

# PROCEEDING NEW YORK UNLESS OTHERWISE ORDERED

By Samuel Halpern

Much has been written about the rescue of *Titanic* survivors by the SS *Carpathia*, including how *Carpathia* steamed through the night in ice infested waters at a record-breaking speed to arrive at the scene in 3½ hours instead of the 4 hours that was normally expected. In addition, many other details were made known through the testimony and written reports of her Captain, Arthur Henry Rostron, concerning what took place on her way to the rescue, during the rescue itself, and her departure and his decision to return to New York.

In this article we will look as to why Rostron delayed communicating his decision to take the survivors to New York, and try to reproduce *Carpathia*'s route of departure from the scene of the wreckage. We will also explore the question of Rostron's timing and *Carpathia*'s course made good in reaching the lifeboats in light of the discovery of the *Titanic* wreck site, and look at the witnessing of *Carpathia*'s arrival on the scene from afar at 4am in the morning on April 15, 1912.

## “Consider New York Best”

On Monday, April 15, 1912, *Carpathia*'s Captain Rostron sent several messages to *Olympic*, *Titanic*'s sister ship, for retransmission to Cape Race. A transcript of a copy of one of the handwritten coded messages addressed to Cunard Steamship Company's New York office read:<sup>1</sup>

Cunard New York ('& Liverpool', deleted) 7.55am New York Lat 41.45N Long 50.20 West ORFANELLO New York unless otherwise ordered with about IMPUSIERON CALMARAIS with Mr Ismay and BONPLANDIE with so much ice about consider New York best (large number icebergs & 20 miles field ice with bergs amongst). Rostron

The 7:55am time in the message appears to be New York time (NYT) presumably associated with the ship's reported position. The message informed Cunard's New York office that *Carpathia* was taking *Titanic*'s survivors to New York unless directed otherwise. The logged transmission time on the message was 8:07pm NYT, more than 12 hours later than the time written in the message itself. A second message, logged at 8:10pm NYT, was addressed to the Cunard's office in Liverpool and contained the same content. The *Procès-Verbal* (PV) wireless log of *Olympic*, written up by her senior wireless operator E. J. Moore, had listed these messages as being received at 8:25pm NYT the same day.<sup>2</sup>

Testifying before the American inquiry on April 22, Philip A. S. Franklin, a vice president of the International Mercantile Marine (IMM) Company,<sup>3</sup> read a message that he received on April 16<sup>th</sup> from the Cunard Line. The time marked on the penciled copy of the message that was given to him was 7:55am. The content of the message itself did not specify the hour. It read:<sup>4</sup>

*Carpathia*, to Cunard Line, New York.

Latitude 41.15, longitude 50.20 west. – Am proceeding New York unless otherwise ordered, with about 800, after having consulted with Mr. Ismay and considering the circumstances. With so much ice about, consider New York best. Large number icebergs, and 20 miles field ice with bergs amongst.

This message contained essentially the same content as the message picked up by *Olympic* without those strange code words embedded in it. It also gave some detail about the number of survivors that *Carpathia* had on board, and that Mr. Ismay was consulted about the decision to return to New York. However, the position in the message given to Franklin, 41° 15' N, 50° 20' W, was 30 miles due south of the position written in the transcript of the message sent to *Olympic*.

### Halifax Or New York?

To understand the complete picture we must consider Captain Rostron's decision to return to New York and the route taken when he left the scene of the wreckage. According to Rostron, *Carpathia* departed the area at full speed around 8:50am *Carpathia* time.<sup>5</sup> Since his ship's clocks were set about 1 hour 57 minutes ahead of clocks in New York,<sup>6</sup> the time they departed the area, 8:50am ship's time, would have been about 6:53am NYT. Therefore, the time transcribed on the copy of the message, 7:55am NYT time, would correspond to about an hour after *Carpathia* got underway. However, at 7:10am NYT, SS *Baltic* received a message addressed from Captain Rostron of *Carpathia* to Captain Ranson of *Baltic*:<sup>7</sup>

Am proceeding for Halifax or New York, full speed. You had better proceed to Liverpool. Have about 800 passengers aboard.

This message was transmitted about 9:07am *Carpathia* time, only a few minutes after *Carpathia* departed the area. It is quite obvious from the content of this message that Captain Rostron had not yet decided where he was going to take *Titanic*'s survivors at the time they departed.

At the American inquiry, *Carpathia*'s wireless operator Harold Cottam had this to say about *Carpathia*'s destination:

Senator SMITH. You say the captain was bound for Halifax?

Mr. COTTAM. Yes, sir.

Senator SMITH. How do you know?

Mr. COTTAM. I went and asked the captain, sir. Three or four ships around about wanted to know where we were bound for, and the captain said he was not decided, but thought he was bound for Halifax; but later on in the morning he changed his mind.

Senator SMITH. At what time?

Mr. COTTAM. I can not remember the time.

Senator SMITH. About what time? Was it forenoon?

Mr. COTTAM. It may have been about noon.

Halifax was the closer of the two locations mentioned in the message to *Baltic*. On *Carpathia*, *Titanic* survivor Major Arthur Peuchen had asked some officer about the nearest port and was told that Halifax was only 36 hours away, which was a slight underestimate for a 14 knot ship.<sup>8</sup> If they were going to go to Halifax they would have to go on a heading of about 286° True from where they were. But blocking their path was a vast field of heavy pack ice some 5 to 6 miles wide stretching as far as the eye could see.

When I turned back to New York, I sent my message to the Cunard Co. telling them that I was proceeding to New York unless otherwise ordered. You see what I mean there? I said, "For many considerations, consider New York most advisable." ... I came right around for New York immediately, and returned to New York. Would you like to know my reasons for coming back to New York? ... The first and principal reason was that we had all these women aboard, and I knew they were hysterical and in a bad state. I knew very well, also, that you would want all the news possible. I knew very well, further, that if I went to Halifax, we could get them there all right, but I did not know how many of these people were half dead, how many were injured, or how many were really sick, or anything like that. I knew, also, that if we went to Halifax, we would have the possibility of coming across more ice, and I knew very well what the effect of that would be on people who had had the experience these people had had. I knew what that would be the whole time we were in the vicinity of ice. I took that into consideration. I knew very well that if we went to Halifax it would be a case of a railway journey for these passengers, as I knew they would have to go to New York, and there would be all the miseries of that. Furthermore, I did not know what the condition of the weather might be, or what accommodation I could give them in Halifax, and that was a great consideration - one of the greatest considerations that made me turn back...but the message did not get off until Monday evening...When I sent that message we had been on our way 12 hours.

The above explanation was given to Senator William Alden Smith by Captain Rostron at the American inquiry.<sup>9</sup> From the context of his statements, Halifax was certainly under consideration when he first left the area of the wreckage as his wireless operator, Harold Cottam, had said. But it was later decided to head for New York instead of Halifax.

Notice that Rostron confirmed that the transmission time of the message to his company stating his decision to return to New York was sent well after they had departed the area. But why did he wait 12 hours to inform Cunard that he was taking the survivors to New York?

To answer this question, let us take a further look at the some of the what Captain Rostron had to say at the American inquiry. In particular, what he had to say about company orders.

By law, the captain of the vessel has absolute control, but suppose we get orders from the owners of the vessel to do a certain thing and we do not carry it out. The only thing is then that we are liable to dismissal. I shall give you an illustration of what I mean by that, as regards receiving orders, and so on. When I turned back to New York, I sent my message to the Cunard Co. telling them that I was

proceeding to New York unless otherwise ordered. You see what I mean there? I said, "For many considerations, consider New York most advisable."

Besides New York and Halifax, what were Captain Rostron's options? For this we turn to an extract from a report he wrote to the General Manager of the Cunard Steamship Company in Liverpool on the 19<sup>th</sup> of April 1912:<sup>10</sup>

Before deciding definitely where to make for, I conferred with Mr. Ismay, and though he told me to do what I thought best, I informed him, taking everything into consideration, I considered New York best. I knew we should require clean blankets, provisions, and clean linen, even if we went to the Azores, as most of the passengers saved were women and children, and they were hysterical; not knowing what medical attention they might require, thought it best to go to New York. I also thought it would be better for Mr. Ismay to get to New York or England as soon as possible, and knowing I should be out of wireless communication very soon if I proceeded to the Azores, it left Halifax, Boston, and New York, so I choose the latter.

So here we see that Rostron's choices were the Azores, Halifax, Boston, and New York. The mention of the Azores in particular is most interesting. If you look at the chart showing the route of *Carpathia* to Gibraltar and the Mediterranean, you will notice that the Azores are not too far off their great circle route. If the General Manager of the Cunard Company wanted Rostron to continue on with his voyage it was possible that he could issue an order to bring the survivors to the Azores and continue on from there. And if that happened, and Rostron disobeyed that order and took his ship elsewhere, then he would be liable for dismissal as he said.

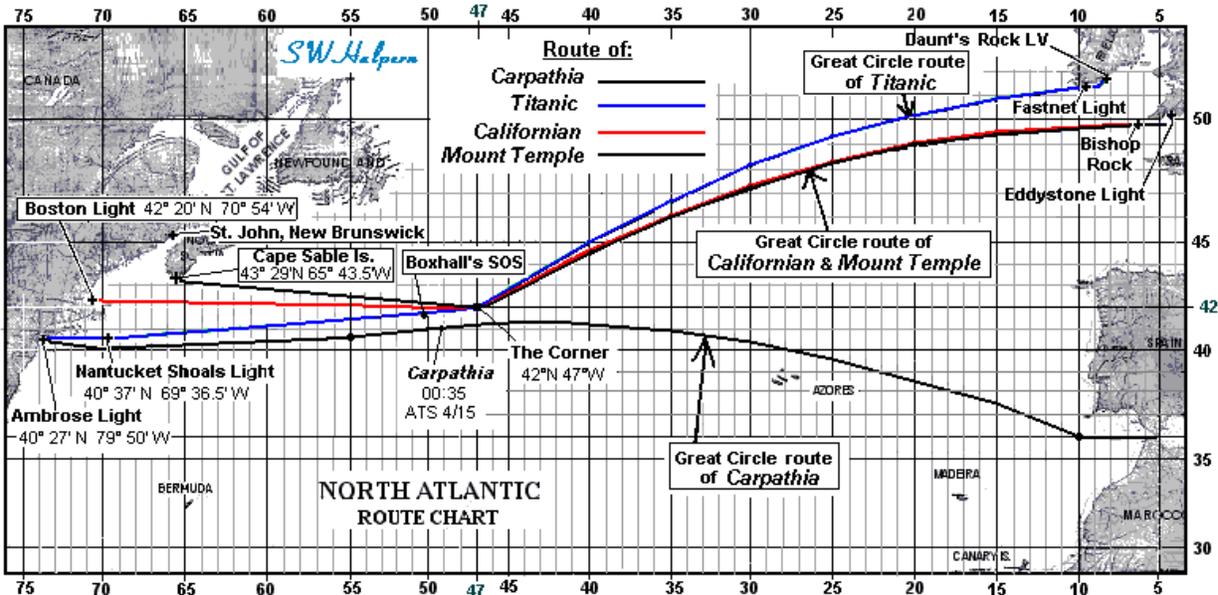


Fig. 1 – Planned routes across the Atlantic of *Titanic*, *Carpathia*, *Californian* and *Mount Temple*.

By sending those messages to his company 12 hours after leaving the scene of the accident, *Carpathia* would have steamed over 170 nautical miles and be well on her way to

where Rostron wanted to go. It made the likelihood of him being ordered to turn around and head for the Azores highly improbable. Certainly, the late transmission time of those messages could not be blamed on a lack of communications. *Carpathia* had been in contact with *Olympic* for a good 6½ hours before those messages for the two Cunard offices were received by *Olympic* for retransmission to Cape Race.<sup>11</sup>

I believe that Captain Rostron may have been concerned that if he tried to notify his company that he decided to head back to New York too soon, then his company may order him to take the survivors to the Azores instead to minimize the inconvenience to his own passengers as well as the overall cost to his company. However, by the time these messages informing his company that he decided to turn back for New York were finally transmitted, it was for all intents a *fait accompli*.

### **“South Point Pack Ice In 41° 16’ North”**

As we have seen, the final decision between Halifax and New York was made some time after *Carpathia* had departed the area. The Azores were ruled out quite early, and that meant that *Carpathia* was going westward, not eastward with her load of survivors and passengers. According to *Carpathia*'s second officer James Bisset,<sup>12</sup> Captain Rostron ordered him to “bear away from the wreckage southwesterly” and called for full speed ahead. This would have been in a direction perpendicular to the eastern edge of a vast ice field which Captain Rostron described as “extending as far as we could see, N.W. to S.E.”<sup>13</sup> The report to bear away from the wreckage southwesterly appears to be an initial attempt to put some distance between *Carpathia* and the observed wreckage that was seen floating on the surface at that time. According to Bisset, “most of the passengers and crew of the *Carpathia*, and some of the survivors of the *Titanic*, were crowding the deck-rails, to stare overside.” As we have seen, Captain Rostron was quite adamant about not wanting to cause any “unnecessary excitement or any more hysteria” among the survivors. So Captain Rostron had ordered Bisset to turn *Carpathia*'s head away from the wreckage as she departed the area. However, within 2 to 3 miles of the wreckage there was this huge field of pack ice which Captain Rostron was not about to cross despite seeing the SS *Californian* come through it about an hour earlier.<sup>14</sup>

In 1913, Captain Rostron wrote an article about the rescue of *Titanic*'s survivors by *Carpathia* for Scribner's magazine. In that article he wrote:<sup>15</sup>

At eight o'clock we also saw a steamer coming toward us out of the ice-field. This ice-field stretched as far as the eye could see from northwest to southeast, and we soon found her to be the *Californian*. We signaled her and told news of trouble, and asked her to search around, as we were returning to New York. It was now blowing a moderate breeze and the sea was getting up.

About eight-twenty or so all the people were aboard, and by eight-forty-five all the boats we could take, and then we proceeded to New York.

I had decided to return to New York, as I considered New York the only port possible under the circumstances.

We soon found our passage blocked by a tremendous ice-field. Of course we had seen this ice-field before, but did not know how compact it was, nor the extent of it. In the field were many bergs from one hundred to one hundred and fifty feet high, and the general mass of ice perhaps six to twelve feet high. We

sailed round this ice-pack for nearly four hours – quite fifty-six miles – before we could set our course for New York. We also passed several large bergs clear of the pack.

In an article published in *The Titanic Commutator*, the journal of the Titanic Historical Society, *Carpathia* passenger Howard Chapin wrote:<sup>16</sup>

As we had picked up all the lifeboats and taken on board all the survivors and whatever lifeboats were in good condition, we got underway and steamed southward, leaving the *Californian* to cruise about the spot the rest of the day in the hope of finding other boats... As we steamed away we passed within a few hundred yards of an immense ice field... a smooth sheet of snowy whiteness from whose midst here and there rose lofty cones of ice, whose clear-cut outlines showed up against a cold, blue sky.

From a letter written in mid ocean by *Carpathia* passenger Luke Hoyt we have the following:<sup>17</sup>

By about nine o'clock all boats in sight having been cared for and the Lyland [sic] Liner *Californian* steaming up we left her cruising in the vicinity and started for New York with our load of sorrow and woe and misery... You have no doubt seen pictures in the magazines of rescue parties in the polar seas. Well that is the best description of the scene I can give you. In the background was in immense ice floe with berg after berg, which had not broken loose, and other bergs floating around, our ship standing off the floe and the boats approaching from the direction of the floe. I think this a perfect picture of the scene. The ice floe was immense. We steamed 52 miles to get away and around it, and it extended in the other direction beyond the horizon...

From his testimony at the American inquiry, *Titanic* survivor Hugh Woolner had this to say about that vast ice field that blocked their path:<sup>18</sup>

I saw [from collapsible boat D] a faint line, what looked like a faint line along the horizon; but when we got on the *Carpathia*, we saw it was a huge floe which stretched out, I do not know how far but we were several hours steaming along it... [There were icebergs that] looked more like scouts out in front... By out in front I mean to the south... That is the way it looked to me.

And from *Titanic* survivor Lawrence Beesley, we have the following description that he wrote in his book, *The Loss of the SS Titanic*:<sup>19</sup>

The problem of where to land us had next to be decided... Halifax was the nearest in point of distance, but this meant steaming north through the ice, and he thought his passengers did not want to see more ice. He [Rostron] headed back therefore to New York, which he had left the previous Thursday, working all afternoon along the edge of the ice-field which stretched away north as far as the unaided eye could reach... It was certainly an extraordinary sight to stand on deck and see

the sea covered with solid ice, white and dazzling in the sun and dotted here and there with icebergs. We ran close up, only two or three hundred yards away, and steamed parallel to the floe, until it ended towards night and we saw to our infinite satisfaction the last of the icebergs and the field fading away astern.<sup>20</sup>

Four separate first hand accounts that said that *Carpathia* steamed along the edge of the ice field in an obvious attempt to get around it to the southward.

The departure of *Carpathia* was also observed from the bridge of the SS *Californian*. Charles Groves, *Californian*'s third officer, described her departure very simply:<sup>21</sup>

The *Carpathia* then got under way by which time it was nine o'clock, and less than 20 minutes later disappeared from view, hidden by the icebergs.

It should be noted that icebergs covered the entire seascape that morning, "there were dozens and dozens all over the place." According to *Californian*'s Captain Lord, "The ones way to the southeast were much larger than the ones to the westward...The ones to the westward were not very high, and they were mixed up with field ice."



**Fig. 2 – Ice field seen from *Carpathia* in the early morning hours of April 15, 1912.  
(National Archives.)**



**Fig. 3 – Another view of the ice field taken later that morning as *Carpathia* steamed southeastward. (National Archives.)**

If we attempt to reconstruct the course taken by *Carpathia*, what we find is that she had to go first southeastward and then southward to get around the heavy pack ice. Starting from the estimated position of the wreckage for 11:20am and working the drift of current backward toward the wreck site for about 2½ hours, we find that the wreckage at the time *Carpathia* departed would be close to 41° 37' N, 50° 00' W.<sup>22</sup> After leaving the scene of the wreckage, *Carpathia* briefly headed southwestward for a couple of miles and then southeastward to parallel the eastern edge of the pack ice. Eventually they would turn southward and then southwestward to get around the southern extent of the pack before heading due west.

But how far to the south did the ice extend? At 4:10pm NYT, *Carpathia*'s Captain Rostron sent the following message to *Olympic*'s Captain Haddock:<sup>23</sup>

Capt. Haddock, *Olympic*. South point pack ice in 41.16 north. Don't attempt to go north until 49.30 west. Many bergs large and small amongst pack, also for many miles to eastward. Fear absolutely no hope searching *Titanic*'s position. Left Leyland S.S. *Californian* searching around. All boats accounted for. About 675 souls saved, crew and passengers; latter nearly all women and children. *Titanic* foundered about 2.20 a.m., 5.47 G.M.T., in 41.46 north. 50.14 west. Not certain of having got through. Please forward to White Star, also to Cunard Liverpool and New York, that I am returning to New York. Consider this most advisable for many considerations. Rostron.

This message was sent by Rostron following a number of messages that began with one received at 2:35pm NYT from Captain Haddock of *Olympic* in which Haddock asked Rostron "shall I meet you and where?" What was implied was a suggested transfer of *Titanic* survivors to

*Olympic*. In a series of messages marked at 3:10pm NYT, Rostron replied to Haddock saying that he was bringing *Titanic*'s survivors back to New York, that Bruce Ismay was under opiate, and that he, Rostron, thought it inadvisable that *Olympic* be seen. Five minutes later, at 3:15pm NYT, Captain Haddock sent the following to Rostron:

Kindly inform me if there is the slightest hope of searching *Titanic* position at daybreak. Agree with you on not meeting. Will stand on present course until you have passed and will then haul more to southward. Does this parallel of 41.17 N. lead clear of the ice? Have you communicated the disaster to our people at New York or Liverpool, or shall I do so, and what particulars can you give me to send? Sincere thanks for what you have done. Haddock.

The reply to this request for particulars of the disaster came at 4:10pm NYT as previously noted. In that message we see that the pack ice extended as far south as 41° 16' N, and that bergs and floe ice could be expected as far eastward as 49° 30' W.<sup>24</sup>

From our derived location of the wreckage, *Carpathia* would have had to go 20 miles to the south to reach the southern extent of the ice. Notice that this distance happens to match the "20 miles of field ice with bergs amongst" mentioned by Captain Rostron in his wireless message to Cunard's New York office. But the pack ice trended southeastward from the area of wreckage as far as the eye could see. That means *Carpathia* had to first go southeastward before she could turn southward and then westward.

Eventually, *Carpathia* was able to get around the ice to reach a latitude of 41°15'N, one mile south of the southernmost point of the pack. At 2:30pm NYT, a little over 7½ hours after departing the wreckage, *Carpathia* was reported at 41° 15' N, 51° 45' W,<sup>25</sup> where she was put on a course of 267° True direct for the Nantucket Shoals light vessel, the first of two arrival points en route to New York for westbound steamers.<sup>26</sup>

How do we know this? In a wireless message addressed to *Olympic* at 3:10pm NYT on April 15, 1912:

Captain *Olympic*: 7.30 G.M.T. [2:30pm NYT] Lat. 41.15 north, long. 51.45 west. Am steering south 87 west, true. Returning to New York with *Titanic*'s passengers. Rostron.

In addition to this, we have the position, 41° 15' N, 50° 20' W, given to IMM's vice president Franklin by the Cunard Line. This position is exactly 64 nautical miles due east of the 2:30pm NYT position for *Carpathia* sent in the message from Rostron to Haddock. At her normal full-ahead speed of 14 knots, *Carpathia* would have covered that distance in 4 hours 35 minutes. That means that *Carpathia* would have passed 41° 15' N, 50° 20' W at 9:55am NYT, about three hours after *Carpathia* departed the area of wreckage. On *Carpathia*, it would have been less than half an hour before local apparent noon which came at 10:22am NYT on that date and location.<sup>27</sup> As *Carpathia*'s wireless operator Harold Cottam told Senator Smith, "it may have been about noon" when Captain Rostron changed his mind and decided on going to New York instead of Halifax.

Could the person who copied down the messages that Rostron addressed to the Cunard Line offices, and later pasted onto Marconi office forms, actually have written down 9:55am NYT? If their handwritten '9' was mistaken for a '7' it would have been read as 7:55am thereby

solving one little mystery dealing with *Carpathia*'s navigation. It also seems that the latitude written down when these messages were transcribed, 41° 45' N, may simply have been a transcription error. Somehow, Cunard's New York office had received the correct 41° 15' N latitude, and put that down in the message given to IMM's vice president Franklin. As we have noted, that latitude is fully consistent with *Carpathia* being on a westward course line for New York having first gone south of the southernmost point of the pack ice that was noted by Captain Rostron.

### *Carpathia*'s Route Of Departure

Shown in the diagram below is a departure course for *Carpathia* that takes into account all the information available to us. It begins at the derived location of the wreckage for 6:53am NYT (8:50am *Carpathia* time) at 41° 37' N, 50° 00' W. It then follows a path down along the eastern edge of the pack ice southeastward, then around southwestward, and then westward to 41° 15' N, 50° 20' W, the location given to IMM's Philip Franklin, for 9:55am NYT. The distance along the route shown to that point is 42 nautical miles, a distance that *Carpathia* would have traveled in 3 hours at 14 knots, *Carpathia*'s normal full-ahead service speed. From there, *Carpathia* would head due west (270° True) for another 64 nautical miles reaching 41° 15' N, 51° 45' W at 2:30pm NYT, where a slight course change to 267° True would put her on a direct heading for the Nantucket Shoals light vessel.<sup>28</sup>

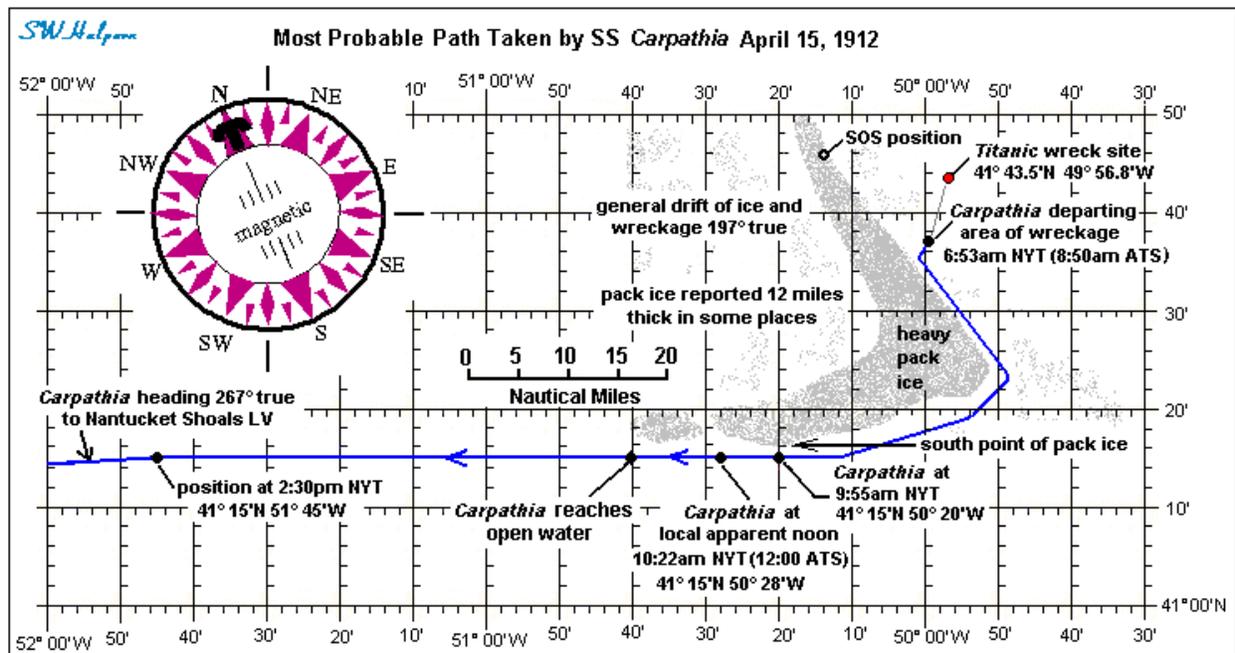


Fig. 4 – Route of departure of the SS *Carpathia* for New York, April 15, 1912.

According to James Bisset, *Carpathia* did not reach open water until sometime after they took sights of the sun at local apparent noon where they would have obtained their precise latitude.<sup>29</sup> At local apparent noon April 15, 1912, *Carpathia* would have been crossing 50° 28' W longitude at 10:22am NYT, about 3½ hours after departing the wreckage.<sup>30</sup> According to Captain Rostron, *Carpathia* was traveling about 4 hours, a distance of 56 miles at 14 knots,

before reaching open water. This means that they did not reach completely open water until passing longitude 50° 40' W in latitude 41° 15' N. According to a Hydrographic office report submitted by *Californian's* Captain Lord, *Californian* did not reach completely open water after resuming her voyage to Boston until she reached longitude 50° 42' W in latitude 41° 33' N.<sup>31</sup> Clearly, the sea was spotted with lots of icebergs and patches of ice floes over a very large area extending well to the west of that major field of pack ice that we have been so involved with.

### **Going To The Wrong Place At The Right Time**

In his April 19<sup>th</sup> report to the general manager of the Cunard Line, *Carpathia's* Captain Rostron wrote:

I beg to report that at 12.35 A.M. Monday 15th inst. I was informed of urgent message from *Titanic* with her position. I immediately ordered ship turned around and put her in course for that position, we being then 58 miles S. 52 E. 'T' from her; had heads of all departments called and issued what I considered the necessary orders, to be in preparation for any emergency.

At 2.40 A.M. saw flare half a point on port bow. Taking this for granted to be ship, shortly after we sighted our first iceberg. I had previously had lookouts doubled, knowing that *Titanic* had struck ice, and so took every care and precaution. We soon found ourselves in a field of bergs, and had to alter course several times to clear bergs; weather fine, and clear, light air on sea, beautifully clear night, though dark.

We stopped at 4 A.M., thus doing distance in three hours and a half, picking up the first boat at 4.10 A.M.; boat in charge of officer, and he reported that *Titanic* had foundered...

According to Rostron, *Carpathia* was about 58 miles from the *Titanic's* SOS position bearing 128° True from it when he received word at 12:35am (ship's time) that *Titanic* struck an iceberg and required assistance. He immediately turned his ship around and headed for the distress coordinates. At the British inquiry, Rostron was asked about the speed that *Carpathia* could make. He replied:<sup>32</sup>

Ordinarily about 14. We worked up to about 17½ that night. That was about the highest speed we made that night.

James Bisset, *Carpathia's* second officer at the time of the disaster, wrote in his book *Tramps & Ladies*, that *Carpathia* was running at a forced speed of 16 knots on her way to the rescue after receiving *Titanic's* distress coordinates. He mentions being 34 miles away at 2:05am, and 25 miles away at 2:40am, both points consistent with making that speed after turning around at 12:35am with 58 miles to cover as reported by Rostron.<sup>33</sup> Bisset also wrote that at 3:15am they were 12 miles from the position, and by 3:30am they started to encounter ice. Soon after, according to Bisset, Rostron had to reduce speed, first to 'one-half' then to 'slow' before stopping his engines around 4:00am. The 12 mile 3:15am point that Bisset gave is *not* consistent with *Carpathia* making 16 knots, but his 3:30am time would be consistent with having about 12 miles remaining assuming they were making 16 knots all along as Bisset wrote.<sup>34</sup> So although

Bisset never says outright that they never covered the full 58 miles from the turn-around point to the SOS position, he implied that they were somewhat short of that distance when they stopped their engines about 4:00am. How much short, depends on how much distance was covered at reduced speed before actually stopping.

At the American inquiry, *Carpathia*'s wireless operator Harold Cottam was asked about Captain Rostron's reaction when he reported his last contact with *Titanic* when they informed him that *Carpathia* should come as quickly as possible. Cottam said:<sup>35</sup>

The captain told me to go and tell the *Titanic* he was making toward the position given as quickly as possible; that he had a double watch in the engine room and she was making a good 15 and perhaps 16 knots. He told me to tell her to get the boats ready, as we had got ours all ready.

The power required to move a displacement type vessel through the water is approximately proportional to the cube of her speed. Therefore, for *Carpathia* to reach a speed of 16 knots, compared to her normal full-ahead speed of 14 knots, would require about a 50-percent increase in supplied steam power. To reach 17½ knots, as Rostron later claimed, would require a 95-percent increase in power supplied, something that is well beyond anything imaginable. However, Rostron's claim that *Carpathia* achieved a record 17½ knots in her mad dash to the rescue through ice infested waters was to go unchallenged for many years,<sup>36</sup> as had several other claims that he had made.<sup>37</sup> The discovery of the wreck of *Titanic* in 1985 was to prove just how mistaken he was.

If we take the information given to us by Rostron, we find that *Carpathia*'s dead reckoning (DR) position at the time she was turned around would be at 41° 10' N, 49° 13' W. However, we now know that *Titanic* did not founder at the reported SOS position. She foundered over the position of the wreck site, 41° 43.5' N, 49° 56.8' W (taken to the center of the boiler field); a distance of about 13 nautical miles to the east and 2½ miles south of the SOS position.

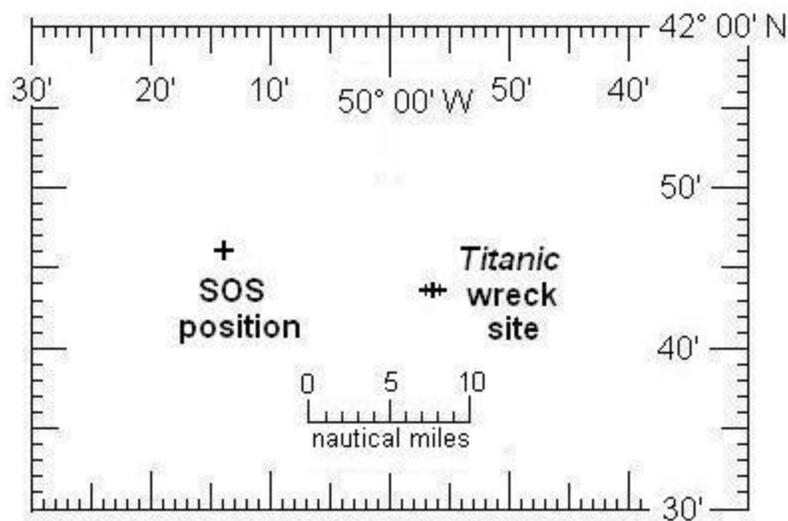


Fig. 5 – *Titanic* wreck site location relative to the SOS position.

The distance from *Carpathia*'s DR position to the wreck site is about 47 nautical miles; a distance that could be covered in 3½ hours at an overall average speed of about 13.5 knots. The bearing from *Carpathia*'s DR position to the wreck site is about 315° True.

So where exactly was *Carpathia* when she was turned around, and where was she when she sighted that green flare that came from emergency boat No. 2, one of several that were lit by *Titanic*'s fourth officer Joseph Boxhall in those early morning hours?

To answer this question we make use of the of the sighting of that green flare ½ point off *Carpathia*'s port bow as she was heading for the SOS position. As we have seen, Rostron claimed that this sighting was at 2:40am, ship's time. However, a handheld flare the kind that Boxhall was holding, could be seen at most about 11 miles away from the bridge of *Carpathia*.<sup>38</sup> Even assuming *Carpathia* was realistically averaging about 15½ knots, by 2:40am she would have covered only 32 miles out of 47, leaving her about 15 miles short of the wreck site, and still too far away for a handheld flare in a lifeboat to be seen. In addition, Captain Rostron said that at 2:45am he ordered rockets to be fired to "reassure *Titanic*."<sup>39</sup> However, the earliest that rockets were seen from those in the boats was about 45 minutes before the first boat was picked up.<sup>40</sup>

Senator FLETCHER. Did you see any other rockets from any other ships that night?

Mr. BOXHALL. Yes; I did. I saw rockets on the *Carpathia*.

Senator FLETCHER. That was in the morning?

Mr. BOXHALL. Yes, sir; it was in the morning. It was quite dark.

Senator FLETCHER. About what time was that?

Mr. BOXHALL. I do not know. I think it was a little after 4 o'clock, sometime, when I got on board the *Carpathia*. It might have been three-quarters of an hour before.

Senator FLETCHER. What sort of a rocket was that?

Mr. BOXHALL. An ordinary rocket. I think it was, so far as I could see, a distress rocket in answer to ours.

Distress rockets (actually socket signals) of the kind used on passenger vessels of the time would go to heights of 600 to 800 feet. If *Carpathia* started to send them up as early at 2:45am they should have been seen by those in the boats at that time. They were not.

The earliest report that some ship was telling another ship to look out for rockets comes from the wireless log of *Caronia*. The time was logged at 6:16am GMT, or 3:13am *Carpathia* time.<sup>41</sup> Confirmation that *Carpathia* was indeed sending up rockets comes from the wireless log of the SS *Mount Temple* which logged that event at 1:25am NYT (3:22am *Carpathia* time).<sup>42</sup> And *Carpathia*'s rockets were seen from the upper bridge of *Californian* at 3:20am *Californian* time (3:27am *Carpathia* time) coming from beyond the place where *Titanic*'s rockets had been observed earlier.<sup>43</sup>

So how can we explain the apparent discrepancy in timing between what Rostron reported and the other available primary evidence?

In 1998, author Dave Gittins proposed that Captain Rostron made a simple and understandable error in his timing. Gittins surmised that Rostron sighted Boxhall's flare, not at 2:40am, but at 2 hours 40 minutes into his passage toward the wreck, or close to 3:15am ship's time. About five minutes later he ordered that rockets be fired to "reassure *Titanic*" thinking that

the green light they saw may have come from the stricken vessel. If this proposal is accepted, then everything else seems to fit into place.

Between 12:35am and 3:15am, *Carpathia* steams on a course of 308° True covering about 40 miles at a more realistic average speed of 15 knots when that green flare is spotted about 10 miles away and bearing ½ point off their port bow. From the direction in which Rostron sighted the flare, it is evident that his course to that point had been almost toward the wreck site, not the SOS position. *Carpathia* had to have started her rescue mission from a point somewhat further to the east than what Rostron had calculated. From the sighting of the green flare, *Carpathia* maintains an average course of 302° True while slowing first to ‘one-half ahead’ and then to ‘slow ahead’ as ice is encountered. At 4:00am, *Carpathia*’s engines are stopped, having covered the last ten miles in 45 minutes. Her total distance run is about 50 nautical miles.

Taking into account the southward drift of Boxhall’s boat since the time *Titanic* sank, and the distances and courses taken by *Carpathia*, we get the following picture of events.

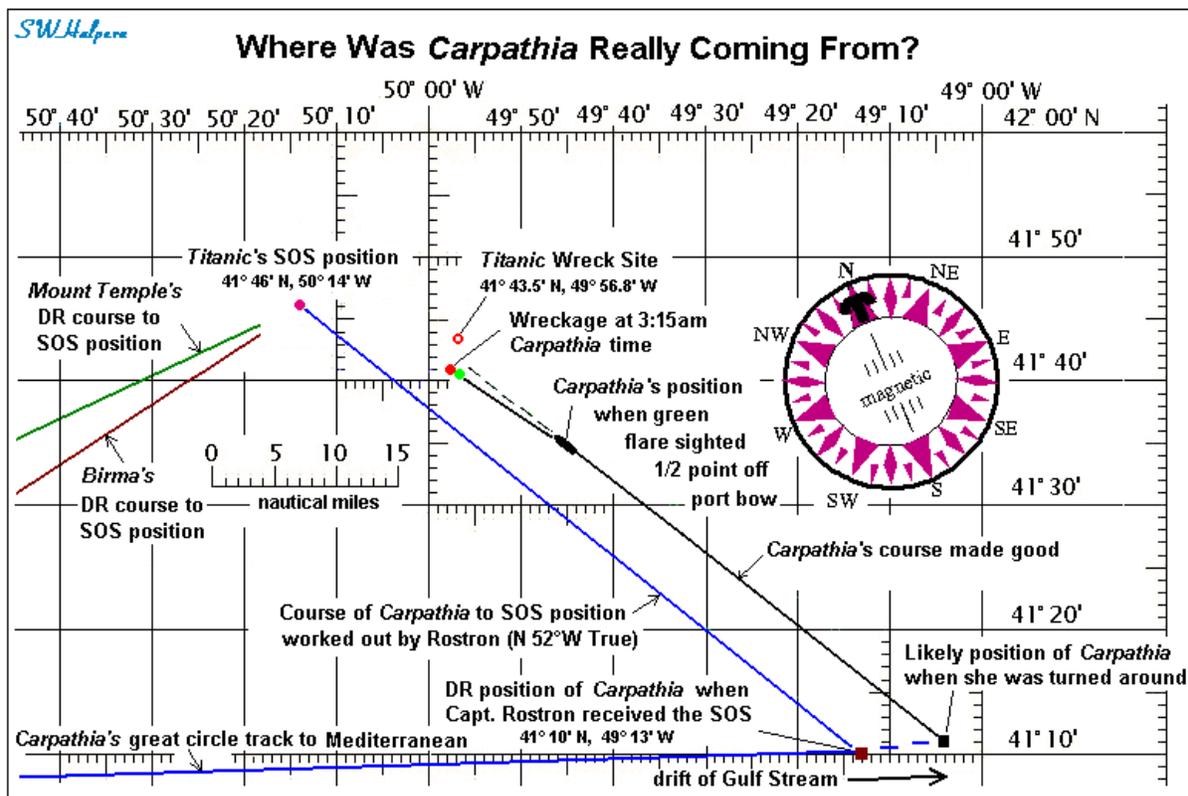


Fig. 6 – *Carpathia*’s DR course to the SOS position versus her course made good.

What we see is that *Carpathia* was likely set a number of miles eastward by the Gulf Stream while she was down in latitude 41° 10' N. A year after the disaster, *Carpathia* passenger Howard Chapin wrote the following for his college alumni journal:<sup>44</sup>

We sailed from New York at noon on Thursday, April 11, 1912, on the RMS *Carpathia*, and Sunday evening found us steaming a little north of west [sic] in the warm waters of the Gulf Stream. It was warm too! The sun had been shining all day from a clear sky, and we had been forced to lay aside our steamer rugs and

heavy coats, and late in the afternoon even to seek the shady parts of the deck in order to be comfortable.

Chapin goes on to describe how he awoke around midnight by the noise of a crewman on deck above his cabin who was unfastening a lifeboat fall from a cleat, and how he went topside to inquire what was happening and was told about *Carpathia* rushing to the aid of *Titanic*. He then describes going below to get dressed into warm clothes because of the sharp drop in temperature, going topside again this time with his wife, seeing the preparations taking place for a rescue, and then noted that “it was after three when we sighted a faint green light off our port bow which we took for the starboard light of the *Titanic*.”

All this supports what is depicted in the chart above showing the probable course made good of *Carpathia* from the time she turned around, to the time of sighting the first green flare, and to where she picked up the first boat.

### “I Was Practically Up To The Position”

*Carpathia*'s final moments before reaching the first lifeboat, however, were not without some unexpected drama. As described by Captain Rostron before the British inquiry:<sup>45</sup>

At four o'clock I considered I was practically up to the position, and I stopped, at about five minutes after four. In the meantime I had been firing rockets and the Company's signals every time we saw this green light again. At five minutes past four I saw the green light again, and I was going to pick the boat up on the port bow, but just as it showed the green light I saw an iceberg right ahead of me. It was very close, so I had to port my helm hard-a-starboard and put her head round quick and pick up the boat on the starboard side. At 10 minutes past four we got alongside.

Rostron went on to explain that he intended to pick up the boat on his port side which was the leeward side, but was not able to do so because they spotted that iceberg right ahead. He then was forced to order his helm be put hard astarboard to turn away from the berg, and therefore picked up the boat on his starboard side. He later explained that after day broke he could see this iceberg was only about ¼ mile off and from 25 to 30 feet high; about the height of his forecastle head. Rostron had no explanation as to why they did not see this iceberg sooner. He admitted that they came as close as ¼ mile from it when they were forced to turn away to avoid striking it. Despite having a lookout posted in the crow's nest and two lookouts in the “eyes of the ship” in the bow, this iceberg was first spotted from the bridge by Rostron himself with the naked eye.

The final sequence of events in getting to the first boat was described in detail as follows:<sup>46</sup>

*This was the boat over here. (Describing.) I did not know the distance off. Here was the iceberg right ahead. I was coming along there; I saw the iceberg right ahead here, and I saw the [green] light was on my port bow. Of course, I could not see the boat itself, but only the light when he showed the flare. I came along here and starboarded, and brought her here. Then I saw the light on my starboard side. I saw the light showing. It was getting close. I went full speed astern. I went*

a little bit past the boat before I could get the way off the ship, and I came back again, because they sang out from the boat that they had only one seaman, and could not handle her. I brought the ship back to the boat. When the boat was alongside of me daylight broke, and I found the berg was about a quarter of a mile off.

Captain Rostron's detailed description is shown in the diagram below.

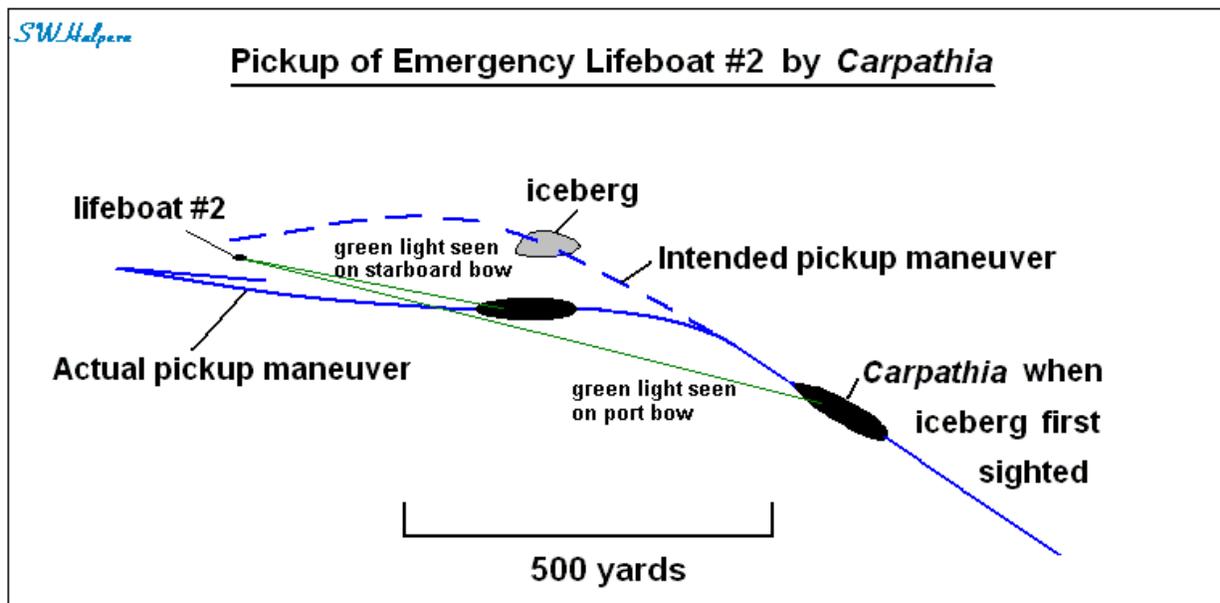


Fig. 7 – Captain Rostron's forced maneuver to avoid iceberg and get to the first lifeboat.

*Carpathia* was not alone out on the open sea when she picked up the first lifeboat from *Titanic*. About 12 to 14 miles to the northwest lay the stopped Leyland liner *Californian* who witnessed not only *Titanic*'s distress rockets go up over the course of an hour that night, but also witnessed the lights of *Titanic* disappear out of sight at 2:05am (*Californian* time) when *Titanic*'s hull fractured in two in the final minutes before she sank under the surface of the Atlantic.<sup>47</sup> About 3:20am *Californian* time, as noted previously, *Carpathia*'s rockets were seen low on the southeastern horizon from the upper bridge of *Californian* when *Carpathia* was still a good 10 miles from reaching the location where *Titanic* had been. But that is not all. About 4am *Californian* time (4:07am *Carpathia*), *Californian*'s Chief Officer George Stewart was in the process of taking over as Officer of the Watch from *Californian*'s Second Officer Herbert Stone:<sup>48</sup>

I looked to the southward and saw a light. On looking through the glass I saw two masthead lights and a lot of lights amidships, apparently a four-masted steamer. This was 4 a.m. I asked Stone if he thought this was the ship he had seen, and he said he did not think it was.

Stewart, looking over on *Californian*'s port beam at the time, did not realize that the steamer he was looking at was not the same vessel that sent up rockets during Stone's watch on deck. So he pointed out the steamer with "two masthead lights and a lot of lights amidships" to Stone and

said, "There she is; there is that steamer; she is all right." Stone, who apparently did not notice this steamer before Stewart pointed it out to him, then looked at the steamer through a pair of binoculars and remarked to Stewart, "That is not the same steamer; she has two masthead lights." Stone testified that this steamer was then abaft *Californian's* port beam showing two masthead lights and "apparently heading much in the same direction as ourselves."<sup>49</sup> At the time, *Californian* was pointing westward.<sup>50</sup> And so too was *Carpathia*, a four-masted passenger steamer with two masthead lights showing "a lot of lights amidships" as she backed slowly to pick up Boxhall's boat on her starboard side.

## Conclusions

When *Carpathia* received *Titanic's* distress call at 10:35pm NYT, *Carpathia* was turned around within about 3 minutes. Her plotted dead reckoning course to the SOS position was 308° True for a distance of 58 nautical miles. However, *Carpathia* was under the influence of the Gulf Stream current all Sunday evening setting her somewhat further eastward than what was expected. Based on the course that was taken and the sighting of a green flare from *Titanic's* emergency lifeboat No. 2 later into the run, it has been determined that *Carpathia* was probably about 50 miles away from the now known location of the *Titanic* wreck site when she was turned around at 12:35am *Carpathia* time.

The sighting of a green flare from *Titanic's* emergency lifeboat No. 2 took place when *Carpathia* was about 10 or 11 miles away, and about 2 hours and 40 minutes into the run having reached a maximum speed of between 15 and 16 knots along the way. *Carpathia* started to fire rockets soon after sighting the flare "to reassure *Titanic*." These were seen by a number of survivors in the boats, from the upper bridge of *Californian*, and noted by other vessels in messages sent out by wireless from *Carpathia*. About 3:30am, *Carpathia* started to encounter ice and was forced to go at reduced speeds before stopping about 4am.

To avoid striking a low-lying iceberg that was directly in her path, *Carpathia* was turned hard to port (hard-astarboard helm order) before reaching emergency lifeboat No. 2. The maneuver forced *Carpathia* to pick up the boat on her starboard side instead of her port side as originally planned. After it became light enough to see all around, it was noticed that this 30-foot high iceberg was only about ¼ mile from where *Carpathia* had stopped.

The lights of *Carpathia* were seen by *Californian's* Chief Officer Stewart who came up to take over the watch from Second Officer Herbert Stone at 4am. He noted that a vessel seen abaft their port beam was a four-masted steamer carrying two masthead lights and a lot of lights amidships. At the time, *Carpathia*, a passenger steamer carrying two masthead lights and showing a lot of lights amidships, was picking up the survivors from *Titanic's* emergency lifeboat No. 2.

*Carpathia* departed the scene of the wreckage at 8:50am, leaving the *Californian*, which finally arrived on the scene about 8:30am, to continue to search for the next 2½ hours to leeward for any additional survivors.<sup>51</sup> At the time, the wreckage had drifted down to about 41° 37' N, 50° 00' W, or about 7 miles SSW of the wreck site. In departing the area at full speed, *Carpathia* had to steam southeastward and then southward to get around a huge area of pack ice that extended down to latitude 41° 16' N. It was about 9:55am when she reached 41° 15' N, 50° 20' W, and was finally heading due west True. It was also about this time that Captain Rostron decided to return to New York instead of taking the survivors to Halifax, having much earlier ruled out the Azores or Boston. By 4:08pm *Carpathia* time, *Carpathia* was heading on a direct

course for the Nantucket Shoals light vessel. Despite being in contact with *Olympic* for over 6½ hours, it was at 5:48pm *Carpathia* time (4:10pm NYT) Monday evening that Rostron informed *Olympic*'s Captain Haddock of the particulars of the disaster, and that he was taking *Titanic*'s survivors back to New York. And it was about 4 hours later that he sent an official message to inform his company's offices in New York and Liverpool that he was taking the survivors to New York unless otherwise directed.

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<sup>1</sup> The transcript was marked "Carpathia Office, 15 Apr 1912, prefix Xmsg. words 42, charges 22/6 (deleted), from *Carpathia* via MCE [Cape Race], sent to MKC [*Olympic*] by H.C. [Harold Cottam] 8.7pm [8:07pm]." Message was on sheet of lined paper gummed to the Marconi form. Not written in Rostron's hand. (John Booth and Sean Coughlan, *Titanic- Signals of Disaster*, White Star Publications, 1993, p. 64.)

<sup>2</sup> The receipt of several messages by *Olympic* for retransmission to Cape Race was recorded in the handwritten PV log of *Olympic* as a single event logged at 8:25pm NYT, 15 April. What was put down was: "Recd 5 M.S.G.'s from MPA [*Carpathia*], asked him if he had list of 3rd class or crew survivors ready, he says no, will send them soon." In a more detailed PV log prepared specifically for the American inquiry by *Olympic*'s wireless operator E. J. Moore, the actual content of the individual messages were given. The time written in the text of the message for Cunard's New York office was 7.55 'p.m.' which may have been a transcription error in the copy of Moore's PV submitted on May 25, 1912 to Senator Smith. For the message addressed to the Liverpool office, Moore just wrote "text same as last message," referring to the previous message addressed to Cunard's New York office.

<sup>3</sup> IMM owned the White Star Line, the American Line, the Red Star Line, the Atlantic Transport Line, the National Line, and held majority stock in the Leyland Line.

<sup>4</sup> American Inquiry, page 183-184.

<sup>5</sup> Report by Captain A. H. Rostron to the General Manager of Cunard Steamship Company, Liverpool, April 19, 1912.

<sup>6</sup> Samuel Halpern, "12:35 AM Apparent Time *Carpathia*," published on-line at the GLTS organization website: [http://www.glts.org/articles/halpern/1235\\_ats\\_carpathia.html](http://www.glts.org/articles/halpern/1235_ats_carpathia.html).

<sup>7</sup> American Inquiry day 10. Extract from PV of steamship *Baltic*, April 14-15, 1912.

<sup>8</sup> American Inquiry, page 344. Halifax was 608 nautical mile from the SOS location. At 14 knots it would take at least 43 hours to cover that distance. To do it in 36 hours would require a speed made good of 17 knots. But then again, Rostron thought he was doing as good as that on his race to get to the erroneous SOS location the night before.

<sup>9</sup> American Inquiry, page 29.

<sup>10</sup> *The New York Times*, 20 April 1912.

<sup>11</sup> From the PV log prepared by *Olympic*'s wireless operator E. J. Moore. Copy submitted to Senator William Alden Smith for the American inquiry, May 25, 1912.

<sup>12</sup> Sir James Bisset, *Tramps & Ladies*, Angus & Robertson, 1959, Ch. 24.

<sup>13</sup> British Inquiry, 25501. In addition to his testimony before the inquiries in 1912, Rostron wrote in his report to Cunard on April 19, 1912: "We also saw that we were surrounded by icebergs, large and small, huge field of drift ice with large and small bergs in it, the ice field trending from N.W. round W. and S. to S.E., as far as we could see either way."

<sup>14</sup> British Inquiry, 25551: "The first time that I saw the *Californian* was at about eight o'clock on the morning of 15th April. She was then about five to six miles distant, bearing WSW true, and steaming towards the *Carpathia*."

<sup>15</sup> Captain Arthur H. Rostron, "The Rescue of the *Titanic* Survivors by the *Carpathia*," *Scribner's Magazine*, Vol. LIII, January-June 1913, pp. 354-364.

<sup>16</sup> H. M. Chapin, "The Titanic Disaster," *The Titanic Commutator*, Titanic Historical Society, No. 142, 1998.

<sup>17</sup> National Underwater and Marine Agency website, [http://www.numa.net/expeditions/carpathia\\_letter.html](http://www.numa.net/expeditions/carpathia_letter.html).

<sup>18</sup> American Inquiry, page 892.

<sup>19</sup> Lawrence Beesley, *The Loss of the S.S. Titanic*, 1912, Ch. VII.

<sup>20</sup> The Russian East Asiatic Steamship Company SS *Birma*, commanded by Captain Ludwig Stulping, was about 100 miles away from the SOS location when the distress signal was received. Like *Mount Temple*, *Birma* raced to the distress location and thought to have arrived there only to find no sign of *Titanic* or any wreckage, "only damn great icebergs" as *Birma*'s Wireless Operator Joseph Connon wrote in a letter dated 20 April 1912. *Birma* was spotted coming up fast by *Mount Temple* at about 8am (American Inquiry, page 779). *Birma* had eventually learned

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that *Carpathia* was picking up boats on the north-easterly side of the ice field, and proceeded to go south around the ice to the other side. According to Rostron, *Birma* was later sighted by *Carpathia* around noontime. (Rostron, “The Rescue of the *Titanic* Survivors by the *Carpathia*.”)

<sup>21</sup> Charles Victor Groves, “The Middle Watch - April 15th 1912,” Published in *The Atlantic Daily Bulletin*, journal of the British Titanic Society, March, 1998.

<sup>22</sup> The drift of wreckage was estimated to be at 1.1 knots with a set of 197° True. The dead reckoning (DR) position of the wreckage for 11:20am *Californian* time was 41° 33' N, 50° 01' W. This led to an estimated position for the wreckage at that time of 41° 33.9' N, 50° 0.6' W. (See my article, “Collision Point,” available on line at: [http://www.glt.s.org/articles/halpern/collision\\_point.html](http://www.glt.s.org/articles/halpern/collision_point.html).) working back from there for 2h 30m finds us at 41° 36.5' N, 49° 59.5' W at 8:50am *Californian* time (8:57am *Carpathia* time).

<sup>23</sup> Time written on the PV log prepared by *Olympic's* wireless operator E. J. Moore and submitted to Senator William Alden Smith for the American inquiry, May 25, 1912, had 4:00pm NYT. The time written on *Carpathia's* Marconi office form was 4:10pm [NYT]. (*Titanic – Signals of Disaster*, p. 63.)

<sup>24</sup> The same information about the extent of the ice field was sent by Rostron in a wireless message to Captain Gates of *Minnewaska* (call sign MMW) on April 16 at 12:40pm NYT. In that message the latitude was written as 41° 46' N, which is the latitude of the SOS position. The latitude sent to Captain Gates was an obvious mistake or transcription error. (See *Titanic - Signals of Disaster*, p. 65.)

<sup>25</sup> *Carpathia's* longitude in this message, 41° 45' W, corresponds to a Local Mean Time of precisely 2 hours 47 minutes behind GMT, or 1 hour 33 minutes ahead of NYT. It seems this was source for the erroneous 5:47pm GMT foundering time for *Titanic* that was sent in the message transmitted at 4:10pm to *Olympic*, and then later repeated and used at the American inquiry. See my revised and expanded article, “Time and Time Again,” *White Star Journal*, the official newsletter of the ITHS, Part I, April 2011, and Part II, August 2011. Also available on-line at: <http://www.titanicology.com/Californian/TimeandTimeAgain.pdf>.

<sup>26</sup> The Nantucket Shoals light vessel was located at 40° 33' N, 69° 28' W. The second point on the arrival route to New York was the Ambrose Channel light vessel at 40° 27' N, 73° 49' W, marking the beginning of the channel leading into New York harbor. In 1912 this light vessel was still often referred to as the Sandy Hook light vessel which was its original name until 1908 ([http://www.uscglightshipsailors.org/ambrose\\_channel\\_lightship\\_station\\_history.htm](http://www.uscglightshipsailors.org/ambrose_channel_lightship_station_history.htm).)

<sup>27</sup> Local apparent noon can easily be found from *Carpathia's* reported 2:30pm NYT (7:30pm GMT) position by working her back at 14 knots on her course line until reaching a longitude where local apparent noon occurred on that date. *Carpathia's* clocks would have been set back by 19 minutes from what it was previously, putting them 1 hour 38 minutes ahead of clocks in New York for her noontime location. *Carpathia's* position for local apparent noon on April 15<sup>th</sup> comes out to 41° 15' N, 50° 28' W at 10:22am NYT.

<sup>28</sup> It should be noted that the general boot shape of the heavy pack ice shown in this diagram matches more or less the general shape of the major “ice-floe” that was drawn in a “rude chart” of the area that appeared in an article written by San Francisco journalist and *Birma* passenger Charles E. Walters on April 22, 1912 for *The Daily Telegraph*. The article was signed by *Birma's* Captain Stulping, First Officer Alfred Neison, Purser G. Hesselberg, and the two wireless operators, Joseph Cannon and Thomas Ward. See my on-line article, “The Enigmatic Excursion of the SS *Birma*,” available at: [http://www.titanicology.com/Titanica/Inigmatic\\_Excursion\\_of\\_SS\\_Birma.pdf](http://www.titanicology.com/Titanica/Inigmatic_Excursion_of_SS_Birma.pdf).

<sup>29</sup> In Chapter 24 of his book *Tramps & Ladies*, published in 1959, James Bisset wrote that the latitude of their noon position was 41° 45' N. As pointed out before, this cannot be correct since Rostron had to take *Carpathia* south of 41° 16' N to get around the heavy pack ice.

<sup>30</sup> *Carpathia's* clocks would have been corrected in the forenoon by some 19 minutes so that at local apparent noon they would read 12:00.

<sup>31</sup> Hydrographic Office Memorandum, Washington, D. C., May 14, 1912.

<sup>32</sup> British Inquiry, 25390.

<sup>33</sup> American Inquiry, pages 19-20.

<sup>34</sup> To cover 58 miles at an average sustained speed of 16 knots requires a run of 3 hours 38 minutes. If the ship was turned for the SOS position at 12:35am, as reported, the expected arrival time would be 4:13am, and that is not counting any time for the ship to slow down and stop. It is easy to see how Bisset came up with this 16 knots. The first boat to be picked up was reported alongside at 4:10am, or 3 hours 35 minutes after being informed about the SOS call. Dividing that elapsed time into 58 nautical miles yields an average of 16.2 knots.

<sup>35</sup> American Inquiry, page 132.

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<sup>36</sup> In his book, *The Titanic and the Californian*, published in 1965, Peter Padfield suggested the SOS position was incorrect, and that *Carpathia*'s speed was exaggerated.

<sup>37</sup> This included the erroneous time in GMT that *Titanic* had foundered, and the time in New York when he first received the news that *Titanic* required assistance. For the former, see my article "Time and Time Again," available on line at: <http://www.titanicology.com/Californian/TimeandTimeAgain.pdf>. For the latter, see my article "12:35 A.M. Apparent Time *Carpathia*," available on line at: [http://www.glbs.org/articles/halpern/1235\\_atc\\_carpathia.html](http://www.glbs.org/articles/halpern/1235_atc_carpathia.html).

<sup>38</sup> Using geographic range table with height of light at 6½ ft and height of eye at 50 ft.

<sup>39</sup> American Inquiry, page 21.

<sup>40</sup> American Inquiry, page 911.

<sup>41</sup> The wireless log of the SS *Caronia* reported that at 6:16am GMT (1:16am NYT), some ship was saying: "We are firing rockets. Lookout for rockets."

<sup>42</sup> The PV from the SS *Mount Temple* reported that at 1:25am NYT, *Carpathia* (MPA) sends: "If you are there, we are firing rockets."

<sup>43</sup> From separate signed copies of written reports submitted to Capt. Lord by Second Officer Herbert Stone and Apprentice James Gibson on April 18, 1912 while *Californian* was still at sea.

<sup>44</sup> George M. Behe, *The Carpathia and the Titanic – Rescue at Sea*, Lulu.com, 2011, p. 41.

<sup>45</sup> British Inquiry, 25401.

<sup>46</sup> British Inquiry, 25473.

<sup>47</sup> *Californian*'s clocks were 12 minutes behind *Titanic*'s. The disappearance time of 2:05am was noted by *Californian*'s Apprentice James Gibson who reported to Captain Lord that the ship that he and Second Officer Stone were watching had "disappeared from sight and nothing was seen of her again." Gibson told Lord that the time as 2:05am by their wheelhouse clock [British Inquiry, 7565-66]. He also reported that altogether eight white rockets were seen.

<sup>48</sup> British Inquiry, 8612.

<sup>49</sup> British Inquiry, 8017. The pointing direction was easily ascertained by the relative positioning of the two masthead lights with respect to each other, with the foremost light being at a lower level than the aftermost light. From the bridge of *Californian*, the foremost light was apparently seen bearing to the right of the aftermost light indicating the vessel they seeing were pointing more or less in the same general direction that they were at that time.

<sup>50</sup> From Stone's written report to Capt. Lord, April 18, 1912, *Californian* was pointing "about WNW" magnetic when Stewart took over the watch at 4am. The difference between magnetic north and True north was about 2 compass points west, making *Californian* pointing approximately due west True at the time. This of course assumes that Stone's report was accurate.

<sup>51</sup> According to testimony from Capt. Rostron, he signaled *Californian* by semaphore about *Titanic* going down, that he got all the passengers from the boats, but that he was not quite sure at the time whether he could account for all the boats, thinking that one boat was still unaccounted for." (American Inquiry, page 22.)