

AGENT'S ANNUAL REPORTS AND
STATISTICS

YEAR 1902.

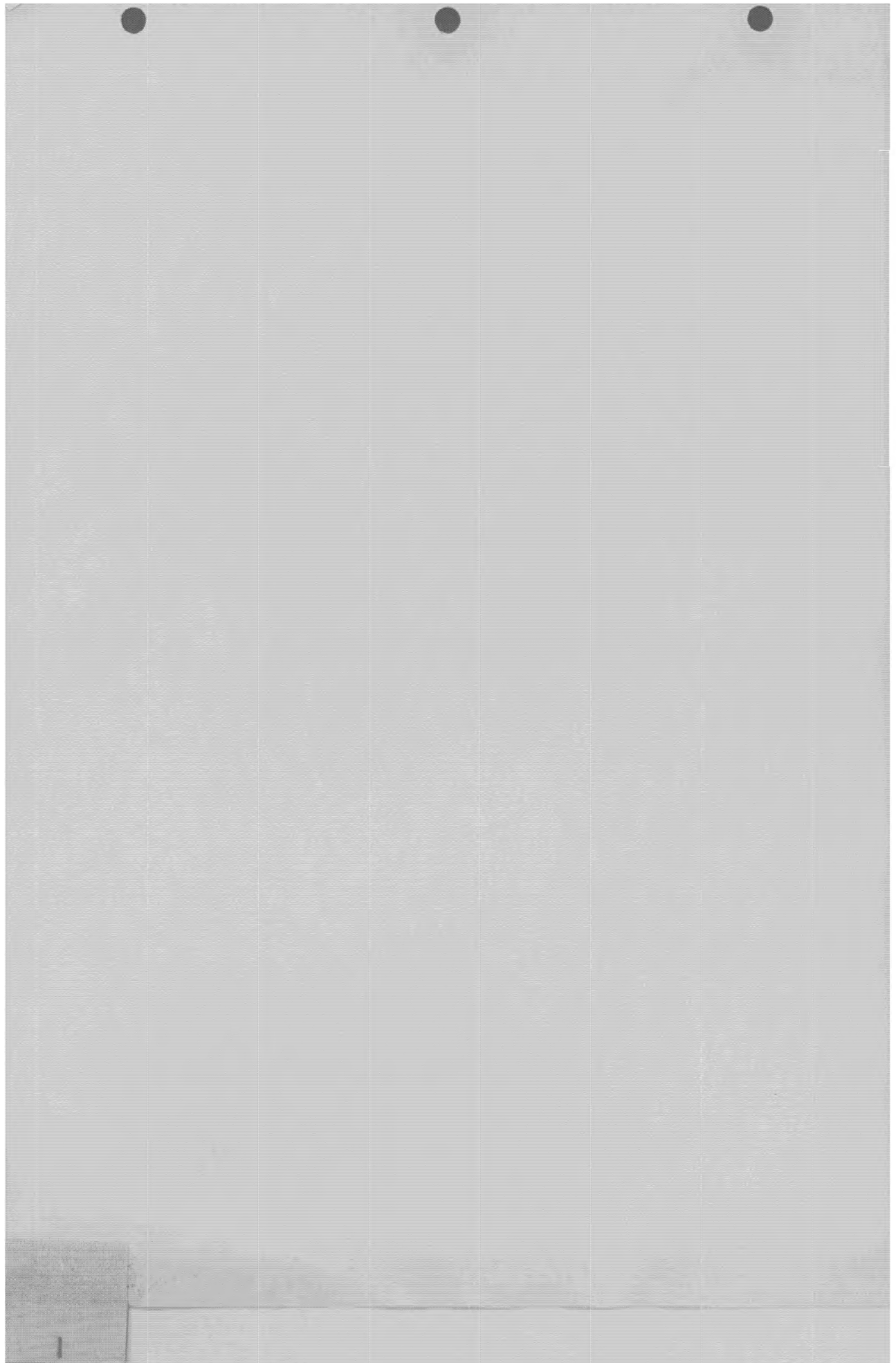
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#2072

ANNUAL REPORTS AND STATISTICS
DEPARTMENT OPERATIONS
YEAR ENDING NOV. 30, 1902

I N D E X

1	Vessel Department Operating Statistics Cleveland Cliffs Iron Company	1	✓
1	" " " " Cleveland Iron Mining Company	1	✓
2	Railroad Department Annual Report Munising Railway Company to Commissioner of Railroads	2	✓
3	Railroad Department Annual Report Marquette & Southeastern Railway Company To Commissioner of Railroads	3	✓
4	Railroad Department Annual Report Lake Superior & Ishpeming Railway Company to Commissioner of Railroads	4	✓



P O N T I A C

	1 9 0 1		1 9 0 2	
	DAYS	PERCENT	DAYS	PERCENT
Time in port,	81	39.7	80½	39.1
Time sailing	114	55.9	135½	55.3
Time lost by bad weather, fog and low water,	6	2.9	4	1.7
Time lost waiting at Soo Canal and River,	3½	1.3	5	2.2
Time lost by accidents,	½	.2	4	1.7
 TOTAL TIME IN COMMISSION,	 204	 100	 227	 100.0
 Number of trips made,	 24		 26	
Number of cargoes carried,	24		26	

PERCENTAGES OF TIME IN COMMISSION IN PORT

Season	1898	38.1
"	1899	35.3
"	1900	34.5
"	1901	39.7
"	1902	39.1

PONTIAC

RECEIPTS	TONS	AMOUNT	PER GROSS TON FREIGHT CARRIED
36 Cargoes iron ore from Marquette,	86,371	\$80,459.70	\$.7000
<u>DISBURSEMENTS</u>			
Extraordinary and General Repairs,	\$ 4,357.75		
Ship Keeping and Winter Dockage,	97.67		
Fitting Out,	983.77		
Wages and Captain's Salary,	9,431.92		
Captain's Expense account,	85.82		
Tug Services	545.98		
Handling Cargoes,	16,450.66		
Taxes,	430.19		
Marine Insurance,	4,448.67		
Freight List Insurance,	60.47		
Passenger Cabin Equipment,	25.25		
Mate's Supplies,	292.66		
Provisions,	1,554.78		
Steward's Supplies,	97.72		
Fuel,	9,362.39		
Engineer's Lubricants,	151.63		
Engineer's Supplies,	141.31		
Boiler Repairs,	360.19		
Machinery Repairs,	189.22		
Auxiliary Machinery Repairs,	38.87		
General Expenses (Telegrams, Dues Lake Carriers Assn. Etc	162.12		
Laying Up,	963.97	50,232.97	.5816
<u>NET EARNINGS FOR SEASON</u>		\$10,236.73	\$.1184
Less amount not allowed by Insurance Co.			
in adjustment of claims,		506.31	
Making total net gain for season 1902		\$ 9,730.52	

NOTE:

The cost per ton to operate after eliminating Extraordinary and
General Repairs account is \$.5311

P O N T I A C

Comparisons

	1 9 0 1	1 9 0 2
Days in commission,	304	227
Number of miles traveled,	32,821	35,870
Number of trips made,	34	26
Number of cargoes freight carried,	24	26
Gross tons freight carried,	79,632	86,371
Average rate freight per gross ton,	\$.7177	\$.7000
Average cost to carry per gross ton freight,	.5520	.5818
Net earnings per ton freight carried,	\$.1657	\$.1184
Cost per ton to operate after eliminating Extra & Gen. Reprs.	\$.5271	\$.5311
Gross Receipts,	\$57,155.85	\$60,469.70
Gross Expenditures,	43,958.51	50,232.97
Net earnings,	\$13,197.34	\$10,226.73
Percentage of operations to earnings,	76.9	83.1
Gross earnings per mile traveled,	\$ 1.7414	\$ 1.6855
Operating expenses per mile traveled,	1.3393	1.4004
Net earnings per mile traveled,	\$.4021	.2851
Gross earnings per day,	\$ 280.17	\$ 266.24
Operating expenses per day,	215.48	221.29
Net earnings per day,	\$ 64.69	\$ 45.05
Expenses per day excluding cargo handling costs	\$ 141.18	\$ 148.82
Cost provisions per man per day(Excluding extra meals)	\$.368	\$.334
Average tons coal consumed per mile steamed,	207/2000	210/2000
Average cost coal consumed per mile steamed,	\$.2505	\$.2593
Average tons coal consumed per hour steamed,	1-480/2000	1-506/2000
Average cost oil consumed per mile steamed,	\$.00540	\$.00423
Average cost of oil consumed per hour steamed,	\$.0648	\$.0503
Average wages paid per day while in commission,	\$ 33.66	\$ 34.86
Average Ore cargoes from Lake Superior,	3318	3322
Average draft water on Ore cargoes from Lake Superior,	17'6"for'd	17'7"for'd
Average mean draft water on Ore cargoes from Lake Superior,	18'3"aft 17'10 ¹ / ₂ "	18'3"aft 17'11"

S T E A M E R P O N T I A C

GENERAL OPERATIONS

The Steamer PONTIAC sailed from the port of Cleveland, on her first trip of season 1902 on April 17th and finished discharging last cargo at Buffalo on November 29th, having been in commission 227 days.

This Steamer was engaged exclusively in transporting iron ore from Marquette to Lake Erie Ports. Altogether 26 round trips were made during the season, the Steamer traveling 35870 miles, going up light every time.

The season rate of 70¢ per gross ton was received on all cargoes carried. The actual operating cost per ton is \$.5816, as against \$.5520 in Season 1901. The average net earnings per ton, therefore, are \$.1184, as compared with \$.1657 in preceding year.

STEAMER PONTIAC

GENERAL REPAIRS

The largest item of repair placed on this Steamer during the past year was for an entire new floor ceiling and bilge ceiling. This new floor was laid from the after bulkhead to the forward bulkhead,-the entire length of the boat. Under the hatches three inch oak was used, the rest of the ceiling being two inch oak plank, all laid on inch pine boards, with new sleepers placed between the angle irons. All the oak was wire spiked to the pine sleepers, and in the after compartment, in addition two bolts were used in bolting each plank to the angle iron. This work was done on a contract price of \$1990.00.

In addition to the above, there was paid for labor chipping the tank top and bilges and coal tarring same, \$130.50, making the total cost of the new ceiling and bilges, \$2020.50.

Among the other items going into the repair account, the following may be mentioned as some of the more prominent ones:

The inside of the hold was scraped, wire brushed and painted, from the bilge cap to the main deck. The cost for labor was \$290.00, and the material used cost \$50.00, making the total cost of this work \$330.00.

Wm. Sweeney, the Ship Carpenter, for repairs to rail, spardeck, hatch sections, coal bunker, fender strake, etc. was paid \$544.31.

In the passenger's dining room, the side walls were refinished, also the sideboard and table. The panels and ceiling of the crew's dining room were scraped and refinished with one coat of shellac, two coats of varnish and all rubbed down with pumice stone and oil, at a cost of \$65.00.

S T E A M E R P O N T I A C

GENERAL REPAIRS #2

The feed pump on this Steamer had become much worn and was overhauled by the Snider-Hughes Co., the builders of same, at a cost of \$112.51.

The other items of repair making up the usual list of this character will be found in the usual elaboration of the General Repair Account.

The most important repair for the coming season will be the putting of a new steel spardeck on this Steamer, and also the removing of the main deck to make the Steamer more accessible to the use of the clamshell unloading device. The cost of removing the present wooden spardeck and replacing with eleven pound steel plate, and the removal of the present wood on the main deck will cost in the neighborhood of \$5,000.00.

The PONTIAC'S boilers are in an unsatisfactory condition, and a number of cracks are liable to come through during the coming season, but it is the opinion of Chief Engineer Kelley that by the expenditure of five or six hundred dollars, the boilers can be carried through another season. The present condition of the boilers may be summed up as follows, in a statement made by Chief Engineer Kelley, of the Line, and Chief Engineer Thomas Reas on Jan. 10th:

PORT BOILER, Port Furnace.

Second expansion ring has crack on forward side 4" long, and crack on after side 18" long. Thought unnecessary to make this repair this season.

Third expansion ring has crack 18" long on forward side, after side good! Unnecessary to make repair at present.

STEAMER PONTIAC

GENERAL REPAIRS #3

Starboard Furnace.

Second expansion ring forward side good: after side has crack 15" long. This may be deferred until later.

Third expansion ring has crack 12" long on forward side: after side being good. Repair of this may be deferred.

MIDDLE BOILER, Port Furnace.

Second expansion ring forward side good, after side has crack 3' long. It will be necessary to put a butterfly patch on this crack before the Steamer goes to sea again. This patch will reach as high as the top of the grates.

Third expansion ring has crack 3" long on forward side. This will be covered by the butterfly patch on No.2 ring.

Starboard Furnace.

Second expansion ring: The forward and after sides of this ring are so badly cracked that the entire lower part of the ring will have to be cut out and a patch put on, which will extend over on to #3 expansion ring. This will be the most expensive repair that will have to be put on the boilers this winter.

The fourth expansion ring on forward side is good, but the after side has a crack 18" long. It will not be necessary to repair this crack this winter.

STARBOARD Boiler, Port Furnace.

The second expansion ring has a crack 2" long in forward side, and crack 20" long on after side. Unnecessary to repair this season.

Third ring has crack 6" long on forward side, after side good. Unnecessary to repair.

Starboard Furnace.

Second ring on forward side good, after side cracked 2' 8" long. It will be necessary to put a butterfly patch on this crack before the Steamer goes to sea again. This will also cover a trace of a crack on the forward side of #3 ring.

The reason it is the opinion of our Engineers that these boilers can be gotten through this season with the foregoing repairs, is that the cracks above mentioned, are not through, and that only a few of them will possibly come entirely through during the coming

STEAMER PONTIAC

GENERAL REPAIRS #4

season of navigation. It is the opinion of Chief Engineer Kelley that the boilers will hardly last longer than the present season. Then something radical will have to be done with the steam plant of this boat, either by the installation of new boilers, with or without forced draft, or by taking out the entire inside of the boilers, leaving nothing but the shell and backheads.

The only explanation that can be given for this early cracking of the rings, is that the material did not happen to be as good as the average run of metal used for this purpose. These boilers have as good care since this work was done, as perhaps at any other time since we have had the boat. In addition to this, the part that has given away below the fire line, is something that has nothing to do with keeping the boilers clean. It has also been suggested that the present method of feeding water into the boilers of the PONTIAC may have had something to do with the cracking of the rings. The cold water is fed into the boilers at the bottom, where the temperature of the water is only about boiling point, while that at the top of the boilers is of a much higher temperature. Inasmuch as the rings almost always crack at the bottom of the boilers, it is thought that the feeding of the cold water into the bottom may cause them to contract, while the upper part of the boilers would have a tendency to expand because of the higher temperature.

To remedy this, it has been suggested that the cold water pipe be run up to the top of the boilers on the inside, and then down again to the bottom, thus allowing it to pass through the steam and hot water at the top of the boilers, which would heat the cold water, being fed into the boilers before it reached the boilers, and thus prevent the chilling of the water in the boilers

STEAMER PONTIAC

GENERAL REPAIRS #5

and the consequent contracting of the rings. This has been done on the boilers of the CENTURION and seems to be satisfactory in every way.

ACCIDENTS

MAY 8TH The PONTIAC finished unloading and, as the river was full of boats and the wind was quite strong, the Captain had to have the tugs take him out. The Tug "Paddy Miles" took the head line and the Tug "Wm. Stevenson" the stern line. When coming down Blackwell Canal, Buffalo, the wind was blowing hard from the southwest, and in spite of all the tugs could do, blew the PONTIAC over against the Steamer "MARQUETTE" striking her a glancing blow with our starboard quarter, inflicting some slight damage to the "MARQUETTE". The PONTIAC also had three top boards in the bulwarks broken. As the PONTIAC was in charge of the tugs, they were responsible for the accident, and when repairs were made to the "MARQUETTE" and "PONTIAC", the bills were assumed by the tug people. The damage to the PONTIAC only amounted to \$12.60, which the Tug Company paid.

MAY 8TH. The PONTIAC was lying at the West Shore Dock, Buffalo, unloading. About 9:00 A. M. one of the deck hands, named Alfred Olson, fell from the spar deck to the main deck through No. 2 hatch, a distance of about eight feet. One of the hatch covers was off

STEAMER PONTIAC

ACCIDENTS #2

in order to give light down the hold: the balance of the covers being on. The man was not working near the hatch and no one saw him fall in. The probability is that he walked into same, not watching where he was going. He walked up the ladder with the help of some of the crew and was sent to the Emergency Hospital. On the next trip to Buffalo, Captain Johnston saw him, and he was apparently as well as ever. The Captain secured a release from him for forty two cents, being wages due him, clearing the boat and her owners from all liability.

MAY 21ST. On May 10th, 1902, the Pontiac left Presque Isle bound for Lorain, O. Laden with iron ore. She proceeded on her voyage in the usual manner and without accident until 3:45 A. M. of May 21st, when she was about abreast of the Gas Buoy on the Middle Ground in St. Clair River off Black River, near Port Huron, Mich. The Pontiac was drawing seventeen feet five inches in forward end and seventeen feet seven inches aft, and was proceeding at full speed (being usual speed at this point) down the middle of the channel, which at this place is from fifteen hundred to two thousand feet wide, and supposed to be from twenty one to twenty two feet deep, when she struck and rubbed over a bar or some other obstruction on the bottom of the channel, the nature of which is not definitely known, causing her speed to slacken so that she nearly stopped, although no shock was felt. As soon as the Master saw her speed slacken he had the engines stopped, but almost immediately it was perceived that she had cleared the obstruction and was going ahead again. The engines were then started ahead and she proceeded on her voyage in the usual course, arriving at Lorain without further

S T E A M E R P O N T I A C

ACCIDENTS #3

accident on May 21st. Immediately after the accident and at short intervals afterward the tanks were sounded, and it was discovered that the Pontiac was making about thirteen inches of water an hour in the forward starboard compartment, but the pumps were able to keep her practically clear of water. Immediately after discharging at Lorain, she went into dry dock at Lorain, and an examination showed that one plate, #B-4 on the starboard side forward, 14' 1" X 48" X 22 $\frac{1}{2}$ " dented, cracked and destroyed, also one plate #C-4 on the starboard side forward, 16' 1" X 48" X 20" dented cracked and destroyed, and the adjoining plate to the above mentioned broken plates slightly indented, and the rivets and butts in several places on the bottom leaking. Also found two frames and two floors in the way of the above mentioned damaged plates broken.

Repair has been made and the bill, amounting to \$1347.65, has been sent to her Underwriters.

AUGUST 1ST While unloading at the Minnesota Dock, Buffalo, the rig hoisting ore out of No.5 hatch swung the bucket against the box that covers the deck winch, smashing it so badly as to necessitate a new one. They also dropped a bucket of ore on one of the hatch covers and broke two planks in the cover. Repair has been made and the bill, amounting to \$40.29, sent to the Minnesota Dock, who settled for same.

AUGUST 14TH The Pontiac was lying at her dock at Fairport discharging her ore cargo. The Barge "James Nasmyth" in tow of two Great Lakes Towing Co. tugs in passing, ran into the Pontiac, striking on the starboard quarter, breaking the rail and bulwarks, bending six iron stanchions and breaking two wooden stanchions that hold up the cabin deck aft. This damage was repaired at Buffalo on

S T E A M E R P O N T I A C

ACCIDENTS #4

the next down trip. As the responsibility rested entirely with the tugs the bill, amounting to \$70.38, was paid by them.

AUG. 23RD TO 25TH While the Pontiac was discharging at the Minnesota Dock, Buffalo, the rig working in #3 hatch swung the iron ore bucket against the starboard forward rigging, pulling down the iron bands on the mast from one and a half to two inches and splitting off some of the mast from forward side to afterside on the starboard side. The rig working in No. 5 hatch swung the ore bucket against the deck house and broke off the covering board and molding on forward side of the house. The latter damage was repaired by the crew without expense. The damage to the fore mast will be repaired this winter and the bill sent to the Minnesota Dock Co. It is very slight.

SEPT. 19TH. While unloading at the E & P Dock, Erie, Pa., the ore bucket hit the oak cap that covers the end of the bulwarks on after side of the turtle deck and broke the cap. This damage was repaired at a cost of \$4.80, and inasmuch as the amount was so small, no claim will be made.

OCTOBER 3RD As the Pontiac was entering the American Soo locks on this date, she suddenly took a sheer and ran into the south pier. This was probably caused by the strong current made by the incoming water. One of the fender caps on the starboard bow was broken off, and two pieces on the lower fender strake broken off, one off the upper fender strake and the angle iron on the lower fender strake bent in one place. This repair was made at Ashtabula when the boat arrived down, and the bill, amounting to \$9.05, will be borne by the Pontiac.

STEAMER PONTIAC

ACCIDENTS #5

OCTOBER 26TH The Steamer Pontiac was lying at the Lehigh Valley Ore Dock discharging when the Steamer "Northern Wave" backed up alongside of her and in doing so came in contact with the Pontiac on her port quarter, breaking the bulwarks in two places. The Captain of the "Northern Wave" looked at the damage and said to have it repaired and bill sent to the Northern Steamship Co., Buffalo. This was accordingly done, the bill amounting to \$22.75.

NOVEMBER 26TH While the Pontiac was discharging at the West Shore Dock, Buffalo, the rig working in No.2 hatch dumped a bucket of ore on deck, breaking the steps used for going over the rail so badly that new ones will have to be provided. The cost of repair will be slight.

P O N T I A C
COMPARISON OF ITEMS OF DISBURSEMENTS

	1 9 0 1	1 9 0 2	+ OR -	R E M A R K S
Extraordinary and General Repairs,	\$ 1,983.13	\$ 4,357.75	\$ +2,374.62	Renewal of floor and bilge ceiling in 1902 costing \$1,900.00
Ship Keeping and Winter Dockage,	151.83	97.67	- 54.21	Vessel laid at dock a longer period of time in 1900-1
* Fitting Out,	808.57	983.77	+ 175.20	This increase largely in additional manilla lines,
Wages and Captain's Salary	3,383.97	9,431.93	+1,067.96	A longer season in 1902
Captain's Expense account,	70.05	85.83	+ 15.83	
Tug Services	695.23	545.98	- 149.24	On account of tug men's strike in 1902 could not always obtain services of tugs
Handling Cargoes,	15,157.08	16,450.66	+1,292.58	Carried 2 cargoes more of iron ore in 1902
Taxes,	361.71	430.19	+ 68.48	
Marine Insurance,	4,574.06	4,448.57	- 125.49	Insurance rate decreased in from 3.20 in 1901 to 2.95 in 1902
Freight List Insurance,	68.57	60.47	- 8.10	
Passenger Cabin Equipment,	8.34	35.25	+ 26.91	
Mate's Supplies,	361.17	292.66	- 68.51	
Provisions,	1,619.81	1,554.78	- 65.03	Based on decrease of \$.034 per man per day
Steward's Supplies,	153.32	97.72	- 55.60	
Fuel,	3,322.16	9,362.39	+ 6,040.23	Based on increased consumption of 31bs per mile
Engineer's Lubricants,	177.43	151.83	- 25.60	Based on decreased cost of \$.00117 per mile
Engineer's Supplies,	47.03	141.31	+ 94.28	
Boiler Repairs,	25.30	360.19	+ 334.89	In 1902 raised starboard boiler for new staybolts & backheads, patching furnace of middle boiler etc
Machinery Repairs,	8.56	189.22	+ 180.66	New intermediate steam chest cover in 1902 principal item
Auxiliary Machinery Repairs,	23.00	38.87	+ 15.87	
General Expenses,	235.60	162.12	- 73.48	In 1901 paid Captain G. A. Symes, reward of \$100.00
* Laying Up,	826.55	963.97	+ 137.42	Machinery Repairs cause principal increase

practically

* The machinery on this steamer was fitted out for season 1902 while laying up at end of season 1901.
The same practical work for 1903 was done while laying up at end of season 1902.

STEAMER FRONTENAC

GENERAL OPERATIONS

The Steamer FRONTENAC sailed from the port of Cleveland, O., on her first trip of season 1902 on April 13th, and finished discharging last cargo at Buffalo on December 4th. The total length of her season, therefore, was 236 days.

This vessel made 24 round trips for the season, bringing ore cargoes from Marquette, Mich., to Lake Erie ports, going up light every time, with the exception of the last trip, when a cargo of coal was carried to Marquette.

The average rate of freight received on all cargoes carried during the season was \$.6380 per ton. The actual operating cost per ton, was \$.5365, as against \$.5273 in 1901. The average net earnings per ton, therefore, are \$.1515 as compared with \$.1907 in previous year.

STEAMER FRONTENAC

GENERAL REPAIRS

While our last year's report indicated that the General Repair Account for 1902 would not be much greater than that of the one just closed, the total amount exceeded the cost of that year about \$1500.00, -made up of numerous items, of which the following are some of the more important:

It was found that two plates between the boiler room and engine room had rusted through at the angle irons; these had to be renewed.

The stairway between the Captain's texas and the passengers' sitting room had always been open, and it has been contemplated for sometime to put in a sliding door, so as to better seclude the two apartments. This was accordingly done at a cost of \$46.90.

With the increased depth of loading the vessel, it seemed advisable to increase the area of the rudder by putting a piece on the top. Consequently 9.87 square feet of rudder was added. This cost \$116.75.

The tank top was found to be leaking in a number of places, to repair which, the floor ceiling had to be taken up in order that the rivets might be drilled out and taps put in and some calking done. This work cost \$229.19.

Some of the sounding pipes and air pipes were rusted off in the tank top. It was found necessary to put in six new sounding pipes and six new air pipes. The total repair in conjunction with this work cost \$187.18.

During a storm on Lake Superior on May 26th, 1902, the vessel was carrying water in her hold and a portion of her floor ceiling was washed up, the repair for which damage cost \$147.12.

The many items of repair going to make up the total cost for the season are too numerous to detail here, but will be in a proper supplementary statement.

STEAMER FRONTENAC

GENERAL REPAIRS

Before going to sea next season, in addition to the usual repairs, a new steel spardeck will be placed on this Steamer from the forecastle deck forward to the forward side of the engine room aft. This work, it is estimated, will cost in the neighborhood of \$3,500.00.

This Steamer when constructed had a main deck for the purpose of carrying package freight when desired. As this boat is used but little in this trade, being employed almost exclusively in carrying coarse freight, there is no need for the retention of this deck for package freight purposes. In addition to this, with the advent of the clamshell device for unloading vessels, this middle-or main deck- is a hindrance to their operation and it was consequently determined to take it out. This, therefore, will be done and will cost from \$1,200.00 to \$1,300.00.

With the increased number of ships navigating the connecting waters of these lakes, Masters sailing vessels provided exclusively with old fashioned anchors, have advocated the adoption of stockless anchors for quick service. It has, therefore been determined that this Steamer should be provided with at least one stockless anchor. This installed will probably cost about \$550.00.

S T E A M E R F R O N T E N A C

A C C I D E N T S

APRIL 25TH The FRONTENAC was lying at the Valley Dock, Cleveland, discharging her ore cargo. The Steamer I. BOYCE, in attempting to wind around the FRONTENAC, swung in on her rail, breaking same, bending seven stanchions and smashing three pine boards in the bulwarks. The damage was repaired at Buffalo, and the bill, amounting to \$19.74, was paid by the I. BOYCE.

JUNE 10TH While the FRONTENAC was unloading at the West Shore Dock, Buffalo, this date the rig swung an iron ore bucket against the whistle, breaking the valve beyond repair. A new one was secured at a cost of \$30.00 and placed in position. Inasmuch as the new valve was of an up to date pattern and the old one had been in use a long time, the West Shore Dock declined to settle for the entire amount, and the matter was compromised by the Dock paying \$10.00, and the boat standing the balance.

JULY 6TH The FRONTENAC was lying at the Angeline Dock, Ashtabula, discharging her cargo, when the Steamer ROBY in passing, came in contact with the FRONTENAC'S port quarter, breaking out a piece of rail, bending three stanchions and breaking the casting to boat davit. The Captain of the FRONTENAC talked with the Captain of the ROBY, who said to have the damage repaired and the bill sent to them, which was accordingly done, and the bill, amounting to \$13.86, paid by the ROBY.

JULY 26TH As the FRONTENAC was coming down the river, Cleveland Harbor, on her way out, she met the Steamer A.D. THOMPSON. As the THOMPSON passed the FRONTENAC, she swung under the FRONTENAC'S

S T E A M E R F R O N T E N A C

ACCIDENTS #2

quarter, rubbing against her. No damage was sustained by the FRONTENAC, and so far as our Captain could ascertain the only damage the THOMPSON sustained was having his green lamp screen rubbed off. The fault lay entirely with the THOMPSON and it is probable nothing more will ever be heard of it.

AUGUST 2ND THE FRONTENAC arrived at Buffalo this date, and when on her way to the Lehigh Valley Dock, in passing through the Blackwell Canal opposite the Watson Elevator, she rubbed the bottom some. The Captain made an examination when she was unloaded, but there appeared to be no damage sustained internally. At the end of the season, when she was put in dry dock to repair the stern bearing, the ship's bottom was looked over carefully to see if any damage could be found. While it was not our belief that any of the damages found were the result of the above contact, Mr. Angus McDougal (For R. Parry Jones in behalf of the ship's Underwriters) recommended that one plate be renewed on the starboard side, three plates be renewed on the port side: that two plates on port side be faired and set back, and that two plates on the port side be faired in place, with the necessary repairs to frames in the way of these plates.

We believe these plates received their damage at some unknown period, and consequently cannot be safely charged up against the present Captain.

AUGUST 2ND The FRONTENAC arrived at Buffalo and was proceeding up the Buffalo River, when at the Michigan Street Bridge met the Steamer BINGHAMTON coming down. The BINGHAMTON stopped at

S T E A M E R F R O N T E N A C

ACCIDENTS #3

the bridge to allow the FRONTENAC to pass through. As the BINGHAMTON was stopping she swung in against the spring piling which caused her to bound over against the FRONTENAC, striking her on the port quarter, abreast of boiler house, inflicting a dent in the plate about three feet long and two inches deep, and bending some frames; also cornice of after cabin broken off four feet. After some discussion the BINGHAMTON finally agreed to repair the damage, which they did with out expense to us.

AUGUST 7TH While the FRONTENAC was lying at the Presque Isle Dock one of the deck hands fell from the spar deck and landed between deck. The men were uncovering the hatches, and he had just helped to take the cover off the hatch he fell through. He apparently suffered no serious injury, though his back hurt him some at the time. He was around and working the next day. The Captain later secured a release from him for \$20.00 freeing the boat and her owners from all liability.

FRONTENAC

	1901		1902	
	DAYS	PERCENT	DAYS	PERCENT
Time in port,	77	37.2	98½	41.7
Time sailing,	121	58.5	130½	55.3
Time lost by bad weather fog and low water,	7	3.4	4½	1.9
Time lost waiting at Soc Canal and River,	2	.9	2½	1.1
Time lost by accidents,				
TOTAL TIME IN COMMISSION,	207	100.0	236	100.0
Number of trips made,	23		24	
Number of cargoes carried,	23		25	

PERCENTAGES OF TIME IN COMMISSION IN PORT

Season	1898	35.4
"	1899	36.2
"	1900	39.0
"	1901	37.2
"	1902	41.7

FRONTENAC

R E C E I P T S	TONS	AMOUNT	PER GROSS TONS FREIGHT CARRIED
24 Cargoes iron ore from Marquette,	7,400	\$52,080.00	\$.7000
1 Cargo coal to Marquette, 2821 ¹⁴⁰⁰ net tons @ 30¢,	2,528	849.51	.3360
25 TOTALS	76,928	\$52,929.51	\$.6880
<u>D I S B U R S E M E N T S</u>			
Extraordinary and General Repairs,	\$ 2,159.72		
Ship Keeping and Winter Dockage,	30.00		
Fitting Out,	615.80		
Wages and Captains Salary,	9,171.84		
Captains Expense Account,	89.00		
Tug Services,	456.13		
Handling Cargoes,	14,218.00		
Taxes,	356.94		
Marine Insurance,	4,151.65		
Freight List Insurance,	55.33		
Passenger Cabin Equipment,	2.50		
Mates Supplies,	351.47		
Provisions,	1,688.72		
Stewards Supplies,	206.24		
Fuel,	6,455.01		
Engineers Lubricants,	69.36		
Engineers Supplies,	73.03		
Boiler Repairs,	33.53		
Machinery Repairs,	46.71		
Auxiliary Machinery Repairs,	15.39		
General Expenses(Telegrams,Dues Lake Carriers Assn.Etc.	160.31		
Laying Up,	866.01	\$41,272.69	\$.5365
NET EARNINGS FOR SEASON		\$11,656.82	\$.1515
Less amount paid on account Legal Expenses,		17.59	
Making total net gain for season 1902,		\$11,629.23	

NOTE:

The cost per ton to operate after eliminating extraordinary and General Repairs account is \$.5084

FRONTENAC

Comparisons

	1901	1902
Days in commission	207	238
Number of miles traveled	31,670	33,927
Number of trips made	23	24
Number of cargoes freight carried,	23	25
Gross tons freight carried,	71,636	76,928
Average rate freight per gross ton,	\$.7180	\$.6880
Average cost to carry per gross ton freight,	.5273	.5365
Net earnings per ton freight carried,	\$.1907	\$.1515
Cost per ton to operate after eliminating Extra and Gen. Repairs,	\$.5177	\$.5084
Gross Receipts,	\$51,434.00	\$52,929.51
Gross Expenditures	37,773.79	41,273.69
Net Earnings,	\$13,660.21	\$11,656.82
Percentage of operations to earnings,	73.4	78.0
Gross earnings per mile traveled,	\$ 1,8240	\$ 1.5601
Operating expenses per mile traveled,	1.1927	1.2165
Net earnings per mile traveled,	\$.4313	.3436
Gross earnings per day,	\$ 248.47	\$ 224.27
Operating expenses per day,	182.48	174.88
Net earnings per day,	\$ 65.99	\$ 49.39
Expenses per day excluding cargo handling costs,	\$ 116.40	\$ 114.64
Costprovisions per man per day(excluding extra meals)	\$.347	\$.381
Average tons coal consumed per mile steamed,	145/2000	154/2000
Average cost coal consumed per mile steamed,	\$.1746	\$.1884
Average tons coal consumed per hour steamed,	1585/2000	1673/2000
Average cost Oil consumed per mile steamed,	\$.00290	\$.00205
Average cost Oil consumed per hour steamed,	\$.0317	\$.0222
Average wages paid per day while in commission,	\$ 31.95	\$ 32.86
Average ore cargo from Lake Superior,	3,114	3,100
Average draft water on ore cargoes from Lake Superior,	17'7"for'd	17'6"for'd
Average mean draft water on ore cargoes from Lake Superior,	18' aft 17'9½"	18' aft 17'9"

FRONTENAC
COMPARISON OF ITEMS OF DISBURSEMENT

	1901	1902	+ OR -	REMARKS
Extraordinary and General Repairs,	\$ 685.33	\$ 2,159.72	\$+1,474.39	A general overhauling and renewal of many parts in 1902
Ship Keeping and Winter Dockage,	185.74	30.00	- 155.74	In 1902 paid no wages to shipkeeper or watchman
*Fitting Out,	1,357.04	616.80	- 641.24	Engineer's Department fitted out for season 1902 while laying up at end of season 1901
Wages and Captain's Salary,	8,011.06	9,171.84	+1,160.78	A longer season in 1902
Captain's Expense account,	67.47	89.00	+ 21.53	
Tug Services,	473.84	456.13	- 17.71	
Handling Cargoes,	13,678.72	14,318.00	+ 539.28	Carried one more cargo of iron ore in 1902
Taxes,	318.07	356.94	+ 38.87	
Marine Insurance	4,283.57	4,151.65	- 131.92	Insurance rate decreased from 2.20 in 1901 to 2.95 in 1902
Freight List Insurance,	61.71	55.33	- 6.38	
Passenger Cabin equipment,	3.80	2.50	- 1.30	
Mate's Supplies,	246.17	351.47	+ 105.30	
Provisions,	1,445.90	1,688.72	+ 242.82	Based on increased cost of \$.014 per man per day
Steward's Supplies,	119.82	206.24	+ 86.42	
Fuel,	5,530.87	6,455.01	+ 924.14	Based on increased consumption of 9lbs per mile
Engineer's Lubricants,	91.84	62.26	- 29.58	Based on decreased cost of \$.00085 per mile
Engineer's Supplies,	80.49	73.03	- 7.46	
Boiler Repairs,	5.30	33.53	+ 28.23	
Machinery Repairs,	130.90	46.71	- 84.19	
Auxiliary Machinery Repairs,	3.24	15.39	+ 12.15	
General Expenses,	231.94	180.31	- 51.63	In 1901 paid Captain J. M. Johnson reward of \$100.00
*Laying up	870.01	866.01	- 4.00	

practically

* The machinery on this steamer was fitted out for season 1902 while laying up at end of season 1901.
The same practical work for 1903 was done while laying up at end of season of 1902.

S T E A M E R F R O N T E N A C

Captain's Expense Account

	1 9 0 1	1 9 0 2
Telegrams and Telephones	\$ 41.61	\$ 55.83
Postage	.60	10.50
Railway Fares	9.50	4.85
Customs	9.00	9.60
Stationery		2.40
Express	1.15	.75
Exchange	4.51	2.32
Miscellaneous	2.00	3.00
T O T A L	\$ 68.37	\$ 89.25

S T E A M E R

F R O N T E N A C

Details of General Expenses

	1901	1902
Telegrams etc	\$ 23.10	\$ 13.90
Stationery		12.45
Trimmings and buttons	10.50	8.50
Travelling Expenses	4.45	21.67
Dues Lake Carriers Association	69.52	67.04
Amount paid Robert Logan, for investigating and Reporting on Engine Indicator Cards	10.00	10.00
Marine Reporting	19.82	28.00
Board Bills of Capt. and Engineer while fitting out and laying up	44.00	43.10
Prizes and Rewards	150.00	
T O T A L	\$331.39	\$204.66

S T E A M E R F R O N T E N A C

P R O V I S I O N A C C O U N T

	1901 -			1902		
	QUAN.	PRICE	AMOUNT	QUAN.	PRICE	AMOUNT
Sugar	1,229 lb	\$.056	\$ 69.80	1,386 lb	\$.056	\$ 76.79
Tea	71 "	.336	23.85	85 "	.314	26.70
Coffee	164 "	.134	22.09	241 "	.122	29.64
Spices & Vinegar			7.86			9.43
Extracts	11 bt	.190	2.11	12 bt	.229	2.75
Baking Powder	58 lb	.202	11.73	91 lb	.236	21.54
Bread & Crackers			25.25			26.28
Butter & Butterine	632 "	.193	121.71	675 "	.214	144.51
Lard & Cotoline	205 "	.098	20.15	343 "	.103	35.67
Cheese	35 "	.136	4.78	101 "	.149	15.08
Fresh Milk	307 gal	.194	59.64	340 gal	.185	61.81
Condensed Milk	132 can	.090	11.92	153 can	.108	16.64
Pickles			10.83			18.35
Sauce			1.05			5.70
Eggs	330 dz	.172	56.83	315 dz	.201	63.61
Flour	11.7 bbl	4.521	52.90	13-3/8 bbl	4.610	61.66
Buckwheat Graham Corn Meal	189 lb	.029	5.52	192 lb	.027	5.46
Farinaceous Foods	102 "	.044	4.49	211 "	.046	9.69
Canned Fruit	10 can	.138	1.38	29 can	.225	6.55
Canned Vegetables	342 "	.075	25.72	380 "	.088	33.54
Dried Fruits	260 lb	.089	23.21	179 lb	.100	17.91
Dried Vegetables	151 "	.054	8.18	92 "	.071	6.63
Fresh Fruit			23.23			42.33
Fresh Vegetables			60.51			83.69
Potatoes	141 bu	.909	128.15	143 bu	.777	111.31
Dried Onions	12-1/2 pk	.352	4.40	9 pk	.473	4.28
Fresh Fish	200 lb	.078	15.76	215 lb	.088	19.10
Salt Fish	8-1/2 "	.156	1.33	66 "	.138	9.12
Fresh Meat	4,921 "	.090	442.45	5,457 "	.101	556.23
Salt Meat	1,235 "	.091	113.56	1,037 "	.095	98.16
Molasses & Syrup	9-1/2 gal	.293	2.78	12 gal	.262	3.15
Ice	632 cwt	.156	98.86	533 cwt	.189	101.14
Miscellaneous			2.29			1.37
TOTAL			\$1,464.32			\$1,715.82
Less cash discounts			18.36			27.10
			\$1,445.96			\$1,688.72

Average consumption of meat per man per day in 1901 was 1.56 lbs

" " " " " " " " " 1902 " 1.45 lbs

S T E A M E R F R O N T E N A C

D E T A I L S O F S T E W A R D ' S S U P P L I E S

	AMN'T	PRICE	1901	AMN'T	PRICE	1902
Table linen, towelling and etc			16.10			11.75
Bed linen, blankets etc			38.70			16.52
Cutlery and spoons			1.70			.42
Crockery and glassware			15.84			13.47
Kitchen utensils			7.26			18.84
Soap			15.06			23.26
Scouring material			4.13			10.69
Brooms	6	.25	1.50	8	.205	1.64
Brushes	12	.225	2.70	8	.097	.78
Laundry			92.94			116.08
Range Coal				6- $\frac{1}{2}$	6.73	43.75
Toilet articles			2.10			2.65
Miscellaneous			25.53			13.09
TOTAL			\$223.56			\$273.94
Less cash discounts			.85			1.00
			\$222.71			\$271.94

S T E A M E R F R O N T E N A C

Details of Mate's Supplies Account

	AMN'T	PRICE	1901	AMN'T	PRICE	1902
Flags and private signals		¢	¢		¢	¢ 17.10
Canvass Deck etc			7.27			
Kerosene Oil	580 gal	.154	89.71	789 gal	.128	101.76
Rope etc	2,310 lbs	.100	231.14	1,983 lbs	.146	288.67
Chimneys and Globes			9.66			17.98
Lamps, Lanterns, and burners			24.70			22.99
Scouring material			8.24			10.08
Soap			10.81			12.50
Rags	85 lbs	.061	5.25	135 lbs	.056	7.60
Hardware and Tools			11.12			24.60
Brushes	34	.456	15.50	20	.403	8.07
Brooms	48	.258	12.37	78	.283	21.93
Candles			19.79			35.54
Hose	208 ft	.275	57.40	225 ft	.273	61.50
Miscellaneous			23.10			48.72
T O T A L			\$526.06			\$679.04
Less cash discounts						4.96
			\$526.06			\$674.08

S T E A M E R F R O N T E N A C

Details of Paints Purchased

	1 9 0 1			1 9 0 2		
	QUANTITY	PRICE	AMOUNT	QUANTITY	PRICE	AMOUNT
White Lead	825 lbs	\$.060	\$ 50.27	450 lbs	\$.061	\$ 27.88
Red Lead	475 "	.066	31.38			
Boiled Oil	127 gal	.682	86.73	75 gal	.654	49.10
Turpentine	23 "	.558	12.84	20 "	.63	12.61
Tinted Lead	350 lbs	.065	16.25	400 lbs	.06- $\frac{1}{2}$	25.00
Hull Paint (black)				10 gal	80	8.00
Hull Paint (red)				78 "	.753	58.75
Maroon Enamel Paint				2 "	1.50	3.00
Miscellaneous			79.87			64.84
T O T A L			\$277.33			\$249.18
Less discount						.70
			\$277.33			\$248.48

S T E A M E R F R O N T E N A C

Details of Engineer's Supplies

	AMOUNT	PRICE	1901	AMOUNT	PRICE	1902
Tools and Hardware		¢	¢ 3.54		¢	¢ 4.44
Lamps and Wicking			14.09			7.88
Scouring Material			6.69			6.67
Soap			4.30			8.30
Rags and Waste	60 lbs	.05	3.00	50 lbs	.066	3.30
Hose	71 ft	.353	25.03	50 ft	.20	10.00
Brooms	6	.273	1.64	15	.273	4.13
Brushes	4	.132	.53	6	.233	1.40
Squirt cans and fillers			.95			
Water Glasses						4.29
Fittings and Pipings			11.13			9.84
Valves			50.24			15.55
Gaskets			10.53			10.74
Packing	130 lbs	.484	62.93	83 lbs	.550	45.69
Miscellaneous			38.09			9.07
T O T A L			\$232.78			\$141.35
Less Cash Discount			.16			6.51
			\$232.62			\$134.84

S T E A M E R F R O N T E N A C

FUEL PURCHASED FOR TWO SEASONS

G R A D E	1901				1902			
	TONS	PER CENT	AVERAGE PRICE	TOTAL COST	TONS	PER CENT	AVERAGE PRICE	TOTAL COST
LUMP	353- 600	15.4	\$2.494	\$ 881.06	423- 600	16.0	\$2.642	\$1,118.25
RUN OF MINE	1,879- 800	81.8	2.400	4,515.36	2,223-1300	84.0	2.400	5,336.76
NUT	24- 400	1.0	2,250	54.45				
SLACK	40-	1.8	2,000	80.00				
T O T A L	2,296-1800	100.0	\$2,408	\$5,530.87	2,646-1900	100.	\$2,439	\$6,455.01

STATEMENT OF GENERAL AND EXTRAORDINARY REPAIRS-----ELABORATED

Total cost of repairs was	MACH. REPAIRS	BOLLER REPAIRS	HULL REPAIRS	DECK REPAIRS	CABIN REPAIRS	BUL-WARKE& RAIL REPAIRS	MISGEL. REPAIRS
\$ 2,272.33							
3 new hatches for between deck\$ Renewing 132 ft.fender on (port side Building platform aft of engine reg. floor in crank pit, reg. deck in engine room under (pony pump Reg. bulwarks on port side where chocks were torn out Building platforms in coal bunkers to wheel coal in fire (hold Fatching spar deck about 500ft. and calking new work on s.deck Renewing railing on port & starboard sides Repaied outside beading on bow, starboard side Repaired iron stanchion in hold in after hatch Covering windows with boards for protection while blasting Renewing floor ceiling in patches over entire hold Entire upper deck hatch for # 3 hatch (new) New chock and small stanchion in bulwarks Repairing leaks in tank tops, 6 new sounding pipes & 6 new air pipes Chafing pieces on 3 stanchion in wake of 5 and 7 hatches Extention piece on rudder, increasing area to 94-45 sq.ft. Closing stairway between texas and lower rooms and putting on a new sliding door Cutting out and putting in new pieces of plates between boiler room & engine room where rusted out New 22ft.kawl boat Wages scraping and painting in hold Renewing floor ceiling washed up by carrying water in hold on Lake Superior Covering high pressure cylinder and steam chest cover with mag- nesia covering Repairing bulwarks & railing damaged while blasting ore Repairing water pipes, bath tub etc Captain & wheelman rooms New fender Repairing doors, locks, etc Renewing bulwarks washed out by heavy sea on Lake Huron Renewal pieces on starboard & after side of deck house Repairing Steering gear New ventilators for dead lights Repairing wheelbarrows Repairing water closet, kitchen faucets etc Repairing speaking tube whistle New hatch hooks Repairing marine glasses Renewing skin where washed up by water under boilers Repairing hatch battings Repairing clock Overhauling & repairing stern bearing Glazing Repairing lamps & lanterns Repairing old kitchen range New kitchen range Repairing kitchen utensils Repairing fire hold tools Paints purchased during season		\$	\$ 68.15	\$ 67.00	\$	\$	\$
				75.37		7.85	
			33.30				
				96.05			
						21.29	
						27.55	
			4.50				
					11.13		
				229.19			
				67.15			
						47.69	
			187.13				
			24.53				
							118.75
					46.97		
			75.20				84.64
			189.83				
				165.22			
	29.76						
						17.47	
					12.00		
			21.72				
					10.25		
						14.40	
					10.20		
	17.31						8.75
							5.05
					3.35		
				2.00			2.85
							2.00
				22.00			
				8.50			
							1.75
							26.67
					11.21		
							5.35
							32.09
							95.00
							13.20
							7.91
							248.43
TOTALS	\$ 47.57	\$	\$ 599.20	\$ 732.33	\$ 106.50	\$ 136.25	\$ 650.49

The total cost of paints purchased during season 1900 was \$300.07

" " " " " " " " 1901 " 277.53

S T E A M E R F R O N T E N A C
 STATEMENT SHOWING TIME DISCHARGING ORE CARGOES

NAME OF DOCK	NO. CARGOES	1901						1902						
		AVERAGE TIME AT DOCK		AVERAGE TIME AT DOCK DISCHARGING		AVERAGE TIME ACTUALLY AT WORK		AVERAGE TIME AT DOCK		AVERAGE TIME AT DOCK DISCHARGING		AVERAGE TIME ACTUALLY AT WORK		
		DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	
N Y P & O Cleveland	2	1	8	1	6		18	1	3	2	1	19		30
C & P "								1	1	15	1	9		30
C T & V "								1	1	16	1	10		19
MINNESOTA Ashtabula	9	2	10	1	21		16	2	1	15	1	7		17
M & S "								2	4	3	2	7		22
ANGELINE "								2	4	15	2	19		26
P & E Erie	2	2	16	2	16		18							
E & P "	2	3	16	2	7		23							
MINNESOTA Buffalo	5	1	16	1	7	1	2	4	2	14	1	11		26
WEST SHORE "	3	3	21	1	10		21	6	3	4	1	12		27
LEHIGH VAL "								5	3	23	1			22
GRAND AVERAGE	23	2	12	1	18		20	24	3	4	1	12		24

STEAMER FRONTENAC

GENERAL DATA

Total number of crew (including Master and Engineer)....	18
Length over all.....	289 Feet
Keel	271 "
Beam	39.6 "
Depth	24 "
Net Tonnage	1676 tons
Gross tonnage	2003 tons
Ore Capacity	3085 "
Coal Capacity	3032 "
Engines	20, 31, 52 X 40
Boilers	2 Scotch, 11 $\frac{1}{2}$ X 14
Steam	150
Horse Power	900
Wheel	15.9 pitch
Average revolutions per minute, loaded	72
" " " " light	76
Number of hatches	(7 working hatches (1 scuttle hatch
Average miles per hour, light	12.22
" " " " loaded	10.39

S T E A M E R P I O N E E R

GENERAL OPERATIONS

The Steamer PIONEER sailed from the port of Cleveland, O., on first trip of season 1902 on April 14th and finished discharging last cargo at Buffalo on December 13th, having been in commission 244 days.

Altogether 19 round trips were made during the season, transporting iron ore cargoes from Marquette to Lake Erie ports. On the last trip a coal cargo was delivered at Marquette. The PIONEER towed the Schooner CHATTANOOGA the entire season, with the exception of the last trip, which she made alone.

The average rate of freight received on all cargoes carried during the season was \$.6909 per gross ton, to which should be added \$.3674 per ton for towing the CHATTANOOGA, making the total receipts per ton of freight carried \$1.0583, as compared with \$1.0645 during the previous year. The actual operating cost per ton is \$.8567 in season 1902, and \$.8052 in 1901. The average net earnings per ton, therefore, are \$.2016, as compared with \$.2593 in preceding year.

STEAMER PIONEER

GENERAL REPAIRS

The General Repairs on this Steamer were not large the past year, and included the ordinary work of this character.

There has been some patching of the floor ceiling in the hold, as is the case every year. This ceiling having been laid in small sections, it has been possible to keep it going thus far without a general renewal. Some further attention will have to be given it before the Steamer goes into commission another year.

Among the more important items of repair that will be necessary before this Steamer commences another season, will be the following:

Two or three holes have rusted through in the tank top in the coal bunker. This repair will be difficult to make because of its location, and will probably seem to be disproportionately large. The cost of this work may be in the neighborhood of \$400.00.

The sides of the ship in the hold will have to be scraped and painted.

A new smokestack will be necessary, which will cost about \$150.00.

The furnaces and boilers of this boat are in fairly good shape, although all the rings show more or less cracks and are liable from now on to go through at any time. Two or three patches will have to be put on this winter.

A C C I D E N T S

This Steamer had no accidents of any moment during the season just past.

S T E A M E R P I O N E E R

	1 9 0 1		1 9 0 2	
	DAYS	PERCENT	DAYS	PERCENT
Time in commission in port,	65	30.3	89	36.5
Time sailing,	116	53.9	134	54.9
Time lost by bad weather, fog and low water,	22	10.2	16	6.6
Time lost waiting at Soc Canal and River,	4½	2.1	5	2.0
Time lost by accidents,	7½	3.5		
<u>TOTAL TIME IN COMMISSION</u>	215	100.0	244	100.0
Number of trips made,	17		19	
Number of cargoes carried,	18		20	

PERCENTAGES OF TIME IN COMMISSION IN PORT

Season	1899	36.4
"	1900	29.9
"	1901	30.3
"	1902	36.5

P I O N E E R

R E C E I P T S	T O N S	A M O U N T	P E R G R O S S T O N F R E I G H T C A R R I E D
19 Cargoes iron ore from Marquette, 1 Cargo coal to Marquette, 1339-1900 net tons @ 40¢	32,139 1,197	\$23,490.30 535.98	\$.7000 .4478
20 Amount received for towing Chattanooga, 1/4 Frt.	33,328	\$23,026.28 12,245.27	\$.6909 .3674
		\$35,271.55	\$1.0583
<u>D I S E U R S E M E N T S</u>			
Extraordinary and General Repairs,	\$ 640.63		
Ship Keeping and Winter Dockage,	89.75		
Fitting out,	823.81		
Wages and Captain's Salary,	8,737.23		
Captain's Expense account,	78.41		
Tug services,	18.78		
Handling Cargoes,	6,110.01		
Taxes,	286.01		
Marine Insurance,	3,285.73		
Freight List Insurance,	24.05		
Mate's Supplies,	219.44		
Provisions,	1,607.88		
Steward's Supplies,	104.11		
Fuel,	5,085.69		
Engineer's Lubricants,	175.39		
Engineer's Supplies,	65.91		
Boiler Repairs,	100.36		
Machinery Repairs,	7.86		
Auxiliary Machinery Repairs,	5.42		
General Expenses (Telegrams, Dues Lake Carriers Assn. etc)	206.09		
Laying up,	880.10	23,552.65	.8567
<u>NET EARNINGS FOR SEASON</u>		\$ 6,718.90	\$.2016
Less amount of deductible averages on Insurance claims of 1900 and 1901,		1,141.14	
Making total net gain for season 1902,		\$ 5,577.76	

Note:

The cost per ton to operate after eliminating extraordinary and
General repairs account is \$.8376

STEAMER PIONEER
Comparison

	1 9 0 1	1 9 0 2
Days in commission,	215	244
Number of miles traveled,	25,425	27,936
Number of trips made,	17	19
Number of cargoes freight carried,	18	20
Gross tons freight carried,	31,142	33,326
Average rate freight per gross ton,	\$ 1.0645	\$ 1.0583
Average cost to carry per gross ton freight,	.8052	.8567
Net earnings per ton freight carried,	\$.2593	\$.3016
Cost per ton to operate, after eliminating Extra and Gen. Reprs.	\$.7666	\$.8376
Gross Receipts,	\$33,157.66	\$35,271.55
Gross Expenditures,	25,081.89	22,552.65
Net Earnings,	\$ 8,075.77	\$ 6,718.90
Percentage of operations to earnings,	75.6	80.9
Gross Earnings per mile traveled,	\$ 1.3041	\$ 1.2830
Operating Expenses per mile traveled,	.9865	1.0224
Net Earnings per mile traveled,	\$.3176	\$.2406
Gross Earnings per day,	\$ 154.22	\$ 144.55
Operating Expenses per day,	116.66	117.02
Net Earnings, per day,	\$ 37.56	\$ 27.53
Expenses per day excluding cargo handling costs,	\$ 90.14	\$ 91.92
Cost provisions per man per day (Excluding extra meals,)	\$.331	\$.384
Average tons coal consumed per mile steamed,	159/2000	165/2000
Average cost coal consumed per mile steamed,	\$.1592	\$.1795
Average tons coal consumed per hour steamed,	1453/2000	1430/2000
Average cost Oil consumed per mile steamed,	\$.00512	.00628
Average cost Oil consumed per hour steamed,	\$.0467	\$.0546
Average wages paid per day while in commission,	\$ 28.84	\$ 30.37
Average ore cargo from Lake Superior,	1,761	1,691
Average draft water on ore cargoes from Lake Superior,	{ 15'8"for'd 16'4"aft	{ 15'2"for'd 16' aft
Average mean draft water on ore cargoes from Lake Superior,	16'	15'7"
Pioneer waiting for Chattanooga during season,	11 ds 9 hr	18ds 19hr
Pioneer's percentage of time waiting for Chattanooga,	5.3	7.7

STEAMER PIONEER
COMPARISON OF ITEMS OF DISBURSEMENT

	1901	1902	+ OR -	REMARKS
Extraordinary and General Repairs,	\$ 1,201.97	\$ 640.83	- \$561.34	In 1901 installed new boiler feed pump, costing \$ 505.64
Ship Keeping and Winter Dockage,	99.85	89.75	- 9.90	
Fitting Out,	469.15	823.81	+ 354.66	In 1902 more time put in on Engineer's Department. More supplies needed in each department.
Wages and Captain's Salary,	7,403.13	8,737.23	+1,335.11	Season 29 days longer in 1902 and Engineer paid more money.
Captain's Expense account,	56.43	78.41	+ 21.98	
Tug Services,	65.80	18.78	- 47.02	
Handling Cargoes,	5,700.74	6,110.01	+ 409.27	In 1902 carried 2 cargoes more of iron ore than in 1901.
Taxes,	275.67	286.01	+ 10.34	
Marine Insurance	3,450.08	3,285.73	- 164.35	Insurance rate decreased from 3.20 in 1901 to 2.95 in 1902.
Freight List Insurance,	27.61	24.05	- 3.56	
Mate's Supplies,	148.29	219.44	+ 71.15	
Provisions,	1,227.90	1,607.28	+ 379.38	Based on increased cost of \$.053 per man per day.
Steward's Supplies,	77.05	104.11	+ 27.06	
Fuel,	4,051.16	5,085.69	+ 201.00	Based on increased consumption of six pounds per mile.
Engineer's Lubricants,	130.26	175.39	+ 32.39	Based on increased cost of \$.00116 per mile.
Engineer's Supplies,	50.73	65.91	+ 15.18	
Boiler Repairs,	66.68	100.35	+ 33.67	
Machinery Repairs,	14.15	7.86	- 6.29	
Auxiliary Machinery Repairs,	8.16	5.42	- 2.74	
General Expense,	152.39	206.09	+ 53.70	In 1902 paid Chief Engineer Thos. Durkin, reward of \$100.00
*Laying Up,	405.90	880.10	+ 474.20	Machinery Department fitted out for 1902 while laying up at end of season 1902.

* The machinery on this steamer was practically fitted out for 1902 while laying up in 1902.
No fitting out was done while laying up in 1901.

S T E A M E R P I O N E E R

Captain's Expense Account

	1 9 0 1	1 9 0 2
Telegrams and Telephones	\$ 29.72	\$ 54.53
Postage	7.35	6.03
Railway Fares	14.75	3.25
Customs	6.80	7.80
Stationery	1.40	
Express	2.25	
Exchange	.30	2.50
Miscellaneous	2.85	4.25
T o t a l	\$ 65.43	\$ 78.41

S T E A M E R P I O N E E R
 Details of General Expense

	1901	1902
Telegrams etc	\$ 17.78	\$ 9.61
Stationery	4.70	12.45
Trimmings and buttons	13.50	17.50
Travelling Expenses	8.65	29.66
Dues Lake Carriers Association	23.22	23.22
Amount paid Robert Logan, for Investigating and reporting on Engine Indicator Cards	10.00	10.00
Marine Reporting	15.00	16.65
Board Bills of Capt. and Engineer while fitting out and laying up	26.65	42.46
Prizes and Rewards	75.00	100.00
T O T A L	\$194.50	\$261.55
Less credit on account accident adjustment	1.81	
	\$192.69	\$261.55

S T E A M E R P I O N E E R

P R O V I S I O N A C C O U N T

	1901			1902		
	QUAN.	PRICE	AMOUNT	QUAN.	PRICE	AMOUNT
Sugar	1,060 lb	\$.055	\$ 59.11	1,139 lb	\$.052	\$ 60.29
Tea	24 "	.346	8.30	66 "	.328	21.65
Coffee	160 "	.143	22.98	158 "	.126	19.98
Spices & Vinegar			5.14			8.08
Extracts	13 bt	.16	2.08	16 bt	.238	3.79
Baking Powder	48-1/2lb	.144	7.00	71 lb	.189	13.46
Bread & Crackers			21.26			26.44
Butter & Butterine	405 "	.178	72.85	625 lb	.233	146.05
Lard & Cotoline	270 "	.104	28.08	343 "	.105	36.41
Cheese	69 "	.131	9.06	54 "	.155	8.38
Fresh Milk	183 gal	.201	36.80	279 gal	.186	52.00
Condensed Milk	86 can	.101	8.72	126 can	.092	11.60
Pickles			17.90			7.56
Sauce			1.60			7.91
Eggs	273 dz	.176	48.10	344 dz	.212	73.12
Flour	11-1/2bbl	4.732	54.42	11-5/8bbl	4.477	52.06
Buckwheat Graham Corn Meal	249 lb	.044	10.91	230 lb	.024	5.69
Farinaceous Foods	85 "	.061	5.20	265 "	.041	10.94
Canned Fruit	25 can	.188	4.71	45 can	.241	10.83
Canned Vegetables	163 "	.082	13.38	391 "	.086	33.75
Dried Fruits	197 lb	.095	18.78	221 lb	.102	22.63
Dried Vegetables	51 "	.063	3.24	153 "	.046	7.09
Fresh Fruit			23.20			34.24
Fresh Vegetables			46.50			60.15
Potatoes	120 bu	.922	110.65	123 bu	.792	97.60
Dried Onions	18-1/2pk	.367	6.80	16 pk	.433	6.96
Fresh Fish	180 lb	.080	14.50	236 lb	.124	29.45
Salt Fish	118 "	.104	12.35	114 "	.100	11.47
Fresh Meat	3,427 "	.102	349.71	4,544 "	.109	497.05
Salt Meat	1,146 "	.090	103.26	1,710 "	.091	156.12
Molasses & Syrup	20-1/2gal	.376	7.72	9 gal	.295	2.66
Ice	626 cwt	.170	106.75	499 cwt	.194	94.31
Miscellaneous			2.84			1.20
TOTAL			\$1,248.90			\$1,630.92
Less cash discounts			21.00			23.04
			\$1,227.90			\$1,607.88

Average consumption of meat per man per day in 1901 was 1.25 lbs

" " " " " " " " " 1902 " 1.51 lbs

S T E A M E R P I O N E E R

D E T A I L S O F S T E W A R D ' S S U P P L I E S

	AMN'T	PRICE	1901	AMN'T	PRICE	1902
Table linen, towelling etc		\$	\$ 26.15		\$	\$
Bed linen, blankets etc			10.55			11.50
Cutlery and Spoons			1.88			.44
Crockery and glassware			4.86			8.21
Kitchen utensils			7.37			18.46
Soap			8.89			16.33
Scouring material			7.59			9.87
Brooms	5	.38	1.40	5	.31	1.55
Brushes	2	.075	.15	5	.092	.46
Laundry			60.50			86.16
Range Coal						
Toilet articles						2.11
Miscellaneous			6.13			57.18
TOTAL			\$135.47			\$212.27
Less cash discounts			.41			.82
			\$135.06			\$211.45

S T E A M E R P I O N E E R

Details of Mate's Supplies Account

	AMN'T	PRICE	1901	AMN'T	PRICE	1902
Flags and private signals		\$	\$		\$	\$
Canvass Deck etc			5.70			
Kerosene Oil	355 gal	.118	41.76	220 ga	.124	27.42
Rope etc	1,136 lbs	.114	129.75	595 lbs	.151	90.11
Chimneys and Globes			4.00			6.40
Lamps, Lanterns and burners			7.04			1.15
Scouring material			7.51			3.39
Soap			3.25			8.23
Rags	45 lbs	.057	2.60	70 lbs	.061	4.25
Hardware and Tools			14.49			33.19
Brushes	17	.438	7.45	14	.514	7.20
Brooms	30	.281	8.45	38	.288	10.95
Candles			5.70			10.00
Hose	100 ft	.30	30.00	100 ft	.30	30.00
Miscellaneous			10.40			32.87
T O T A L			\$274.10			\$265.16
Less cash discounts			22.20			4.18
			\$251.90			\$260.98

S T E A M E R P I O N E E R

Details of Paints Purchased

	1 9 0 1			1 9 0 2		
	QUANTITY	PRICE	AMOUNT	QUANTITY	PRICE	AMOUNT
White Lead	100 lbs	\$.064- $\frac{1}{4}$	6.25	75 lbs	\$.061	\$ 4.57
Red Lead	150 "	.073	11.00	400 "	.075	30.00
Boiled Oil	62 gal	.621	38.51	79 gal	.64	50.58
Turpentine	12 "	.533	6.40	10 "	.60	6.00
Tinted Lead	300 lbs	.06- $\frac{1}{2}$	19.50	200 lbs	.063	12.50
Princess Brown	521 "	.04	20.84	500 "	.037	18.75
Hull Paint (red)				5 gal	.80	4.00
Inside Maroon Enamel Paint				3 "	1.50	4.50
Miscellaneous			13.17			4.20
T O T A L			\$115.67			\$135.10
Less discount						.76
			\$115.67			\$134.34

S T E A M E R P I O N E E R

Details of Engineer's Supplies

	AMOUNT	PRICE	1 9 0 1	AMOUNT	PRICE	1 9 0 2
Tools and Hardware		\$	\$ 13.18		\$	\$ 20.13
Lamps and Wicking			24.35			10.09
Scouring Material			2.63			4.78
Soap			4.25			5.35
Rags and Waste	135 lbs	.05	6.75	170 lbs	.05	8.60
Hose	71 ft	.242	17.19			
Brooms	8	.25	2.00	4	.322	1.30
Brushes	4	.245	.98	11	.236	2.60
Squirt Cans and Fillers			.35			
Water Glasses			5.98			5.98
Fittings and Pipings			8.11			28.13
Valves			55.64			31.48
Gaskets			3.40			2.63
Packing	97 lbs	.690	67.01	102 lbs	.703	71.71
Miscellaneous			14.84			20.87
T O T A L			\$226.66			\$213.53
Less Cash Discount						2.16
			\$226.66			\$211.37

S T E A M E R P I O N E E R

FUEL PURCHASED FOR TWO SEASONS

G R A D E	1 9 0 1				1 9 0 2			
	TONS	PER CENT	AVERAGE PRICE	TOTAL COST	TONS	PER CENT	AVERAGE PRICE	TOTAL COST
LUMP	67	3.4	\$2.892	\$ 193.75	104	4.5	\$3.187	\$ 331.50
RUN OF MINE	111	5.5	2.184	242.40	419- 900	18.0	2.400	1,006.68
NUT	5	.2	2.250	11.25	28- 400	1.2	2.250	63.45
SLACK	1,840-1100	90.9	1.958	3,603.76	1,775-1500	76.3	2.075	3,634.06
T O T A L S	2,023-1100	100.0	\$2.002	\$4,051.16	2,327- 800	100.	\$2.185	\$5,085.69

STEAMER PIONEER

STATEMENT OF GENERAL AND EXTRAORDINARY REPAIRS-----ELABORATED

Total cost of repairs was \$842.36	MACH. REPAIRS	BOILER REPAIRS	HULL REPAIRS	DECK REPAIRS	CABIN REPAIRS	BUL- WARKS& TANK REPAIRS	MISC. REPAIRS
Patch 13" x 10" on back flue sheet of port boiler	\$	\$ 47.86	\$	\$	\$	\$	\$
Scraping & painting in hold			9.25				
New floor in Mates room				8.05			
Renewing & repairing hatch covers				20.07			
Renewing & repairing ceiling in lower hold under hatches				95.10			
Renewing & calking after deck over cabin				146.45			
Renewing & repairing floors in dining room, hall, pantry, mess-room, kitchen, etc				45.02			
Overhauling & repairing steering gear	21.97						
Repairing water closet, wash basins after cabin tanks, etc					24.76		
Overhauling & repairing all electric wiring							23.60
Renewing & repairing pipe railing						22.21	
Renewing whistle wire etc	20.17						
Repairing ladders							1.95
New clocks for pilot house and dining room							10.00
Repairing log							1.85
New steps on port & starboard sides leading to cabin deck							13.96
Repairing Marine glasses							4.00
Stanchion for ford hatch to prevent men falling in hold							7.07
Calking seams in ford. deck				2.48			
New battings & strongbacks for hatches				12.06			
Straightening hatch combings				4.26			
Timber to pack water tanks to prevent freezing							6.90
Patching hole in coal bunker tank top			3.60				
Repairing ventilator							3.03
Repairing all locks, knobs, keys, etc. on doors					15.20		
Glazing					32.70		
Repairing fire hold tools		11.56					
Repairing kitchen range							11.99
Repairing lamps & lanterns							10.90
Paints purchased during season							134.34
T O T A L S	\$102.14	\$ 59.42	\$ 12.85	\$333.49	\$ 82.66	\$ 22.21	\$229.59

Total cost of paints purchased during season 1900 was \$252.73

" " " " " " " 1901 " 115.67

The total cost of paints used by engineers department in season of 1902 was \$ 9.51

S T E A M E R P I O N E E R
 STATEMENT SHOWING TIME DISCHARGING ORE CARGOES

NAME OF DOCK	NO. CARGOES	1901						1902						
		AVERAGE TIME AT DOCK		AVERAGE TIME AT DOCK DISCHARGING		AVERAGE TIME ACTUALLY AT WORK		AVERAGE TIME AT DOCK		AVERAGE TIME AT DOCK DISCHARGING		AVERAGE TIME ACTUALLY AT WORK		
		DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	
T & O C Toledo	1	1	8	1	5		16							
C H & D "	1	1	16	1	3		15							
MINNESOTA Ashtabula								3	2	12	1	20		17
M & S "								2	2	19	1	2		11
P & E Erie	1	4	16	4	5	1	1	1	2	1	1	23		10
E & P "								1	1	5	1	4		13
LEHIGH VAL. Buffalo	13	1	22		16		11	8	2	4		13		12
WEST SHORE "	1	1	1		18		16	2	2	7	1	14		21
MINNESOTA "								1	2	3	1	16		16
D L & W "								1	2	5		11		10
GRAND AVERAGE	17	1	22		23		12	19	2	10	1	2		14

STEAMER PIONEER

GENERAL DATA

Total number of crew (including Master and Engineer) ...	17
Length over all	241 Feet
Keel	225 "
Beam	35 "
Depth	17 "
Net tonnage	774 Tons
Gross Tonnage	1123 "
Ore Capacity	1772 "
Coal Capacity	1532
Engines	20, 23, 54 X 42
Boilers	2 Scotch, 12 X 11½
Steam	160
Horse Power	1223
Pitch of Wheel	15'9"
Average revolutions per minute, loaded	72
" " " " light	78
Number of hatches	(8 working hatches (4 intermediate hatches
Average miles per hour, running alone, light	13.38
Average miles per hour, running alone, loaded	12.20
Average miles per hour, towing Chattanooga, light.....	8.98
Average miles per hour towing Chattanooga, loaded.....	8.39

S T E A M E R C A D I L L A C

GENERAL OPERATIONS

The Steamer CADILLAC sailed from the port of Cleveland, O., on first trip of season 1902, on April 14th, and finished discharging last cargo at Cleveland on December 11th, having been in commission 242 days.

This Steamer was engaged the entire season in carrying cargoes of iron ore from the port of Marquette, Mich., to Lake Erie ports, going up light each time, with the exception of the last ^{two} trips, when coal cargoes were carried to Marquette. The total distance traveled during the season was 31,114 miles, making 24 round trips.

The average rate of freight obtained on all cargoes carried during the season was \$.6825, as against \$.7179 in the previous year. The actual operating expenses per ton of freight carried were \$.5015 in 1902 and \$.5362 in 1901.

The average net earnings per ton of freight carried in 1902, are, therefore, \$.1810 as against \$.1816 during the preceding year.

STEAMER CADILLAC

GENERAL REPAIRS

The General Repair Account for the past season was but of the usual character. In addition to the repairs made necessary on account of the accidents, hereafter referred to, the other repairs will not be large.

A repair in the way of an improvement that may be undertaken, will be the moving of the stanchions from their present location at the hatchways to the next beam, which change is under consideration of expert advice. This change, if made, will cost from \$500.00 to \$700.00, and is done to afford better facilities in unloading, taking into consideration the use of the more modern unloading machinery.

S T E A M E R C A D I L L A C

ACCIDENTS #1

JUNE 2ND The Cadillac was fueling at the Valley Dock, Cleveland. The Engineer in charge of the fuel scow swung the fuel bucket over against the iron ladder, running from the deck to top of the boiler house, smashing it so badly as to require new piping to repair same. This was reported to the Pittsburg Coal Co., who, after some discussion, paid the bill for repairs, amounting to \$19.20.

JUNE 19TH The Steamer Cadillac was lying at the Valley Dock discharging cargo, when the Steamer J. E. TREVOR started to wind around the Seneca Street bend. In so doing her stern came in contact with the Cadillac's port quarter aft, breaking one angle iron, bending one and starting the iron chock. This damage was repaired at the end of the season and the bill, amounting to \$26.03, sent to the Pittsburg Steamship Co.

JUNE 19TH The Cadillac arrived at the Valley Dock, Cleveland, to discharge cargo, but could not be placed just where the Dock Foreman wanted her, account of another boat just ahead unloading; so that Cadillac had to wait until she was unloaded. In the meantime the hoists were moved up and started to unload the CADILLAC where she lay, and everything went along all-right until after dinner, at which time the Steamer ahead had finished unloading and out of the Cadillac's way. The Dock Foreman then asked the Cadillac to move up seven or eight feet, which the Cadillac did. They then started to unload again, but failed to move the hoists forward to correspond with the distance the Cadillac had moved. Consequently the boom on the

S T E A M E R C A D I L L A C

ACCIDENTS #2

hoist would not clear the main mast, as it had previously done when the rigging was first placed. In swinging around the boom struck the mast, breaking it off about twenty three feet from the top. The Cadillac stopped at the ship yard on the way out and had the mast repaired, the bill amounting to \$132.48. Inasmuch as the old spar was considerably decayed and not in good shape, the Pittsburg Coal Co. declined to bear the entire expense of repair, and the matter was compromised by our standing one half the bill and the Pittsburg Coal Co. the other half, viz: \$66.24.

JUNE 26TH The Cadillac arrived at the Soc on the night of this date, bound down, and after being looked through, decided to tie up at the Government Pier until morning, as there was a heavy wind blowing, making it dangerous to come on down the river at night. Accordingly the Cadillac was made fast to the pier. Shortly after this, the Steamer O. M. POE, while making a landing alongside of the Cadillac, backed into her port side striking about thirty feet aft of the main cabin, inflicting the following damage: Top edge of sheer strake plate bent in from fore side of #3 hatch to aft side of #1 hatch, and gunwale angle bent in with the plate and rivets sprung; half round molding on top edges of sheer strake bent; two bulwark plates shoved in and buckled; one main rail angle bent in about three inches; three round bulwark stanchions severely buckled; one main deck stringer plate crushed and buckled by stanchions, and some other slight damage. A survey was made of the damage on the Cadillac, and it was estimated that \$300.00 would fully cover the cost of repairs. This was reported to the

S T E A M E R C A D I L L A C

ACCIDENTS #3

owners of the Poe, and a settlement effected on that basis. Repair has been made on account of this damage, the total cost of which was \$146.95.

JUNE 27TH The Cadillac left Presque Isle at 12:30 A. M. June 26th, loaded with iron ore to a draft of 16' 6" forward and 16' 9" aft, and arrived at the Soc on the evening of the same day. She locked through and made fast to the Government Pier, just astern of the Lafayette, waiting for daylight. The next morning the following boats were lined up alongside the Cadillac: Barge #117 lying outside the Cadillac, next to her the Case, outside the Case the LaSalle, the Maricopa and her barge, the Bryn Mawr, were outside of the Lafayette and the Hanna was next to the barge. About three A. M. the Lafayette let go her head lines and swung the whole tier of vessels into the river. The #117, was the Lafayette tow, and as their tow line was fast, she cast off the lines which held her to the Cadillac and followed the Lafayette down. The Britton and tow went down first, the Hanna followed them and the Lafayette came next with her tow. When the other boats drifted out into the stream after the Lafayette cast off from the dock, the Cadillac waited until they got well out and then started down near the docks, working out toward the ranges. The Maricopa still had her barge alongside when the Cadillac started and was not under headway, and the Cadillac went by well inside of him. The Hanna was going very slowly and this caused the Lafayette and tow to go slow also. The Cadillac started under one bell, but this did not give her very good steerage way and the Captain rang her up, so that the Cadillac came up

S T E A M E R C A D I L L A C

ACCIDENTS #4

alongside of #117 and about 150 feet starboard of her. The Lafayette blew three check whistles which the Captain of the Cadillac took to be for his barge, but he blew them again, and the Cadillac answered them and checked. The Lafayette was well out toward the ranges at that time and the Cadillac starboarded some and dropped in astern of the barge. The boats were then just above the Bayfield can, and the Captain of the Cadillac noticed the Maricopa about a quarter of a mile astern, just working ahead of his barge and sticking out the tow line. By the time the Cadillac got just below the Bayfield rock, the Lafayette's engines were stopped, so that Cadillac stopped hers, and continued to drift astern of the Lafayette's barge. The Lafayette blew the Hanna four whistles, and the latter boat went ahead faster, so that the Lafayette started her engines again. The Cadillac started ahead when he did. It was at this time the Captain of the Cadillac noticed the Maricopa almost a half mile astern and bearing a trifle over the Cadillac's port quarter. The Cadillac went very slowly, probably not more than two miles an hour faster than the current, down to the turn, trying to keep our regulation distance astern of the #117, and while working down there the Maricopa rapidly came up astern. The Captain did not think he would try to pass there, and did not pay any attention to him until he got about his length directly astern of the Cadillac, when the Maricopa blew a check whistle, which the Cadillac did not answer. He immediately blew again, and in the meantime continuing to gain on the Cadillac rapidly, so that when she began making the turn into Little Rapids Cut at North Entrance light

STEAMER CADILLAC

ACCIDENTS #5

her bows were lapping the Cadillac's port quarter. The Captain rang up our engine to make the turn, and when the Cadillac got straightened down the Cut, checked, as the Maricopa was going by and the Captain of the Cadillac thought it the best place to pass. When the Maricopa's bows were abreast of the Cadillac, the Cadillac sheered violently to starboard and ran into the slip opposite the Country Club. As soon as she started to shear, the Captain rang to stop and back strong, in the meantime having the wheel hard-a-starboard. However she ran up on the bank and stopped, and as soon as the Bryn Mawr got by, backed off and went up the Cut and turned around and continued on her voyage.

An examination was made when this Steamer was put in dry dock and resulted in finding the following damage:

Shell plates #3 and #4 of strake "C" on the port side badly indented and several of the rivets loosened, floor frames #6, #7, #8, #9 & #10 are damaged, the angle frames being fractured and the floor plates buckled, and the foot of the collision bulkhead buckled. This damage was repaired and the Ship Building Co's. bill amounted to \$2591.39.

After this accident occurred the facts were laid before Messrs Mather & Co., of Philadelphia, and it was mutually agreed between the Pittsburg Steamship Co. and ourselves, at the instance of Mather & Co., that H. A. Kelley, Esq., should go ahead and take the statements of both sides, fully and impartially, with a view of arriving at the exact facts in the matter. It was understood that if the statements of the crews developed no serious differences upon the facts, a settlement could probably be arrived at without resort to litigation. It was

S T E A M E R C A D I L L A C

A C C I D E N T S # 6

further agreed, however, that if serious differences upon the matters of fact did develop, Mr. Kelley might withdraw and leave the parties to the proper remedies. Mr. Kelley took the statements of both sides and found conflicting testimony on the essential facts in the case, and therefore declined to have anything to do with the settlement of the case. The amount of damage to the Cadillac, estimated by a representative of the Pittsburg Steamship Co. on a superficial examination made while the Cadillac was lying at Toledo, was placed at \$1200.00, and they made a proposition to us to settle on a division of the damages. This we declined to do, because we did not feel that it was possible to entirely estimate the extent of the damage until the vessel should be dry-docked. This view was afterwards borne out by the repair bills as above shown. On January 29th, at a conference between Mr. R. Parry Jones, on behalf of the Cadillac's Underwriters, Mr. H. A. Kelley and Mr. J. H. Sheadle, it was intimated on the part of Mr. Kelley that if the claim was presented to the Pittsburg Steamship Co., that they would agree to a division of the cost. This was accordingly agreed to on the part of the Cadillac's representative and such claim made.

OCTOBER 12TH On the evening of this date the Cadillac was proceeding on her voyage up the Lakes, and just after making the turn into the Detroit River at Bar Point Light, was placed on the course well over to the west side of the channel, and shortly after came into collision with the Steamer Lackawanna, bound down, under the following circumstances:

STEAMER CADILLAC

ACCIDENTS #7

Just after making the turn the Cadillac was placed on a course well over to the west side of the channel, and continued in this manner for a distance, when two down-bound Steamers were discovered about three fourths a mile above. They both seemed to be somewhat to eastward of the center of the channel and the Cadillac blew them a two blast signal, and her course was changed an eighth of a point to port. The westerly vessel of the two down bound Steamers did not answer the signal and very soon after commenced to swing to starboard, and as soon as this starboard swing was noticed, the Cadillac immediately blew a danger signal, and a signal to the engineer to check. This was followed by another two blast signal, but none of the signals were answered by the sheering vessel, which proved to be the Lackawanna. At the time the danger signal was blown the Lackawanna and Cadillac were apparently about half a mile apart. Shortly after the second two blast signal was blown, the Lackawanna started to swing back and showed her green light again, and the Cadillac's wheel was put hard-a-starboard, and the engineer signalled to reverse. The Lackawanna, however, did not swing sufficiently to port after her sheer to starboard and the boats came together with a glancing blow, the bluff of the Cadillac's starboard bow striking the bluff of the Lackawanna's starboard bow, about thirty feet from the latter's stem.

The damage to the Lackawanna was considerable, consisting of six plates more or less stove in on the starboard side on the sheer strake, and seven frames fractured. The starboard house shoved over several inches to port; four berths destroyed, the wainscoting about the berths splintered. A

STEAMER CADILLAC

ACCIDENTS #8

toilet room distorted and three doors jammed.

The damage to the Cadillac was located on the starboard side below the main deck and abreast of the forward watertight bulkhead, two plates in the third strake below shear being stove in, three frames fractured and the watertight bulkhead badly buckled in way of the blow, fender and fender bars damaged.

The foregoing represents a statement made by our people. The Lake Transit Co., owners of the Steamer Lackawanna, have their own views on the matter and attach blame to the Steamer Cadillac. The facts, as they were known by us, were laid before Messrs. Mather & Co., and under date of Jan. 14th, they instructed that the matter be placed in the hands of Messrs. Hoyt, Dustin & Kelley, for purpose of making a settlement based on a division of the damages. This case will not be determined until the Lackawanna is repaired, which will not be done until the Spring of 1903.

The damage sustained by the Steamer Cadillac in this accident amounts to \$1473.87.

NOVEMBER 23TH The Cadillac finished unloading a cargo of coal at Marquette and was proceeding thence to Presque Isle dock for her ore cargo. The Cadillac approached on a line with the dock, with the intention of landing on the north side, then winding around the end of the dock to the south side so as to lie stem out. When close to the dock, the Captain of the Cadillac noticed the Angelina lying on the north side of the dock, and inasmuch as he would have to go around the Angelina

STEAMER CADILLAC

ACCIDENTS #9

to land on the north side, he determined to land on the end of the dock where he could back up and let the wind blow him around to the south side. When the Cadillac was about two boat lengths from the end of the dock, the Angeline blew a two blast signal, indicating he was leaving the dock and would pass to port of the Cadillac. The Cadillac answered this with a two blast signal, indicating this arrangement was satisfactory. However, instead of going to starboard, or the South side of the dock, the Cadillac swung to port directly across the Angeline's bows. As the Angeline was too close to stop, and the Cadillac still came ahead, they came together the Cadillac striking the Angeline on the starboard side about twenty feet from the stem.

The survey held on the Angeline showed the following damage as a result of this collision:

One forecastle side plate, one sheerstrake plate, one topside plate one side plate, all badly indented; fender strake bent; forecastle deck stringer plate buckled on outer edge; forecastle deck stringer angle buckled; one forecastle deck beam, four frames bent; windlass deck stringer plate buckled; windlass deck stringer angle and beam buckled.

The survey held on the Cadillac showed the following damage:

PORT SIDE:

Strakes "E", "F" and "G" fractured and bent;

STARBOARD SIDE:

Strake "E" stemplate fractured; Strake "F" stemplate severely distorted; Strake "G", stemplate strained and bent.

The damage on these two boats has been repaired at a total cost of \$2,233.64, and will be a claim on the Cadillac's Underwriters.

CADILLAC

	1901		1902	
	DAYS	PERCENT	DAYS	PERCENT
Time in port,	81	38.8	88	36.3
Time sailing,	110	52.6	128	52.9
Time lost by bad weather fog and low water,	9½	4.5	20¼	8.4
Time lost waiting at Soc Canal & River,	4	1.9	4¼	1.8
Time lost by accidents,	4½	2.2	1½	.6
TOTAL TIME IN COMMISSION,	209	100	242	100.0
Number of trips made,	24		24	
Number of cargoes carried,	24		26	

PERCENTAGES OF TIME COMMISSION IN PORT,

Season	1898	31.1
"	1899	36.5
"	1900	42.6
"	1901	38.8
"	1902	36.3

C A D I L L A C

Comparisons

	1 9 0 1	1 9 0 2
Days in commission,	209	242
Number of miles traveled,	27,411	31,114
Number of trips made,	24	24
Number cargoes freight carried,	24	26
Gross tons freight carried,	56,392	59,882
Average rate freight per gross ton,	\$.7179	\$.6825
Average cost to carry per gross ton freight,	.5363	.5015
Net earnings per ton freight carried,	\$.1816	\$.1810
Cost per ton to operate after eliminating Extra & Gen. Reprs.	\$.5025	\$.4917
Gross Receipts,	\$40,487.15	\$40,870.75
Gross Expenditures,	30,245.11	30,037.97
Net earnings,	\$10,242.04	\$10,842.78
Percentage of operations to earnings,	74.7	73.4
Gross earnings per mile traveled,	\$ 1.4770	\$ 1.3136
Operating expenses per mile traveled,	1.1034	.9651
Net earnings per mile traveled,	\$.3736	\$.3485
Gross earnings per day,	\$ 193.71	\$ 168.88
Operating expenses per day,	144.71	124.08
Net earnings per day,	\$ 49.00	\$ 44.80
Expenses per day excluding cargo handling costs,	\$ 92.81	\$ 79.52
Cost provisions per man per day(Excluding extra meals)	\$.335	\$.323
Average tons coal consumed per mile steamed,	110/3000	115/3000
Average cost coal consumed per mile steamed,	\$.1223	\$.1394
Average tons coal consumed per hour steamed,	1148/3000	1166/3000
Average cost oil consumed per mile steamed,	\$.00296	\$.00272
Average cost oil consumed per hour steamed,	\$.0307	\$.0276
Average wages paid per day whilein commission,	\$ 27.90	\$ 27.98
Average ore cargo from Lake Superior,	2,340	2,353
Average draft water on ore cargoes from Lake Superior,	{ 16'5"for'd	{ 16'7"for'd
	16'10"aft	16'11"aft
Average mean draft water on ore cargoes from Lake Superior,	16'7½"	16'9"

C A D I L L A C

R E C E I P T S	T O N S	A M O U N T	P E R G R O S S T O N F R E I G H T C A R R I E D
24 Cargoes iron ore from Marquette,	56,484	\$39,532.80	\$.7000
3 Cargoes coal to Marquette	3,398	1,331.95	.3919
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> { 1903-1700 net tons 30¢ 1902 " " 40¢ </div> </div>			
36	59,822	\$40,870.75	\$.6825
<u>D I S B U R S E M E N T S</u>			
Extraordinary and General Repairs,	\$ 583.16		
Ship Keeping and winter dockage,	30.00		
Fitting out,	371.23		
Wages and Captain's Salary,	7,901.13		
Captain's Expense account,	82.72		
Tug Services,	34.87		
Handling Cargoes,	10,783.21		
Taxes,	267.71		
Marine Insurance,	3,261.43		
Freight List Insurance,	40.96		
Mate's Supplies,	319.58		
Provisions,	1,269.45		
Steward's Supplies,	113.58		
Fuel,	4,338.07		
Engineer's Lubricants,	84.83		
Engineer's Supplies,	74.52		
Boiler Repairs,	24.60		
Machinery Repairs,	23.65		
General Expenses (Telegrams Dues Lake Carriers Assn. Etc.	131.36		
Laying Up,	290.91	30,027.97	.5015
<u>NET EARNINGS FOR SEASON</u>		\$10,842.78	\$.1810
Less amount not allowed by Insurance company in adjustment of claims,		435.30	
Making total net gain for season 1902		\$10,407.48	

NOTE:

The cost per ton to operate after eliminating extraordinary and General repairs account is \$.4917

C A D I L L A C
COMPARISON OF ITEMS OF DISBURSEMENT

	1901	1902	+ or -	REMARKS
Extraordinary and General Repairs,	\$ 1,904.61	\$ 83.18	\$-1,321.45	New wooden floor ceiling in 1901 also scraping and painting tank top
Ship Keeping and Winter Dockage,	91.34	30.00	- 61.34	In 1902 paid no wages to shipkeeper or watchman
* Fitting out,	697.01	371.33	- 325.78	Engineer's Department fitted out for season 1902 while laying up at end of season 1901
Wages and Captain's Salary,	6,922.28	7,901.13	+ 978.74	A longer season in 1902
Captain's expense account,	70.98	83.72	+ 12.74	
Tug Services,	170.56	34.27	- 136.29	On account of tug men's strike in 1902 could not always obtain services of tugs,
Handling Cargoes,	10,846.85	10,783.21	- 63.64	
Taxes,	254.46	267.71	+ 13.25	
Marine Insurance,	3,320.96	3,261.43	- 119.53	Insurance rate decreased from 3.20 in 1901 to 2.95 in 1902
Freight List Insurance,	48.67	40.96	- 7.71	
Mate's Supplies,	299.23	319.58	+ 20.35	
Provisions,	1,130.09	1,269.45	- 46.46	Based on decreased cost of \$.013 per man per day
Steward's Supplies,	128.29	113.58	- 14.71	
Fuel,	3,366.73	4,338.07	+ 186.60	Based on increased consumption of 5lbs per mile
Engineer's Lubricants,	81.18	84.83	- 7.46	Based on decreased cost of \$.00024 per mile
Engineers Supplies,	50.56	74.52	+ 23.96	
Boiler Repairs,	50.99	24.60	- 26.39	
Machinery Repairs,	7.82	33.65	+ 15.83	
Auxiliary Machinery Repairs,				
General Expenses,	121.09	131.36	+ 10.27	
* Laying up,	560.71	290.01	- 269.80	In 1901 Engineer's Department fitted out for 1902 while laying up. In 1902 only necessary laying up work was done.

practically

* The machinery on this steamer was fitted out for season 1902 while laying up at end of season 1901. No fitting out work was done while laying up at end of season 1902.

STEAMER CADILLAC

Captain's Expense Account

	1901	1902
Telegrams and Telephones	\$ 30.41	\$ 45.70
Postage	9.00	10.50
Railway Fares	17.50	12.85
Customs	9.00	9.80
Stationery		3.69
Express	.20	
Exchange	.57	1.78
Miscellaneous	4.30	3.00
TOTAL	\$ 70.93	\$ 87.32

S T E A M E R C A D I L L A C

Details of General Expense

	1901	1902
Telegrams etc	\$ 12.89	\$ 30.20
Stationery	5.56	12.45
Trimmings and buttons	12.90	8.00
Travelling Expenses	4.25	16.67
Dues, Lake Carriers Association	32.04	32.04
Amount paid Robert Logan for investigating and Reporting on Engine Indicator Cards	10.00	10.00
Marine Reporting	15.40	22.00
Board Bills of Captain and Engineer while fitting out and laying up	48.30	17.75
Prizes and Rewards	50.00	
Miscellaneous	34.40	
T O T A L	\$225.74	\$149.11

S T E A M E R C A D I L L A C

P R O V I S I O N A C C O U N T

	1901			1902		
	QUAN.	PRICE	AMOUNT	QUAN.	PRICE	AMOUNT
Sugar	804 lb	.059	47.51	964 lb	.052	50.79
Tea	35 "	.372	13.10	41 lb	.306	12.58
Coffee	144 "	.142	21.14	67 "	.131	8.82
S p ices & Vinegar			6.74			7.39
Extracts	18 bt	.164	2.95	18 bt	.185	3.33
Baking P owder	58 lb	.217	12.63	56 lb	.195	10.92
Bread & Crackers			31.68			18.45
B utter & Butterine	466 "	.165	77.36	559 "	.167	93.93
Lard & Cotoline	244 "	.100	24.55	222 "	.110	24.60
Cheese	49 "	.134	6.52	79 "	.158	12.54
Fresh Milk	256 gal	.194	49.67	186 gal	.181	33.81
Condensed Milk	54 can	.097	5.25	222 can	.094	20.90
Pickles			11.49			13.34
Sauce			.72			6.37
Eggs	245 dz	.116	40.80	224 dz	.208	46.77
Flour	9-1/2 bbl	4.606	43.76	8-1/8 bbl	4.61	40.92
Buckwheat Graham Corn Meal	187 lb	.033	6.25	166 lb	.023	3.83
Farinaceous Foods	63 "	.061	3.86	155 "	.038	5.93
Canned Fruit	28 can	.159	4.47	44 can	.202	8.90
Canned Vegetables	227 "	.078	17.89	236 "	.089	21.11
Dried Fruits	177 lb	.095	16.98	183 lb	.098	18.04
Dried Vegetables	79 "	.065	5.18	30 "	.051	1.64
Fresh Fruit			36.94			41.92
Fresh Vegetables			51.15			68.38
Potatoes	98 bu	.782	77.83	98 bu	.742	72.98
Dried Onions	11-1/2pk	.320	3.68	11 pk	.346	3.81
Fr esh Fish	232 lb	.080	18.61	147 lb	.094	13.93
Salt Fish	35 "	.090	3.16	49 "	.08	3.92
Fr esh Meat	3,119 "	.105	329.78	4,103 "	.113	467.20
Salt Meat	707 "	.092	65.57	820 "	.086	70.72
Molasses & Syrup	20 gal	.613	11.96	14 gal	.333	4.66
Ice	626 cwt	.152	95.59	365 cwt	.191	69.99
Miscellaneous			3.05			
TOTAL			\$1,147.84			\$1,282.42
Less cash discounts			17.75			12.97
			\$1,130.09			\$1,269.45

Average consumption of meat per man per day in 1901 was 1.14 lbs

" " " " " " " " 1902 " 1.27 lbs

S T E A M E R C A D I L L A C

D E T A I L S O F S T E W A R D ' S S U P P L I E S

	AMN'T	PRICE	1901	AMN'T	PRICE	1902
Table linen, towelling etc		¢	¢ 9.30		¢	¢ 5.75
Bed linen, blankets etc			15.25			7.05
Cutlery and Spoons			1.53			
Crockery and glassware			10.71			6.30
Kitchen utensils			7.11			8.18
Soap			12.00			10.60
Scouring material			5.51			6.63
Brooms	9	.225	2.03	2	.25	.50
Brushes	8	.138	1.03	1	.08	.08
Laundry			38.14			48.28
Range Coal	3- $\frac{1}{2}$	6.78	23.75	5- $\frac{1}{2}$	6.945	38.20
Toilet articles			.96			3.83
Miscellaneous			69.50			8.52
TOTAL			\$246.83			\$143.92
Less cash discounts			.76			.46
			\$246.06			\$143.46

S T E A M E R C A D I L L A C

Details of Mate's Supplies Acc't

	AMN'T	PRICE	1901	AMN'T	PRICE	1902
Flags and private signals		⌘	⌘		⌘	⌘
Canvass Deck etc			18.30			
Kerosene Oil	712 gal	.122	85.92	686 gal	.125	86.14
Rope etc	1,440 lbs	.112	162.48	1,473 lbs	.137	201.90
Chimneys and Globes			7.20			8.38
Lamps, Lanterns, and burners			13.99			21.45
Scouring material			9.89			5.23
Soap			1.65			5.02
Rags	75 lbs	.072	5.40	55 lbs	.066	3.60
Hardware and Tools			7.55			25.45
Brushes	29	.379	11.00	24	.456	10.95
Brooms	31	.254	7.88	24	.25	6.00
Candles			1.20			9.25
Hose	100 ft	.340	34.00	100 ft	.29	29.00
Miscellaneous			15.65			14.68
T O T A L			\$382.07			\$427.05
Less cash discounts			10.60			18.35
			\$371.47			\$408.70

S T E A M E R C A D I L L A C

Details of Paints Purchased

	1 9 0 1			1 9 0 2		
	QUANTITY	PRICE	AMOUNT	QUANTITY	PRICE	AMOUNT
White Lead	300 lbs	\$.06- ¹ / ₄	\$ 18.75	300 lbs	\$.05- ³ / ₄	\$ 17.25
Red Lead	750 "	.066	50.00	625 "	.058	36.50
Boiled Oil	116 gal	.676	78.37	84 gal	.617	51.84
Turpentine	10 "	.55	5.50	36 "	.611	22.00
Maroon Enamel Paint				3 "	1.50	4.50
Tinted Lead	200 lbs	.065	13.00	200 lbs	.06- ¹ / ₄	12.50
Hull Paint (black)				4 gal	.975	3.90
Hull Paint (red)				8 "	.85	6.80
Princess Brown	591 lbs	.04	23.64	404 lbs	.03- ³ / ₄	15.15
Miscellaneous			18.47			16.53
T O T A L			\$207.73			\$187.02
Less Cash Discount						.88
			\$207.73			\$186.14

S T E A M E R C A D I L L A C

Details of Engineer's Supplies

	AMOUNT	PRICE	1901	AMOUNT	PRICE	1902.
Tools and Hardware		¢	¢ 5.56		¢	¢ 2.50
Lamps and Wicking			5.26			5.66
Scouring Material			7.44			10.35
Soap			4.00			3.30
Rags and Waste	65 lbs	.07	4.55	60 lbs	.056	3.35
Hose				18 ft	.62	11.16
Brooms	10	.228	2.28	9	.334	2.31
Brushes	4	.425	1.70			
Squirt Cans and Fillers			.80			
Water Glasses						1.70
Fittings and Pipings			11.51			7.32
Valves			3.27			12.17
Gaskets			8.23			11.50
Packing	63-3/4bs	.513	32.74	34 lbs	.475	11.40
Miscellaneous			30.34			7.60
T O T A L			\$117.68			¢ 90.72
Less Cash Discount			.12			1.62
			\$117.56			¢ 89.10

S T E A M E R C A D I L L A C

FUEL PURCHASED FOR TWO SEASONS

G R A D E	1 9 0 1				1 9 0 2			
	TONS	PER CENT	AVERAGE PRICE	TOTAL COST	TONS	PER CENT	AVERAGE PRICE	TOTAL COST
LUMP	192- 600	12.6	\$2.363	\$ 454.18	669-1100	37.4	\$2.539	\$1,700.26
RUN OF MINE	1,326-1500	87.4	\$2.195	2,912.55	1,079-1500	60.3	2.368	2,557.44
NUT								
SLACK					42- 600	2.3	1.900	80.37
TOTALS	1,519- 100	100.0	\$2,216	\$3,366.73	1,791-1200	100.	\$2,421	\$4,338.07

STEAMER CADILLAC

STATEMENT OF GENERAL AND EXTRAORDINARY REPAIRS-----ELABORATED

Total cost of repairs was	MACH. REPAIRS	BOILER REPAIRS	HULL REPAIRS	DECK REPAIRS	CABIN REPAIRS	BUL- WARKS & RAIL REPAIRS	MISC. REPAIRS
\$736.61							
Repairing star, in hold at hatch		\$	\$ 10.23	\$	\$	\$	\$
Renewing locks and knobs on all doors in all the rooms					37.42		
Wages of men scraping & painting in hold			31.50				
Kedge anchor purchased from Choctaw							30.00
Patch 51" x 8" on first ring of middle furnace		65.17					
New oak chock timbers in windlass room for anchor chain							20.80
Renewing floor ceiling in crank pit of engine room				10.15			
New bulwarks from aft end of cabin to for'd end of wooden bulwarks						52.10	
Renewing rail on port and starboard sides						23.02	
Renewing fender strake where necessary all around			122.78				
Engraving pieces in timber beneath after Capstan & timber hds.				12.91			
Eyebolts & clamps for gangways & new fenders			7.89				
Repairing water closet, aft. bath room closet, etc			13.44		22.68		
Repairing all screen doors and windows					16.77		
Repairing steering pole							1.00
Repairing leak in water bottom			2.55				
New sink in kitchen & lamp room floors				4.93			.85
Repairing ladder in main hold							
Repairing pump box in lower (hold							3.40
Renewing hatch battings	3.71			8.22			
Repairing steering gear		.63					
Repairing fire hold tools			.40				
Repairing pilot house floor			2.00				
New lugs for hatches							
Weather strips placed on after cabin				4.54			
Repairing anchor crane							4.50
Lumber for staging							.55
Repairing boiler room and sheet iron work in front of boiler		8.65					
Renewing rail washed out by heavy sea						13.02	
Glazing					.75		
Repairing kitchen range							18.72
Repairing binnacle lamps signals lights, etc							5.15
Paints purchased during season							188.14
TOTAL	\$ 3.71	\$ 74.50	\$ 188.38	\$ 32.61	\$ 72.16	\$ 88.14	\$ 271.11

The total cost of paints purchased in season of 1900 was \$183.97

" " " " " " " " " 1901 " 207.73

The total cost of paints used by engineer's department in season of 1902 was \$23.80

S T E A M E R C A D I L L A C
STATEMENT SHOWING TIME DISCHARGING ORE CARGOES

NAME OF DOCK	NO. CARGOES	1901						1902						
		AVERAGE TIME AT DOCK		AVERAGE TIME AT DOCK DISCHARGING		AVERAGE TIME ACTUALLY AT WORK		AVERAGE TIME AT DOCK		AVERAGE TIME AT DOCK DISCHARGING		AVERAGE TIME ACTUALLY AT WORK		
		DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	
CH & D Toledo	12	1	23	1	2		17	1	2	10		21		18
T & O C "	5	2	15	1	17		17							
CH V & T "	3	2	4		21		16	5	1	22	1	5		14
B & O Sandusky								1	3	22	3	17		24
CL & W Lorain								1	1	2	1	1		12
CT & V Cleveland	1	5	5	2	17		14	2	1	20	1	6		16
NY P & O "								2	5	19	3	20		31
C & P "	1	1	22	1	20		21							
MINNESOTA Ashtabula								5	1	22	1	13		17
P Y & A "	1	1	14	1	11		16							
M & S "								1	5		2	21		20
BUF.ICE Co. Buffalo	1	2	15	1	22		22							
LEHIGH VAL. "								2	1	5		20		17
WEST SHORE "								1	2	15	1	22		37
MINNESOTA "								1	2	13	1	13		31
D & L W "								2	1	18	1	2		13
GRAND AVERAGE	24	2	7	1	8		17	24	2	10	1	16		19

STEAMER CADILLAC

GENERAL DATA

Total number of crew (including Master and Engineer) ...	16
Length over all	244 feet
Length of keel	230 "
Length of Beam	37 "
Depth	19 "
Net Tonnage	1068 tons
Gross tonnage	1263 "
Ore Capacity	2327 "
Coal Capacity	2053 "
Engines	15, 25, 42 X 36
Boilers	1 boiler, 11'6" X 13'
Steam	180
Horse Power	550
Pitch of Wheel	10'9"
Average number of revolutions of wheel per minute, loaded	80
" " " " " " " " light	87
Number of hatches	(6 Working hatches (5 intermediate "
Average miles per hour light	10.99
" " " " loaded	10.00

STEAMER CHOCTAW

GENERAL OPERATIONS

The Steamer CHOCTAW sailed from the port of Buffalo on first trip of season 1902 on April 14th, and finished discharging last cargo at Marquette, Mich. on December 6th, having been in commission 237 days. This vessel carried 19 cargoes of iron ore from Marquette and one cargo of iron ore from Ashland. On two of the up bound trips, coal cargoes were carried to Marquette.

The average rate of freight received on all cargoes carried during the season was \$.7025 per ton, as compared with \$.7650 in previous year. The average operating expenses per ton of freight carried were \$.5525 in 1902 and \$.5023 in 1901. The average net earnings per ton of freight carried, therefore, in 1902 are \$.1500, as compared with \$.2627 in season of 1901.

The lessened average rate of freight obtained in the current year is due to this Steamer having traded to Ashland 13 trips in the preceding year, while she carried but one cargo from that port in 1902, the balance of her cargoes having been carried from Marquette; the differential in rate between Marquette and Ashland being ten cents per ton in favor of the latter. In addition to this lessened rate, the average cost to carry, it will be noted, is greater than during the preceding year. Some explanation of this may be found in the fact that in addition to the general slightly increased cost in all expenditures entering into steamboat operations this season, this Steamer lost three weeks out of her season by reason of accident and the consequent time for repairs.