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**THE B.C. PAPER MANUFACTURING COMPANY**

by George McKnight

The B.C. Paper Manufacturing Co. Ltd. was promoted by Herbert Carmichael of Victoria in 1891. Carmichael was the Provincial Assayer at the time. What prompted or who suggested the idea is not on record. William Hewartson, a retired English papermaker, then living in Victoria, may have been the responsible party. He was the technical adviser and first manager. Herbert Carmichael, the promoter and director of the company, had no experience in pulp and paper manufacturing.

Herbert Carmichael must have had a hard and busy time selling stock in the company. He showed his faith and expertise by subscribing and paying for 150 shares. The second largest stockholder was a citizen of Santa Barbara, California who took twenty shares. Three Alberni people took stock: A.D. Faber of Sproat Lake, George A. Huff, storekeeper in Alberni, and Frank Sterling, rancher, of Sproat Lake. In all some 270 shares of \$100.00 value were subscribed and a total of \$26,450 was received. The first directors of the company were William P. Sayward, lumber manufacturer, Joshua Davies, auctioneer, J. Stuart Yates, barrister and solicitor, Thomas M. Shotbolt, druggist, and James Thomson, contractor.

100% Recycled paper



There is no record of who suggested the location, just below the first rapids of the Somass River, Alberni Valley. It is evident the site was chosen because a low head of water power could be developed for a moderate outlay, there was an abundant supply of pure water and great timber resources, and the site was on tidewater.

In 1891 very little was known of the power resources of the mainland or Vancouver Island, and if it was known it was recognized that the development of the larger power sites would call for more money than the company had at its command. The land, Lot 7, was bought from John Mollets, who had purchased it from the Crown in 1886. The title was transferred in the land registry office in Victoria on August 26<sup>th</sup>, 1891. In September of that year Herbert Carmichael conveyed the property to the B.C. Paper Manufacturing Company. Site clearing operations began soon afterwards.

Alfred Carmichael tells the story of his becoming involved in the enterprise as a young lad of only 16 when he was advised by Herbert Carmichael to go to Alberni from Victoria and work on the construction of the mill. Alfred sailed as a passenger on the steamer *Maude* on one of its regular trips. Upon arriving at Alberni, he was put on the site clearing crew by the man in charge, James Thomson. His wages were \$30.00 per month and he paid \$23.00 per month for room and board with the Thomsons, who at that time ran the River Bend Store.

An interesting sidelight to the story is a collection of Carmichael's letters to his mother, to whom he wrote regularly from 1892 until 1897 and which she kept and later returned to him. They cover life in Alberni from the start of the mill's construction until it was finally closed and abandoned. One of the letters cites the fact that there was very little cultural activity in the community. A group called the "Alberni Mutual Improvement Association" was organized to meet this need. In one of his letters Carmichael describes the aim of the association as follows:

"It will do great good to the Valley. It will cause everyone to read and think more... a circulating library has been established... We have begun a society journal to which members will contribute and which will be read at each meeting. On February 23, 1892 a meeting of the society was held and the program included an essay on readings from Scott by Mr. James Thomson, Dickens by Mr. Howitt, Shakespeare by the Reverend Mr. Smith, and if I have time I may give a reading from Longfellow."

On January 3, 1893 Carmichael described a concert at which George Huff had been invited to sing:

"He chose 'Polly Wolly Doodle All the Day.' Mr. Huff has no voice at all but he thinks he has. He arrived just in time to hear his name called for him to sing. The audience cheered him on and he liked this very much. He advanced to the stage and bowed to the audience. There was only one book with the words and music and the accompanist took it and so Mr. Huff tried to remember the words. He forgot some of them and so broke down part way through. The people cheered him on and so he took another look at the words and then started again. This time he struggled through to the end. The audience cheered, laughed and shouted 'Encore.' Mr. Huff was delighted and would have sang it again had the chairman permitted it."

On March 23, 1893 he wrote: "Oxen are used instead of horses. They are awfully slow in their movements but nevertheless are most useful as they can work where horses cannot. We use a fine pair called Tom and Dick for logging."

The construction of the dam proved to be a problem. In 1891 a contract was awarded to a firm called Russell and Jobson, of Victoria, to build the dam. The project was well underway and about two-thirds completed after three months of work when the fall rains came. The river rose and the partly-finished dam was completely washed out by the flooding river. The company went broke and most of the workers on the project never got paid whatever wages were still owed them for the summer's work. There was no legislation protecting workers as there is now.

The following year, in 1892, a contract was awarded to Robert Wood to build the dam and the mill. Robert Wood was one of the Wood brothers who later established the Barclay Sound Cedar Company, the original mill which was to become the Alberni Pacific Lumber Company. On May 15<sup>th</sup>, 1893, Herbert Carmichael was having difficulty raising the necessary funds to finance the construction and to pay the contractor, Robert Wood. Consequently, Wood's workers did not always get their pay on time.

William Hewartson, the manager, was dismissed in August of 1893 for his failure to get the mill operating as planned. Everything worked against him, so it was said. The raw material which could be made into paper with the equipment that had been installed was rags, rope and old gunny sacks. The coast towns were scoured for such material. By the time it reached Alberni the cost was prohibitive and in any case the supply failed. The mill produced its first paper on July 24<sup>th</sup>, 1894. Attempts to use wood as a raw material were made and the first wood pulp was produced on Monday, October 1<sup>st</sup> of that year.

The only wood pulp machines installed were a chipper and a crusher. Some wood was chipped and crushed and put into the rotary digester with a liquor of caustic soda. The result was disappointing, the wood could not be digested.

After Hewartson's dismissal a Scottish papermaker named George Dunbar was brought from Scotland to manage the mill. Upon arriving and inspecting the plant, Dunbar expressed in no uncertain terms that wood pulp paper could be produced with the equipment available. Dunbar consented to some experimenting and even tried bracken ferns as a raw material. A coarse wrapping paper resulted but the cost of gathering the ferns, even with the cheap labour of the times, was prohibitive.

All of this was quite a comedown for Hewartson, who had such high expectations for the mill when it was being constructed. The following is quoted verbatim from an article he wrote for a Winnipeg newsletter:

"At Alberni are the mills of the British Columbia Paper Manufacturing Company, Ltd. They are situated on the Somass River, the largest river on Vancouver Island, at the head of navigation, in a lovely valley. The mills are very extensive, covering a large area of ground.

The principal buildings are about 300 feet long, with about 50 feet in width, partly two stories high, and consist of lumber and planing mills, pulp and paper mills, with paper bag machinery. The motive power is obtained from the Somass, a substantial dam having been built across it above the rapids, and a massive flume,

erected through a rock cutting 800 feet long by ten feet wide and five feet deep. Three large turbine water wheels give the motive power now required.

The lumber mill consists of a log frame, with 60 inch circular saw, cutting logs up to 40 feet in length, four saw gang edger, planing and moulding machinery to take up to 8 x 6 inches, self acting shingle machine and jointing machine.

It is the intention of the Company to add sash and door machinery as soon as the requirements warrant it. The paper and pulp mill machinery is of the most improved description for working up the refuse of the sawmill, and also any other paper making material consisting of rag grinding machine, wood barking, chipping, crushing and pulping machines.

Two large globular boilers (or digesters), two roller gangs with granite runners, five rag beaters, four 'Driver' paper making machines with five cylinders, large reel paper cutting machine, bag making and printing machinery, capable of turning out 10,000 paper bags per hour. There is also an engineering and blacksmith shop, fitted with a large lathe, saw bench, etc. and a massive steam boiler for washing and drying. The works will be lighted throughout by electricity.

Chemical works for the production of chlorine and caustic by electricity are also on the program as well as works for the production of wood naphtha, benzine, turpentine and resin. The Company owns a tugboat and two scows, and are building two wharves and a tramway.

They have laid out about fifty acres of their property as a townsite, and other exceptional facilities for building thereon. Water and electricity will also be provided."

The great expectations expressed in Hewartson's article have not yet been fully realized, even more than 100 years later with the high state of wood utilization and paper making technology available today.

It is interesting to note the hours of work at the mill:

Monday to Friday	6:00 AM to 6:00 PM
Saturday	6:00 AM to 12:00 Noon (day shift)
Sunday	12:00 Midnight to 6:00 AM Monday (night shift)
Monday	6:00 PM to Tuesday 6:00 AM (night shift)

All week the same to 6:00 AM Saturday, when the shift did not go to work until 6:00 AM Monday.

George Bird's description of the events leading to the start of the mill are from his writings as found in the book "Tse-Ees-Tah," the native words for "One Man in a Boat":

"The flume was built, the sawmill set up, temporarily powered by the boiler which was in place for the paper mill's needs. Later it was driven by a 40 H.P. turbine. By 1893 the mill was almost ready to run. (July 24<sup>th</sup> 1894 was the date the first paper

was produced and a sample of it is on display in the Alberni Valley Museum. This was the first paper produced in British Columbia.)

The machinery, several tons of old paper, barrels of chemicals, and resin were brought by sailing ship to Victoria from England. The cargo was then transferred to the steam freighter 'Mascot.' This scow like vessel brought it right up the Somass River at high tide to the bridge at River Bend. It was unloaded onto a strip of rocky ground between the river and the road. Here, just up river from the present highway bridge is a perpendicular rock bench along the river bank which forms almost a natural wharf. It was there the machinery was unloaded. From there it was taken up the river on a scow which was towed by the steamship 'Lily,' of which I was the engineer. Several trips were necessary."

There is another account which states that Andrew Service hauled part of the machinery to the mill site with oxen, which would be along Falls Road and into the mill site along the present entrance to Paper Mill Dam Park.

"By carefully watching the tides, all but one load was safely landed. The exception was several barrels of lime which caught fire through water leaking into the bottom of the scow.

While the construction of the mill was going on, a few houses started to spring up at Milltown, the townsite laid out on the mill property. Those who built houses were Ben Tubman, John Cameron, Alfred Carmichael, Mrs. Cox and myself. The Company built two for R.H. Wood and James Dunbar, their second manager. Stephen Wells walked to work from Beaver Creek Road where he had located and Andrew Service came from his ranch on the opposite side of the Stamp River from Prairie Farm, crossing the river at the mill in a canoe."

Andrew Service's ranch was in the area of Service Road and Service Park, both of which are named for him.

"The process of making paper consists of cutting rags and old clothing and ropes into short lengths with a machine, something after the principle of a chaff cutter. Two Chinese handled this work and the transfer of the material to the next process, which was carried on in two globular steam digesters. These revolved slowly under steam pressure for several hours, about half filled with the material and the necessary amount of soda.

The cooked mass was then raised to the beater, or rag engine room upstairs. There were five of these machines driven by a 100 H.P. turbine. They each consisted of a large oval cast iron pan, with a set of knives securely fastened to the bottom, over which revolved very quickly a very heavy cast iron roller about 2 feet, six inches in diameter and about 3 feet long.

As the material, with sufficient water, circulated around the pan, through the action of the revolving roll, it passed between two sets of knives. The roll was gradually lowered. The fibres of the material were slowly separated and reduced to the right length and condition. Finally, the whole weight of the revolving roll was running on the lower knives and the 'stuff' was soon ready to be released to run down the 'stuff chest' into the machine room.

Whilst this process had been taking place, quantities of fresh water circulated through the machine and perfectly cleansed the material. If bleaching was indicated, chloride of lime was now added, and it was interesting to watch it change to the desired colour. Unless it was blotting paper that was being made, sizing made of resin and soda was now added. It was then ready to be made into finished paper. One man looked after the digesters, and a white man and a Chinese helper ran the rag engines during each 12 hour shift.

I was one of those in charge. It took much observation and good judgement to carry out this work, so that an even and good quality paper finally resulted.

The paper machine was more complicated. It was driven by a 25 H.P. (water) turbine. The 'stuff,' looking similar to skim milk if white paper was being made, flowed evenly over a five foot endless finely woven brass wire cloth. Endless square rubber bands travelling on the wire formed the edges of the paper.

As the wire travelled slowly along, it gently vibrated sideways, to distribute evenly the fibres of the paper. It passed over two steam vacuum suction boxes, where all the loose water was drawn from the paper. The paper at this point was still moist and had no strength.

As it left the wire, it was carried on, first by an endless woollen felt and then a cotton one. Next it went through two sets of heavy steel rollers called couch rolls and press rolls to five drying cylinders. These cylinders were heated by steam. The paper passed around all these supported by moving endless cotton felts a little wider than the paper.

When it left these cylinders, which were about 30 inches in diameter, it had sufficient strength to carry itself to the calendar rolls and was next wound onto the winder. Here the paper could be cut into the width required by circular cutters. A revolving knife cut into the proper lengths.

Two White Men operated the paper machine and two Indian girls the winder. The sheets or rolls of paper now went to the finishing room, where they were packed by two white girls. It was hauled to the wharf in Alberni for shipment to Victoria.

The mill closed in 1895. Alfred Carmichael and myself, assisted by two or three Chinese workers, cleaned up all of the material left. About five tons of paper was the last shipment made. It was about 10 years before the next paper was made in British Columbia at Powell River in 1910."

Actually it was 15 years and, as a result of the failure of the Alberni mill, what was learned from the mistakes and errors in judgement helped to guarantee the success of the Powell River venture, which is now part of MacMillan Bloedel's pulp and paper production facilities.

Further research indicates that the mill which Hewartson purchased for the company had already been abandoned in Scotland as being out of date. It was shipped and assembled in the expectation that it could be used to make paper out of wood but this proved impossible. The mill was not even suitable for paper production using rags, let alone wood. It was a venture based on unrealizable expectations and out-of-date technology.

It was, however, the first paper mill in British Columbia and a model of the mill donated by MacMillan Bloedel, along with samples of the paper it produced, are now on exhibit in the Alberni Valley Museum.

British Columbia Paper Manufacturing Company Limited  
List of the shareholders of the company as of February 26<sup>th</sup>, 1894

H. Carmichael	Victoria	Secretary	150 shares
A.D. Faber	Alberni	Farmer	5
George A. Huff	"	Storekeeper	2
F. Sterling	"	Farmer	1
W. Alexander	Santa Barbara, California	Gentleman	20
John Jardine	Victoria	Painter	2
James Hogarth	"	Clerk	2
C.F. Jones	"	Accountant	2
A. Moffat	"	Farmer	2
A.B. Wood	"	Farmer	2
W.P. Sayward	"	Capitalist	5
T. Shotbolt	"	Chemist	5
Josh. Davies	"	Auctioneer	5
J.S. Yates	"	Barrister	5
Jas. Thomson	Alberni	Farmer	5
Hugh Barr	Confield	Farmer	4
Wm. Hewartson	Alberni	Paper maker	2
I.R. Robertson	Victoria	Gentleman	5
N. Carmichael	"	Surveyor's assistant	4
John Fraser	"	Bookkeeper	2
F.A. Bennett	"	Barrister	5
H.M. Yates	"	Real estate agent	1
K.S. Townsend	Libertyville, Illinois	Merchant	2
H. McCleery	Belfast, Ireland	Commercial agent	2
M.R. Smith	Victoria	Baker	2
G.S. Smith	"	Baker	1
J.J. Erskine	Manchester, England	Commercial Traveller	7
A.C. Aitken	Cowichan	Farmer	2

Called upon each of the 100 shares, \$100.00

Total amount received	\$26,450
Total unpaid	<u>550</u>
	27,000

Dated at Victoria, B.C. this 5<sup>th</sup> day of March, 1894



### **B.C. BOOK PRIZES**

The Haig-Brown regional prize for 1996 went to Ken Drushka for his biography of H.R. MacMillan, B.C.'s first Chief Forester and pioneer lumberman. The book was published by Harbour Publishing of Madeira Park and is highly recommended.

### **DAVID DOUGLAS COMMEMORATED**

On May 18, 1996 the David Douglas Society of Western North America and the Superintendent of the Fort St. James National Historic Site officiated at the unveiling of a memorial monument to pioneer botanist David Douglas. He traveled throughout western North America, from California to British Columbia, between 1825 and 1833. On one of his exploratory journeys he planned to travel from Fort Vancouver on the Columbia River to Siberia via central and northern B.C. Douglas reached Fort St. James on June 6, 1833 but a week later his canoe was swamped in the Fort George Canyon of the Fraser River. His collections and journals were all lost. He died the next summer in Hawaii.

### **EX-FOREST SERVICE VESSEL SQUADRON NEWS**

This year's vessel rendezvous will be held from Saturday June 29 to Monday July 1 inclusive at Telegraph Harbour Marina on Thetis Island. Approximately 14 - 16 boats are expected and will be open to visitors between 13:00 and 16:00 on June 30. Further information can be obtained from Doug Mitchell at 599 Norris Road, Sidney, B.C. V8L 5M8. Phone 656-2959.



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