



**NO. 94-109**

**TRAIN 847**

**REEFTON**

**30 MARCH 1994**

### **ABSTRACT**

This report relates to an incident in which the Locomotive Engineer of Lyttelton to Westport freight train 847 on 30 March 1994, failed to stop his train at the limit of the Track Warrant and overran it by 23 km. The safety issues disclosed by the investigation related to the issue and observance of Track Warrants.

# TRANSPORT ACCIDENT INVESTIGATION COMMISSION

## RAIL INCIDENT REPORT NO. 94-109

**Train Type and Number:** Freight, 847

**Locomotive:** DC 4473 and DC 4945

**Date and Time:** 30 March 1994, 0550 hours

**Location:** Reefton, 61.69 km Stillwater -Westport line.

**Type of Occurrence:** Failure to observe track warrant

**Persons on Board:**  
Crew: 1  
Passengers: Nil

**Injuries:**  
Crew: Nil  
Passengers: Nil  
Others: Nil

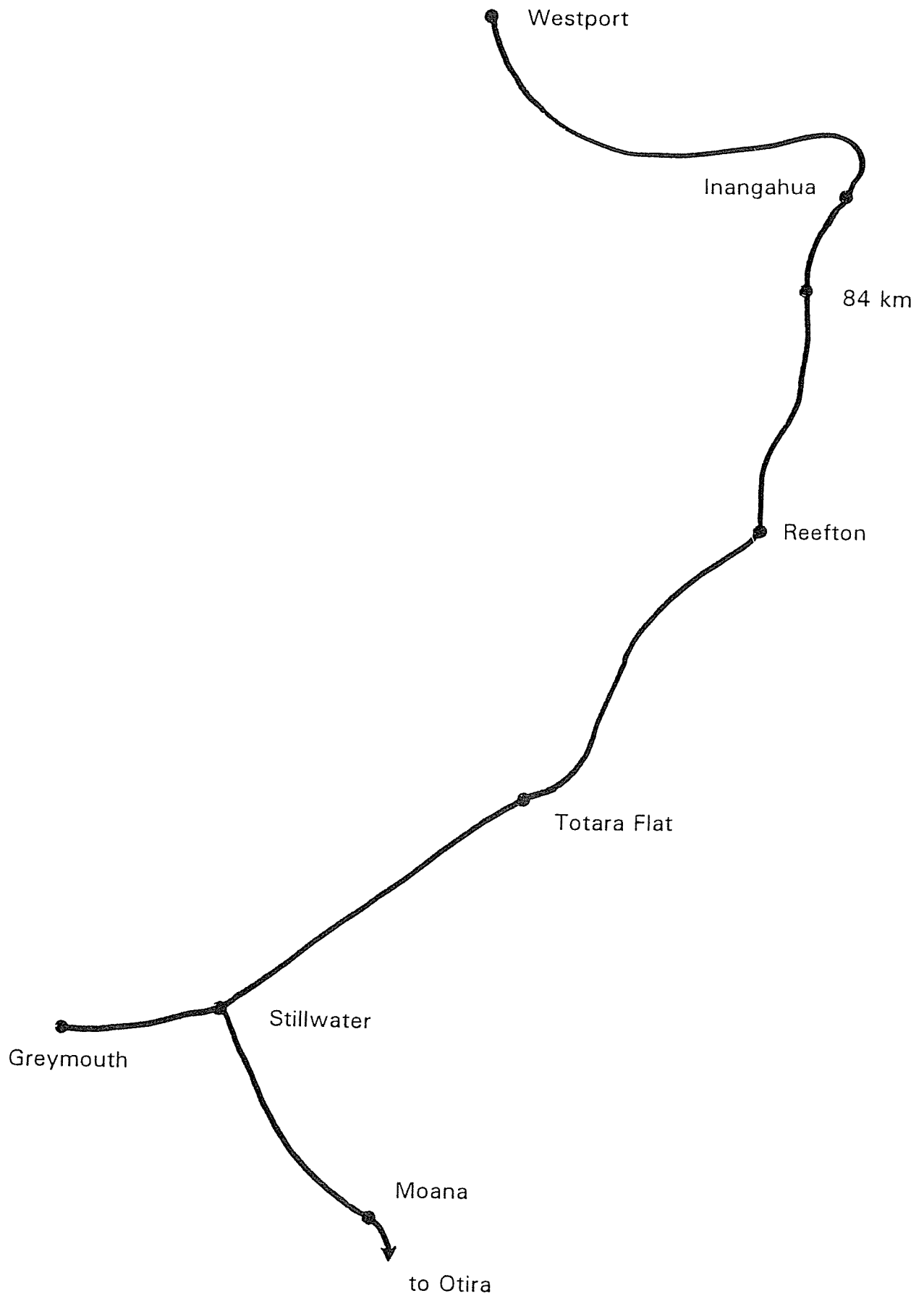
**Nature of Damage:** Nil

**Information Sources:** Transport Accident Investigation Commission  
field investigation

**Investigator in Charge:** R Chippindale

## 1. NARRATIVE

- 1.1 The train involved in the incident on 30 March 1994 was 847, a Lyttelton to Westport freight with a consist of empty unit freight wagons. There was a crew of one on board, a Locomotive Engineer.
- 1.2 Train 840 departed Westport at 2300 hours crewed by a Locomotive Engineer who “booked on” at 2230 hours. Before departure, he was issued with a Track Warrant authorising him to proceed to Totara Flat (28.4 km from Stillwater and 127.57 km from Westport) where he was to cross train 845 on its way to Westport. Train 845 was running late and 840 which arrived at 0130 hours had to wait 20 minutes at Totara Flat. After 840 and 845 crossed the Locomotive Engineer of 840 was issued with a crossing order to cross train 847 at Moana (19.07 km on the Christchurch side of Stillwater). He was to take over 847 and return to Westport (see Map Fig. 1).
- 1.3 Before train 840 reached Moana the Train End Monitor signalled a “battery low” indication signifying an impending loss of any indication of the rear end brake pipe pressure and of sufficient power for the tail lamp. The Locomotive Engineer discussed with Train Control how long the battery would last as a replacement would have to come from Otira. Although an estimate was made that it might last an hour the tail lamp failed shortly thereafter and before the train reached Moana at 0300 hours. Arrangements were made for a replacement to be sent on train 847. The replacement from Otira had the wrong bracket so the Locomotive Engineer found a tail light and mounted it on the rear of the train.
- 1.4 While still at Moana the Locomotive Engineer was issued with a Track Warrant at 0322 hours for his return duty on 847 from Stillwater signal 19634 to Reefton. There was single line automatic signalling as far as Stillwater after which Track Warrant Control was in operation. The trains crossed at Moana and the Locomotive Engineer got his train under way towards Stillwater at 0345 hours. Just prior to arrival at Stillwater the Locomotive Engineer heard the Locomotive Engineer of train 845 call “clear” at Westport.
- 1.5 When the Locomotive Engineer heard the other Locomotive Engineer on the radio cancelling his Track Warrant he knew there were no other trains on the line between his and Westport so he continued on his way calling as he was required to by his Warrant at Stillwater and Ikamatua. He forgot that the limit of his Warrant was Reefton. The Train Control Officer called him after he passed Reefton but that call still did not alert him to the fact that he had passed the limit of his Warrant. It was not until Train Control called him a second time asking him where he was and he replied he was “at the 83 kilometre”, that his mistake was realised.
- 1.6 At that stage he was between 23 and 24 km past the limit of his Track Warrant. He was instructed by Train Control to proceed to the 84 km peg and stop there until he was relieved.
- 1.7 The Locomotive Engineer was issued with his Track Warrant almost 3 hours before he would reach the position at which it expired. He wrote down and repeated back the detail of the Warrant correctly. At the time the Warrant was issued train 845 was still occupying a section of the line, and the Track Warrant for 847 could only be issued up to the point at which 845 had last reported clear instead of through to Westport as was the more normal event. After writing the detail on the Track Warrant form, he placed the Warrant on a clip on the wall of the Locomotive’s cab which was to his right and in the dark.
- 1.8 After receiving the Track Warrant the Locomotive Engineer was involved in attempting to rectify a difficulty with the replacement of a tail light on the train which he was handing over. Once the



**FIGURE 1: LOCATION DIAGRAM**

temporary fixing of the tail light on train 840 had been completed he boarded 847 and proceeded towards Stillwater. At Stillwater and again at Ikamatua he reported “clear” to Train Control as he was required to do.

1.9 The Locomotive Engineer was familiar with the area of operation and the night duty period which was normal. He was well rested and believed he was alert.

## 2. FINDINGS

- 2.1 The train was being operated normally prior to the incident.
- 2.2 The Track Warrant was appropriate and correctly compiled.
- 2.3 The Track Warrant details were entered and read back correctly by the Locomotive Engineer.
- 2.4 The Track Warrant was not for the total distance from Stillwater to Westport, which was the more usual in the Locomotive Engineer’s experience.
- 2.5 The Locomotive Engineer believed that the only factor stopping him from being cleared to Westport was the train in front which was also travelling to Westport.
- 2.6 Once the Locomotive Engineer heard on his radio that the preceding train had arrived at Westport he overlooked the limit on his own Track Warrant and assumed he was clear to continue to the train’s final destination.
- 2.7 The early issue of the Track Warrant and the location of the Locomotive Engineer’s copy in a dark area of his cab were factors in his unwitting disregard of the Warrant’s limit.
- 2.8 Had the Train Control Officer delayed the issue of the Track Warrant he could probably have issued it through to Westport. However this would have meant stopping the train to enable the Locomotive Engineer to take down the details and Train Control endeavour to minimise the number of stops required.

## 3. SAFETY RECOMMENDATIONS

- 3.1 It was recommended to the Managing Director of New Zealand Rail Limited that:
  - 3.1.1 Consideration be given to providing a clip in an illuminated position near the Locomotive Engineer which would enable him to have the Track Warrant clearly visible without affecting his ability to maintain an adequate lookout ahead of the train (069/94), and
  - 3.1.2 The practice of issuing Track Warrants prior to their immediate need, be reviewed to minimise the potential for the suppression of the Warrant’s details by more recent events affecting the Locomotive Engineer (070/94).

3.2 New Zealand Rail Limited Responded as follows (in part):

*Driving a locomotive and controlling a train requires good cab vision and therefore the cab illumination particularly at night should not restrict the visibility from the cab of the locomotive.*

*The copy of the warrant held in the cab of the locomotive is available for reference by the Locomotive Engineer if needed to refresh his memory.*

*The issuing of Track Warrants is done in a planned way to ensure train movements are all managed in a safe manner and that train delays are minimised to meet business needs.*

*The preliminary safety recommendations 069/94 and 070/94 are therefore not considered appropriate having reviewed our safety system.*

12 October 1994

M F Dunphy  
Chief Commissioner