



Collision between freight trains 1901S and 5132S at Dry Creek, South Australia

11 October 2011

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Figure 1: Leading locomotive of train 1910S post-collision with train 5132S



Abstract

At about 0105¹ on 11 October 2011 an empty (northbound) ore train (1901S) travelling on the interstate main line from Pelican Point (Outer Harbor, South Australia) to Rankin Dam (Coober Pedy) passed signal 13 at Dry Creek Junction displaying a stop (red) indication. Train 1901S subsequently collided at low speed approximately mid-consist with a loaded (southbound) grain train (5132S) that was traversing a turnout at Dry Creek Junction to enter the Dry Creek North Yard in South Australia.

There was no injury to the train crews as a result of the collision. There was significant damage to the crew cab of the lead locomotive of train 1901S and to the grain wagons of train 5132S that were struck during the collision.

The investigation is continuing.

FACTUAL INFORMATION

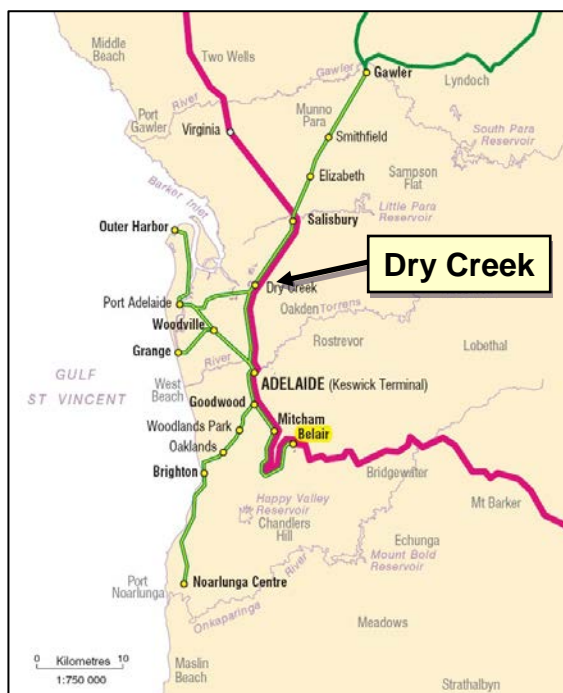
The information contained in this preliminary report is derived from the initial investigation of the occurrence. Readers are cautioned that it is possible that new evidence may become available that alters the circumstances as depicted in the report.

1 The 24-hour clock is used in this report. Australian Central Daylight Time (CDT), UTC +10:30 hours.

Location

Dry Creek Junction is located approximately 16.8 track kilometres (Figure 2) from Adelaide² on the portion of the Defined Interstate Rail Network (DIRN) between Adelaide and Crystal Brook which is managed by the Australian Rail Track Corporation (ARTC).

Figure 2: Location of Dry Creek



Geoscience Australia. Crown Copyright ©.

Dry Creek Junction is comprised of a single turnout, No. 9, to enable southbound train movements from the DIRN to access the shunt main³ and other sidings located within the Dry Creek North Yard (Figure 3). Network Control is provided by the ARTC located in Adelaide.

Train Information

1901S

Train 1901S was owned and operated by Specialised Bulk Rail Pty Ltd. It consisted of two locomotives (SCT 014 leading and SCT 015 trailing) hauling a crew van, fuel wagon and 88 empty PQGY type wagons. Train 1901S was

travelling from Pelican Point to Rankin Dam and was 1276 m in length with a gross trailing mass of about 2398 t. The train was being operated by two crew members: a driver and co-driver.

5132S

Train 5132S was owned and operated by Genesee and Wyoming Australia Pty Ltd. It consisted of three locomotives (705 leading and GM40T and GM47 trailing) hauling 55 loaded wagons containing grain from Jamestown to Port Flat. Train 5132S was 1901 m in length with a gross trailing mass of about 4866 t. The train was also being operated by two crew members: a driver and co-driver.

The occurrence

The crew of train 1901S signed on at 0001 and took control of the train at Bishops Loop, near Wingfield. The driver of train 1901S was undergoing route competency training and was operating train 1901S under the instruction and supervision of a driver qualified for that section. Train 1901S was operating with the lead locomotive in idle and the trailing locomotive SCT 015 providing motive power.

The train was held to wait for line clearance at Bishops Loop by the ARTC Network Control Officer, and again at signal 1, Dry Creek South, prior to entering the triangle connecting to the main line. After a delay of approximately 20 minutes at signal 1, train 1901S was signalled into the triangle with a medium speed indication and then onto the main line, via a low speed indication at signal 5 also at Dry Creek South.

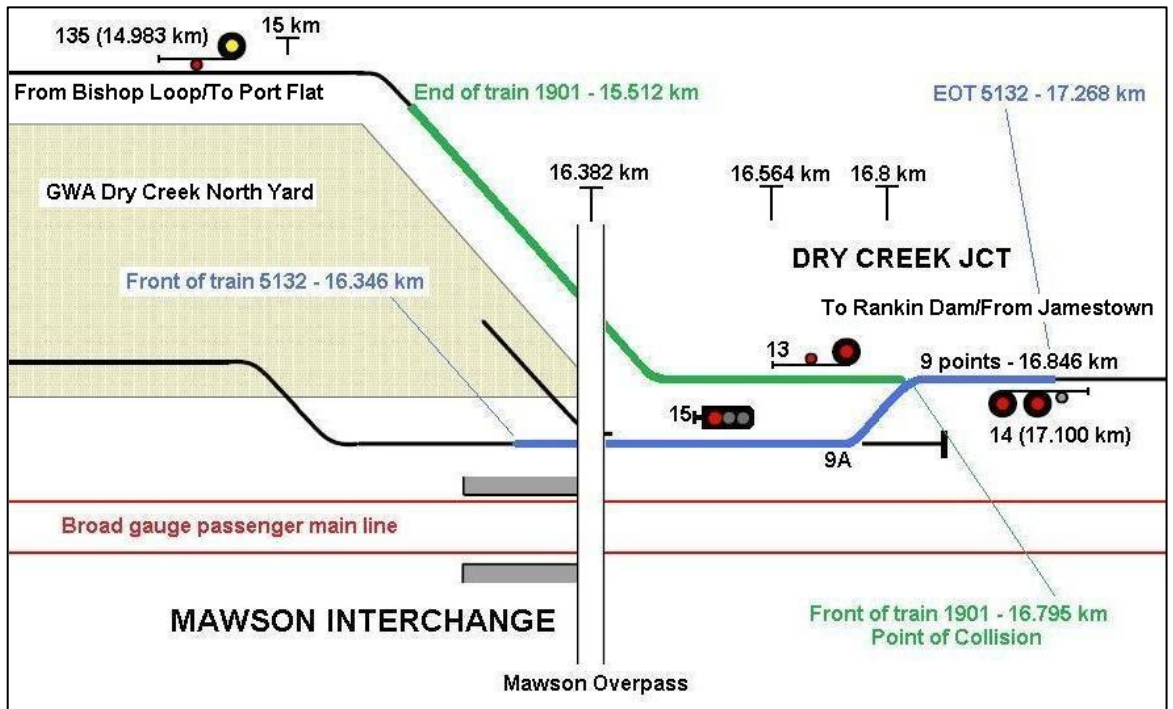
After entering the main line the train was accelerated to 60 km/h approaching signal 13 at Dry Creek Junction, the incident site (Figure 3). Signal 13 was displaying a red indication.

At approximately the same time, train 5132S, coming from Jamestown, was traversing the turnout at Dry Creek Junction at low speed, approximately 13 km/h, to enter the shunt main track that runs parallel to the main line. Approximately 22 wagons had cleared the fouling point with the remainder of the train occupying the main line.

2 Track kilometres for the Defined Interstate Rail Network between Adelaide and Crystal Brook are measured from origin mark at Mile End, Adelaide

3 The Shunt Main is also referenced as Auxiliary Main.

Figure 3: Incident site Dry Creek Junction



Information obtained from the data logger of train 1901S shows that an emergency application of the train brake was made approximately 86 m prior to signal 13, however train 1901S proceeded past the stop signal at 59 km/h travelling a further 231 m before colliding at approximately 22 km/h with train 5132S. As a consequence of the collision, train 1901S separated in two locations.

At the time of the occurrence it was a dark night with light rain periods.

Post occurrence

The train crews initiated emergency procedures notifying the Network Control Officer at the Mile End network control centre of the collision. The train crews proceeded to check on each other's welfare and secure train 1901S with the application of handbrakes.

Following the ATSB's release of the site at 0900, the location was progressively recovered throughout the day with the line reopened to rail traffic at 2310 on the day of the incident.

The train drivers were all tested for the presence of alcohol and drugs. The tests returned zero results.

The investigation is continuing and will focus on examination of:

- Train handling.
- Crew training.
- Crew resource management.
- Verification of signalling system including sighting.
- Rolling-stock braking characteristics and train performance.