Florida; Comer, Alabama; and McRaeville, Georgia. The woodyard at McRaeville will be somewhat of a novelty in that initially a small amount of tree-length logs will be purchased. The Pettibone Company is placing a slasher at the yard for demonstration purposes which will enable the woodyard to convert the tree-length logs to standard-length pulpwood bolts. The Pettibone slasher was recently visited by Mr. Harper and Mr. Malsberger of the Woodlands Department and both were impressed by the performance of this machine. It is possible that the machine will have an important place in our future wood procurement plans. Its performance will be carefully analyzed.

Southern Division Tree Planting Completed. . . The Southern Division has completed tree planting for the '66 - '67 planting season with a total of 2,000,000 pine seedlings planted on Company lands. The majority of these seedlings were set out with tree planting machines which are capable of planting 10 to 15 thousand seedlings per day. Trees are planted by hand in areas of rough terrain. One man can plant between 600 and 800 seedlings per day. A limited number of superior slash pine seedlings will be made available to our Company to compare their growth rate with standard nursery run seedlings. The superior seedlings are the progeny of genetically superior parent trees which exhibit such desirable traits as disease resistance, fast growth, straightness, high specific gravity and small crown size. Growth variation between the two seedling sources will be studied to determine the benefit of such seedlings to the Company.

Woodlands Equipment Purchased. . . The Southern Division recently purchased a D-73 Caterpillar tractor and a single drum Fleco Brush Chopper to be used in reducing brush and small undesirable trees in areas where we have less than an adequate stand of pine reproduction. In the past, this type of work has been done by contractors, and purchase of Company equipment for this task should result in a lower cost. The brush chopper is 10 feet wide, has 12 large cutting blades and will reclaim from 10 to 15 acres per day depending on the terrain and density of the brush.

All Woodlands operations in Maine are processing on schedule. Cutting has been sharply curtailed, and the major effort is now toward moving wood from the woods to river or rail landing sites. As hauling is completed, camps will close down until late spring. With over three feet of snow in the woods, it is very difficult to get men to cut. After all, wallowing around in three feet of snow is not very pleasant or productive. We now have 98% of the scheduled cut produced and 80% of this has either been delivered to the mills, landed on drivable waters, or piled down at railroad sidings. Enough wood has been stored at rail sidings to see the mills through the spring mud season when trucking is severely restricted.
Woodlands is seriously concerned about the spruce budworm epidemic that has hit very hard in the Oxbow area of Maine. There is a lot of public opposition to spraying with DDT; but to date it is the only known chemical that will kill the budworm. If allowed to spread uncontrolled, millions of cords of wood will be lost. It is very strange that people who use pesticides in their gardens or on their own shade trees object to its use in wilderness areas where little or no damage is done. In the budworm epidemic that devastated northern Maine 50 years ago, there was a loss of over 25 million cords of wood. The Company has one town that it purchased 60 years ago, and which was scheduled to be cut in the early twenties, that has yet to be cut because the wood on it was destroyed by the budworm. It still is years away from being ready to cut. It is hoped the Legislature will act to prevent the damage that could result to Maine industry if the outbreak is not controlled.

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The Research and Development Department reports further progress in instrumental analysis with the purchase of an infrared spectrophotometer (Beckman Microspec) and a gas chromatograph (Beckman G.C.-5). Although these two instruments have been set up and operating for a relatively short time, they are already proving to be valuable additions to our analysis capabilities.

The Microspec is rapidly becoming a very valuable piece of laboratory equipment. It has greatly increased our analytical capabilities. Identifications which were not previously possible in our laboratory can now be performed accurately and rapidly. For example, we can now differentiate between clay and other fillers such as Zeolex and Hi-Sil.

Many components that required time-consuming wet chemical techniques can now be done in greatly reduced time. Solvent differentiation, identification of various plastics, and analysis of unknown deposits are but a few of the many things possible with this unit. We now have a library of close to 200 spectra on our instrument.

The G.C.-5 gas chromatograph is principally used in our lab for fine separation although qualitative identifications are possible in many cases. It has been used principally to separate fatty acid and resin acid fractions from tall oil. Fractionization and identification of turpentine fractions is also under development.

This instrument has a great deal of potential relative to analytical separations. The field of gas chromatography is relatively new. We are developing a program and trained personnel to grow with it.

Departmental changes. . . . The Pioneering Research Section of Research and Development has been reorganized into two groups to better serve the needs of the Department and the Company.

The Process Dynamics Group is now under the direction of Orrin H. Merrill. He was formerly in the Paper Research Group and replaces Joe Lebrasseur who accepted a position at the Great Southern mill.

The Applied Mathematics Group is now under the title and will be under the direction of Marshall N. Brunden. This group will continue to serve in such areas as statistical analysis, digital simulations, technical computer programming, and operations research type analyses. In addition this group will be responsible for the programming of the quality control computer for the Millinocket mill.
Another Big Load. ... a 50-ton transformer was placed in position February 1st at the "Little Italy" transformer station at Millinocket. Due to its height the railcar carrying the transformer could move only during daylight hours from Sharon, Pennsylvania and took 16 days to reach Millinocket.

The Transportation Department coordinated the efforts of various departments and agencies. These were our Engineering and Yard Departments; Railroads and Chase Transport, a specialist in heavy hauling; the Bangor Hydro; New England Tel. and Tel.; Bee Line; Millinocket Highway and Police Departments.

It was transferred from the railcar to a heavy duty low-bed trailer in the mill yard; and as the Engineering Department had advised the Cherry Street Bridge would not safely support the load, it was necessary to go through town to the Central Street Bridge to get across Millinocket Stream.

Well in advance of shipment the route was laid out and arrangements were made to have a large number of power, telephone and TV lines raised. As a safety measure, line crew trucks from each of these utilities accompanied the transformer over the route which had been cleared and sanded by the Highway Department. Police cars from the Town and State escorted the caravan.

A visit to the Cedar Springs plant was made by a group of leading citizens of Marianna, Florida who have been very interested in the Company's plans to build a newsprint mill at Sneads, Florida. The visitors toured the plant facilities and were guests for dinner at the guest house. After dinner, Peter S. Paine, Chairman of the Board, and Edward L. Cowan, Vice President Engineering and Research, discussed the Company's thinking relative to the proposed Florida operation.

Salary Administration – Hay Associates (Announced to Officers and Department Heads by R. A. Haak, President, February 17). ... "In order to assist us to improve salary administration for the monthly salaried group, we have retained the firm of Edward N. Hay and Associates. The Hay firm has had many years of experience in this field, including a substantial amount in the pulp and paper industry. Our objective is to develop and maintain an equitable balance in salary rates - both as between the various departments of the Company and in comparison with other companies in the industry. Hay consultants will begin work shortly. They will be assisted by a small group of our own employees from several departments, including the Personnel Department.

The first step will be to obtain an accurate explanation of the duties and responsibilities of various selected key jobs in the Company. This will be done by direct interviews with the holders of these jobs and the resulting descriptions reviewed with them and their superiors. Jobs will then be evaluated according to the skills and experience required and to their importance to the Company. The purpose is to establish salary ranges for certain bench-mark jobs. Later, ranges will be set for all monthly paid jobs. Not until after standards have been established will the proficiency of an individual be considered, and this will be done in connection with an employee's annual performance review.

In my view, the equitable administration of salaries is of the greatest importance to our ability to attract and retain the individuals vital to our continued growth and success. The experience of other companies has proven that a program such as that we are now beginning helps in reaching the goal of fairness and objectivity in setting salaries. Your thoughtful cooperation is requested."
NEW EMPLOYEES

RICHARD J. RYCHLIK, effective January 16, joined the Chicago Sales staff as a Sales Service Representative, reporting directly to George Nystrom. A graduate of Rutgers University, Dick comes to Great Northern from Art Color Printing Company, Dunellen, New Jersey.

JAGJIT S. BHULLAR, effective February 1, joined Central Engineering Department as Steam Engineer, reporting to K. L. Fish, Power Systems Engineer. Jack last worked at "Expo '67" in Montreal. He was born in India and was educated in Mechanical Engineering in Australia, graduating in 1958.

SHYAMAL K. DUTTA, effective February 1, joined Central Engineering Department as Engineer, reporting to F. W. Lindsay, Chief Design Engineer. Sam came to us from a consulting firm in Germany. He was born in India and received his Chemical Engineering Masters Degree in Germany, graduating in 1965.

PAUL ANGELOFF, effective February 1, joined the Transportation Department at Cedar Springs as Traffic Supervisor, reporting directly to Reid Smith. Prior to joining the Southern Division, Paul was employed by Seaboard Airline Railroad.

JOHN A. WILTSE, effective February 13, joined Central Engineering Department as a Junior Engineer, reporting to F. W. Lindsay, Chief Design Engineer. John graduated from University of Michigan in 1964 where he majored in Mechanical Engineering. Prior to joining Great Northern, he worked for the Peace Corps in Pakistan for two years.

DAVID L. DUNHAM, effective February 15, rejoined Central Engineering as a Junior Engineer, reporting to R. H. Hale, Chief Electrical Engineer. Dave graduated from the University of Maine in 1965 with a B.S. in Electrical Engineering. His most recent "employment" was with the Maine Air National Guard for 6 months.

THOMAS R. FLANAGAN, effective March 1, will rejoin the Company as Insurance Manager. Tom and his family will be moving from Bangor to Millinocket within the next few months.

PERSONNEL CHANGES

DALE K. PHENICIE, effective January 1, was promoted from Research Technologist in the Research and Development Department at Millinocket to Analytical Research Group Leader, reporting directly to Victor F. Mattson, Technical Director. Dale has been with the Company since June, 1963.

MARSHALL N. BRUNDEN, effective January 1, was promoted from Senior Research Technologist in the Research and Development Department at Millinocket to Applied Mathematics Group Leader, reporting directly to V. F. Mattson, Technical Director. Marshall has been with the Company since September, 1963.

ROBERT M. LEAVITT, effective January 1, was promoted from Research Engineer to Paper Research Group Leader in the Research and Development Department at Millinocket, reporting to V. F. Mattson, Technical Director. Bob has been with Great Northern since March, 1965.

ORRIN H. MERRILL, effective January 1, was promoted from Junior Research Physicist to Research Physicist in the Research and Development Department at Millinocket, reporting to V. F. Mattson, Technical Director. Orrin has been with the Company since October, 1965.

JOSEPH G. LEBRASSEUR, effective January 20, transferred from the position of Process Dynamics Group Leader at Millinocket to the position...
of Process Control Engineer in the Process Control Department at Cedar Springs, reporting directly to Richard Curran. Joe has been with the Company since 1962.

WARREN E. DENBOW, effective January 30, was transferred from Engineering Assistant in the Central Engineering Department, Millinocket, to Foreman in the Stores Department reporting to T. M. Knight, Assistant Manager of Stores. Warren has been with the Company since August, 1966.

HUGH D. BROOME, JR., effective February 1, was promoted from an hourly Forest Technician classification to the position of Mechanical Supervisor in the Woodlands Department at Cedar Springs, reporting directly to Wendon W. Warr. Hugh has been with the Southern Division since November, 1966.

MANLEY T. JOHNSTON, effective February 1, was promoted from the classification of Engineering Clerk to the position of Assistant to Cost Engineer in the Central Engineering Department, Cedar Springs, reporting directly to Jerry Hunnewell. Manley has been with the Southern Division since November, 1966.

E. HARRIS MERCER, effective February 1, was promoted from the classification of Yard Clerk to the position of Yard Master in the Transportation Department, reporting directly to Reid Smith. Harris has been with the Southern Division since December, 1965.

JEROME L. BLANKENSHIP, effective February 1, was promoted from the position of Yard Master to the position of Assistant Traffic Supervisor in the Transportation Department, reporting directly to Reid Smith. Jerome has been with the Southern Division since October, 1963.

CHARLES R. GRANTLAND, effective February 1, was promoted from the position of Traffic Supervisor to the position of Assistant Traffic Manager in the Transportation Department, reporting directly to Reid Smith. Charlie has been with the Southern Division since December, 1965.

W. VERNON WIDNER, effective February 6, was promoted from an hourly Inventory Clerk classification to the position of Assistant Storeroom Supervisor, reporting directly to Howard Pugh. Vern has been with Southern Division since July, 1963.

ALLEN J. TOZIER, effective February 1, transferred from the classification of Chief Audit Clerk at Millinocket to Accountant at Cedar Springs, reporting directly to C. R. Chandler, Assistant Manager of Accounting. Allen has been with the Company since 1963.

RESIGNATIONS

HERMAN L. BROOKINGS, JR., Assistant to Cost Engineer in the Central Engineering Department at Cedar Springs, resigned January 31, to enter military service.

WILLIAM EVANS, Electrical Engineer in the Central Engineering Department at Cedar Springs, resigned January 31.

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DEATH

ERNEST F. JONES died at St. Petersburg, Florida, on February 18. Mr. Jones joined the Company as a Forester in February, 1919. He became Superintendent, Division of Forest Engineering, in 1929, which position he held at the time of his retirement on June 30, 1952.
In the Company's Interim Report to Stockholders, Peter S. Paine, Chairman of the Board, reported:

"Earnings for the first twelve weeks of the fiscal year amounted to $2,778,000, or 97¢ a Common share after Preferred Stock dividend requirements. In the corresponding period of last year earnings were $2,720,000, or 96¢ a share."

HIGHLIGHTS

<table>
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<tr>
<th></th>
<th>12-25-66</th>
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</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>$29,937</td>
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<tr>
<td>Income Before Taxes</td>
<td>4,530</td>
<td>4,170</td>
</tr>
<tr>
<td>Provision for Taxes</td>
<td>1,752</td>
<td>1,450</td>
</tr>
<tr>
<td>Net Income</td>
<td>2,778</td>
<td>2,720</td>
</tr>
<tr>
<td>Per Common Share</td>
<td>$.97</td>
<td>$.96</td>
</tr>
</tbody>
</table>

The Company's Annual Meeting was held at Millinocket on Tuesday, January 17. At the meeting, stockholders re-elected as directors:

Peter S. Paine, Chairman
Hoyt Ammidon
Howard G. Brush
Edward L. Cowan
Richard G. Croft
Robert Haak
Robert Hellendale
Frederick K. Trask, Jr.
J. H. Heuer

The following officers were re-elected:

Peter S. Paine, Chairman of the Board and Chief Executive Officer;
Robert A. Haak, President;
Howard G. Brush, Vice President - Finance;
Edward L. Cowan, Vice President - Engineering and Research;
Robert Hellendale, Vice President and Secretary;
J. H. Heuer, Vice President - Operations;
Leslie G. Kewer, Vice President - Planning;
John T. Maines, Vice President - Woodlands;
John H. Staples, Vice President - Sales;
Emery E. Allain, Controller;
Donald E. York, Treasurer;
John F. Ward, Clerk

Peter S. Paine hosted a luncheon at the Savoy Hotel in London on Wednesday, January 11, which was attended by about 25 people representing our Kraft Liner consumers in the United Kingdom. Mr. Paine addressed the group, expressing Great Northern's appreciation for the relationship which has developed in the past three years. He also commented briefly on the activities of Great Northern in 1966 and the development plans in our Kraft Liner operations at Cedar Springs. At the close of Mr. Paine's talk, a spokesman for the British guests thanked Mr. Paine and expressed the great satisfaction of the British consumers in having a dependable and reliable source of supply in Great Northern.
Paper production for fifteen weeks ended 1/15/67 . . . .

<table>
<thead>
<tr>
<th></th>
<th>1967</th>
<th>1966</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tons</td>
<td>Daily Avg.</td>
</tr>
<tr>
<td>Cedar Springs</td>
<td>90,894</td>
<td>966</td>
</tr>
<tr>
<td>East Millinocket</td>
<td>109,208</td>
<td>1,068</td>
</tr>
<tr>
<td>Millinocket</td>
<td>83,182</td>
<td>819</td>
</tr>
<tr>
<td></td>
<td>283,284</td>
<td>2,853</td>
</tr>
</tbody>
</table>

CEDAR SPRINGS MILL

The Christmas shutdown began on December 24 and construction tie-ins and maintenance work was carried on during all the following week. During the scheduled start up on January 1, a portion of a shroud ring on one of the buckets on the turbine generator came off, throwing the turbine out of balance. It was necessary to dismantle the turbine to make repairs, thus extending the shutdown until January 5.

The mill went down again unexpectedly on the evening of January 14 due to difficulties and eventual burn-up of the circuit breaker following the Georgia Power Company feeder. Georgia Power had been off all day for construction tie-ins. Production was resumed the morning of January 16.

The new Natural Gas System is in operation both on the Lime Kiln and the boiler igniters. System de-bugging and job cleanup remains. It has been necessary to revert to stand-by oil and propane on several occasions due to gas curtailment.

All phases of the No. 2 Paper Machine Project are proceeding steadily. The evaporators have been completed and were placed in operation January 16th. The setting of dryer rolls and felt support rolls for the first four dryer sections is continuing.

Construction on the No. 3 Paper Machine is accelerating. Caisson installation has been completed and the structural steel erection is progressing rapidly. Most major equipment has been ordered for above project.

Twenty F. F. A. (Future Farmers of America) boys from Blakely, Donalsonville, Colquitt, and Columbia were hired at Cedar Springs in the Woodlands Department to plant pine trees during the Christmas school holidays. The boys hand planted pine seedlings in areas where machine planting was not feasible or practical.

This was a part of the Woodlands Department program to get every acre of Company owned timberland into pine production at the earliest possible date.

According to Mr. Jim Richardson, Woodlands Manager, these boys did an excellent job, as evidenced by the fact that they planted 127,000 pine seedlings on approximately 150 acres during the two week period.

CHATTahoochee Plywood Mill

Site clearing and grading have been completed. Building foundations are under construction, with the delivery of the pre-fabricated building to arrive during mid-January.
EAST MILLINOCKET MILL

A Million Manhour Xmas Present ...

At 8:00 a.m., December 24, 1966, the mill reached one-million manhours without a lost-time injury. The accumulation of these hours started last May 26, thus taking 212 days to reach the goal. The mill's most previous million manhour achievement was on October 22, 1963.

During the million manhour period, a safety contest was held whereby supervisors would contact employees and give them tips on correct safety procedures. The supervisors passed out to employees a total of 1106 safety coupons in a 2-week period, which were deposited for a prize drawing on December 27.

Mill Manager Martin J. Roach drew the coupon which allowed William Barnett to win a "Safety for Charity" award of $100. Bill, who works in the Groundwood Department, designated the Washburn Memorial Church at Sherman Mills as recipient of the $100 award. The supervisor who made the safety contact with Bill was Raymond Michaud, Groundwood Tour Foreman. Raymond was also top man with a total of 322 employee safety contacts.

For December, safety man of the month in the Groundwood Department was Harry Gleason. Harry was given a shirt embossed with "Safety Man of the Month" lettering.

The new goal is two million consecutive manhours without a lost-time injury.

The disease may be present for several years before it becomes obvious by the standard blood counts. In the meantime, there may be damage to the nerves, spinal cord, and brain. As with diabetes, tuberculosis, and other diseases, it is desirable to make the diagnosis before serious symptoms appear.

Labeled specimen bottles will be made available to all employees; and if the test is positive, both the individual and his family doctor will be notified. The family doctor will carry out further tests to determine whether the individual has pernicious anemia. Pernicious anemia patients can be maintained in excellent health by the administration of vitamin B-12 once a month.

The drive at Millinocket is a pilot-type program in that it is the first one to be conducted in the area. The work is being supported by a grant to the Eastern Maine General Hospital from the United States Public Health Service.

MILLINOCKET MILL

A pernicious Anemia Detection Drive at Millinocket ... Pernicious anemia is a fairly common vitamin deficiency disease occurring chiefly in individuals over forty. It is caused not by a deficiency of vitamin B-12 in the diet, but by the inability of certain individuals to absorb the vitamin from the intestinal tract.
WOODLANDS NOTES

Plans are nearly complete for installation of a chipping plant at MacDonald Siding (Portage, Maine). Wood will arrive at the operation in tree-length, go through a ring debarker, then to the chipper, and chips will be blown into railroad cars for shipment to Millinocket.

A new portable slasher, now on order, is expected to be delivered by late March. It will be used at MacDonald Siding until late June, and then moved to Umbazooksus Lake where it is hoped to convert two four-foot jobs to tree-length operations.

Hauling is underway at all the woods camps in the Pittston district. Poor road conditions have resulted from one of the mildest Maine winters on record. On roads that are simply bulldozed with no gravel surface added, the present minimum frost depth is not conducive to holding up a truck loaded with 20 tons of pulpwood. The Aroostook trucking is on more of a year-round basis, but there are still thousands of cords that cannot be moved until the roads are frozen.

Recreation Statistics... A traffic survey was conducted at six check-points on the Company's Maine timberland holdings; and from the period May 15 to November 30, 1966, the count was 33,000 vehicles and 68,000 recreationists.

More than 10,000 Company Sportsman's Maps were distributed to the various checkpoints and to Maine, Boston, New York and Montreal tourist bureaus. A total of 2,236 of the maps were mailed from the Bangor office to fill requests from 47 states and 9 Canadian Provinces. The only states not represented were Alaska, Utah, and North Dakota.

A questionnaire survey of 300 Maine visitors and 277 from other states showed that 284 and 264 respectively planned to make return visits; 246 of the Maine visitors and 247 from out of state favored road usage fees.

A long-range program pertaining to recreational use of Company lands in Maine is being studied by the Division of Forest Engineering.

A complete survey of roads, and picnic and camping sites is being prepared. The possibilities of opening more lakes for camp lots are being considered. The growing demand for wilderness recreation creates a situation that could increase the profitability of our land holdings, as well as contribute to the overall economy of the State. Involved in this study are the Woodlands Planning Committee, and Leo Thibodeau, Public Relations Director.

Six Union Locals and several members of Management participated in an Instructors' Course for the Driver Improvement Program that was conducted at Millinocket on January 10 and 11 by Carl J. Basl, District Director, for the National Safety Council. This course, commonly known as the Defensive Drivers Course, was sponsored by Great Northern in cooperation with the National Safety Council and the Maine Highway Safety Committee. The prime purpose was to establish a joint Management-Union program to bring the course to the drivers in the area. The new Instructors, along with Arthur Michaud who is a certified Instructor, will now make the program available to people in the two towns.

This is the first attempt at sponsoring the course jointly in the State of Maine, and is being watched with much interest by the Highway Safety Committee.

At the conclusion of the course, Donald W. Bail, Personnel Director, presented certificates to each of the participants.
It was a Big Load. . . A 50-ton transformer, almost 15' high and 9' wide and 12' long arrived at McKay Station Thursday afternoon, January 12. The combined efforts of Transportation, Engineering and Woodlands Dept. resulted in the safe arrival of this shipment.

Due to its extreme height, the railcar carrying the transformer could move only during daylight hours from Sharon, Pennsylvania, through Buffalo, New York, taking 20 days to reach Greenville. The services and equipment of a specialist in heavy hauling were engaged for the movement from Greenville to Ripogenus. Preparations were started weeks before shipment to verify that the road from Greenville to Ripogenus Dam could safely handle the combined weight of 75 tons, which included the tractor and special low bed trailer. This involved several trips over the road to spot any dangerous points, and Woodlands personnel shored up bridges that were of doubtful strength.

Transportation contacted and made arrangements with county and local authorities in connection with various clearances and heights, and coordinated the arrival of the heavy haulers equipment and crew at Greenville with the arrival of the railcar. As a precautionary measure, arrangements were made with Woodlands Department to furnish a plow, as well as a heavy sand truck to take care of slippery spots and to help smub the low bed going down steep grades. Other units of the convoy consisted of two light trucks carrying the hauler's crew with their jacks and skidding planks, engineers' cars and miscellaneous observers.

The transformer is a component of a new generating unit that is expected to be ready for operation in October, 1967. The McKay Station has operated with two units since startup in the spring of 1953, but was designed and constructed to accommodate a total of three units.

Maine Water Conditions. . .

The West Branch storage now totals 23.5 billion cubic feet. This is 41% of full storage, 88% of normal and to 20% greater than a year ago.

Precipitation for the month of December was 73% of normal; but for the first two weeks of January, it has totaled only 34% of normal.

William E. Cozens was appointed Chairman of the Groundwood Section of the Printing Paper Division of American Paper Institute at a meeting held in Chicago on December 15th.


DuPont offers this service to customers interested in cost reductions. It was the second presentation of the program at Millinocket, and a number of additional presentations have been made to Great Northern people at DuPont's home quarters. The program was launched by DuPont more than ten years ago and is still making money for them today. It is based on individual cost reduction commitments by each member of Company management.

Since the visitation of DuPont, Great Northern management has decided to go ahead with this program in the Operations Department of its Maine mills.
Listed as a New Year's resolution for the industry by Pulp and Paper Editor Albert W. Wilson -

"Develop better inter-company communications, up and down. As Pete Heuer said, staff and line management are too far apart. Workers should be encouraged to speak out, without fear of losing their jobs. And this would be a really Happy New Year if some genius could show managers how to convince workers that management isn't "against labor" even though it sits across the bargaining table from union leaders."

* * * * * * *

President of the Canadian Pulp/Paper Association, R. N. Fowler, said --

"Pulp and paper production in Canada increased by more than 9% in 1966. This tremendous upsurge was by far the largest every achieved, and it raised to some $2.3 billion the value of the nation's pulp and paper output.

Not only production, but also costs increased considerably during 1966. As a result, the increase in industry output was not reflected in earnings, and in a number of instances profits were lower than in 1965.

The industry as a whole once again continued to produce at close to its productive capacity. That this was achieved while a substantial amount of new capacity was being completed reflected the continued sharp growth in world requirements for pulp and paper.

Particularly notable was the strength of demand from the U. S. where the economy continued to expand with great vigor."

The University of Washington's new pulp and paper school is the only one of its kind west of the Mississippi. There are five other State universities that offer similar courses leading to a degree in pulp and paper technology. They are the University of Maine, New York State College of Forestry, Western Michigan University, North Carolina State University College of Forestry, and University of Miami in Ohio.

* * * * * * *

The State of Georgia is reported by Pulp and Paper as the top producer of pulpwood in the South -

"Purchases of pulpwood grown in the South and delivered to pulp and paper mills in 1965 totaled more than $615 million, according to the Southern Pulpwood Conservation Association. The 1965 total for the region established a new record for the seventh consecutive year and was seven per cent higher than the amount paid by the industry for pulpwood the previous year.

Georgia held top position for the 18th consecutive year as the South's leading producer of pulpwood raw material, while Alabama took second place. The '65 figures are based on the results of a 12-state pulpwood production survey made by the U. S. Forest Experiment Stations at Asheville, N. C., and New Orleans in cooperation with SPCA."

* * * * * * *

NEW YORK (UPI)-- "There's a good chance that Johnny Jones, born in 1967, will be wrapped in disposable paper products at birth and, when his time comes, go out of the world in a coffin lined with the same material."
NEW EMPLOYEES @ CEDAR SPRINGS
JAMES T. MIDDLETON, effective January 2, joined the Woodlands Department as Unit Forester, reporting directly to Warren Garrett. James graduated from the University of Georgia in December, 1966, where he majored in Forestry.

PETER R. PERPALL, effective January 5, joined the Woodlands Department as Unit Forester, also reporting directly to Warren Garrett. Peter graduated from the University of Georgia in December, 1966, where he majored in Forestry.

PERSONNEL CHANGES @ MILLINOCKET
WINSTON H. BROOKS, effective January 1, transferred from the Controller's Department where he was Budget Analyst and Cost Accountant to Plant Accountant, reporting directly to Scott B. Weldon, Mill Manager. Win has been with the Company since 1964.

PERSONNEL CHANGES @ CEDAR SPRINGS
(Effective dates -- January 1 unless otherwise noted)

K. EARL DURDEN has been promoted from Assistant Manager of Accounting to Manager of Accounting at Millinocket, Maine. Earl will report directly to Peter F. Yacavone, Assistant Controller and will be functionally responsible for general accounting, billing, cost accounting and central typing. Earl joined the Company at Cedar Springs in 1963.

CHARLES R. CHANDLER was promoted from Accountant to the position of Assistant Manager of Accounting. Charles joined the Company in June 1966, prior to which he was employed with Singer Company, Syosset, N. Y.

WILLIAM L. MOSELEY, JR., effective January 9, transferred from Yard Clerk to the position of Finishing and Shipping Supervisor for the Chattahoochee Plywood operation, reporting directly to W. K. Hoseid. Prior to joining the Company, Bill was a Major in the U. S. Army.

WILLIAM W. RICKETSON was promoted from the position of General Superintendent to Mill Manager. Jack joined the Cedar Spring's operation as Paper Mill Superintendent prior to the mill startup in 1963. Jack was formerly employed by Bowaters at Calhoun, Tennessee.

GEORGE W. VAN GOETHM was promoted from the position of Pulp Mill Superintendent to General Production Superintendent. George also joined the Company prior to the mill startup, and was formerly employed by Continental Can Company, Augusta, Georgia.

JULE M. TALLEY, Assistant Pulp Mill Superintendent, was promoted to Pulp Mill Superintendent. Jule is another "before startup" man and was previously employed by Continental Can at Augusta, Georgia.

OWEN L. FUSSELL was promoted from Pulp Mill Foreman to Assistant Pulp Mill Superintendent. Owen came to the Company from Tennessee River Pulp and Paper Company at Counce, Tennessee.

DOY ELLIS was promoted from Finishing and Shipping Supervisor to Assistant Paper Mill Superintendent - Finishing and Shipping. Doy, another "before startup" man, was formerly employed by Continental Can Company at Port Wentworth, Georgia.

DAVID F. CRUM was promoted from Woodyard Supervisor to Assistant Pulp Mill Superintendent - Woodyard. Prior to joining the Cedar Springs operation in 1963, Dave was employed by Tennessee River Pulp and Paper, Counce, Tennessee.

DENNIS V. MERRITT was promoted from an hourly Digester Operator classification to the position of Pulp Mill Foreman. Prior to joining the Company in 1963, Dennis was also employed by Tennessee River Pulp and Paper Company.

JOHN E. COLLINS was promoted from an hourly Shipping Clerk classification
cation to the position of Finishing and Shipping Shift Foreman. Prior to coming with the Company in September, 1963, John was employed by Kimberly-Clark Corporation at Coosa Pines, Alabama.

JOHN V. PRATT was promoted from an hourly Shipping Clerk classification to the position of Finishing and Shipping Shift Foreman. Before joining the Cedar Springs operation in September, 1963, John was employed by Bowaters Southern Paper Company, Calhoun, Tennessee.

THURMAN M. COLLINS was promoted from an hourly Shipping Clerk classification to the position of Finishing and Shipping Shift Foreman. Thurman is another "September, 1963 man," prior to which he was employed by Georgia Kraft Company at Macon, Georgia.

GEORGE A. KEITH was promoted from an hourly Shipping Clerk classification to the position of Finishing and Shipping Shift Foreman. Prior to joining the Cedar Springs operation in September, 1963, George was employed by Continental Can Company at Augusta, Georgia.

BOBBY L. WALKER was promoted from an hourly Wood Area Operator classification to the position of Woodyard Shift Foreman. Bobby also came with us in 1963, prior to which he was employed by Gulf States Paper Company at Demopolis, Alabama.

WILLIAM L. THOMAS was promoted from an hourly Wood Area Operator classification to the position of Woodyard Shift Foreman. Prior to joining the Company in September, 1963, William was employed by Georgia Kraft Company at Macon, Georgia.

HUBERT W. CLINES was promoted from an hourly Wood Area Operator classification to the position of Woodyard Shift Foreman. Prior to joining the Company in August, 1963, Hubert was with the Georgia Kraft Company at Rome, Georgia.

SHERWIN T. COULTER was promoted from an hourly Wood Area Operator classification to the position of Woodyard Shift Foreman. Prior to joining the Company in September, 1963, Sherwin was employed by Georgia Kraft Company at Macon, Georgia.

JAMES A. PUGH was promoted from an hourly Shift Operator classification to the position of Technical Services Shift Foreman. Prior to joining the Cedar Springs operation in November, 1963, James was employed by International Paper Company at Mobile, Alabama.

PERCY R. JONES was promoted from an hourly Shift Operator classification to the position of Technical Services Shift Foreman. Prior to coming with the Company in September of 1963, Percy was employed by Owens-Illinois Paper Company at Valdosta, Georgia.

BILLY E. RATHIEL was promoted from an hourly Shift Operator classification to the position of Technical Services Shift Foreman. Billy also came to Cedar Springs in September of 1963, prior to which he was employed by Hydrotane Gas Company at Colquitt, Georgia.

BILLY W. CHILDREE was promoted from an hourly Shift Operator classification to the position of Technical Services Shift Foreman; and prior to joining the Company in September, 1963, Billy was employed by Chemstrand Corporation at Pensacola, Florida.

RESIGNSATIONS

JAMES R. SCHOETTLER, Director of Product Development at Millinocket, resigned January 20, 1967, to accept a position with Nekoosa-Edwards Paper Company at Port Edwards, Wisconsin. Dr. Schoettler had been with Great Northern as Technical Director since 1959.

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DEATH

WILLIAM R. HOUSER, Materials Engineer at the Millinocket mill, died January 7 shortly after admission to a local hospital. Mr. Houser had been with the Company since April 10, 1935.