

**WORKER STRUCK BY
HEAVY DUTY SPRING**
Type of Incident: Fatality
Date of Incident: March 5, 2011

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SECTION 1.0 DATE AND TIME OF INCIDENT

1.1 March 5, 2011 at approximately 6:30 p.m.

SECTION 2.0 NAMES AND ADDRESS OF PRINCIPAL PARTIES

2.1 Owner

N/A

2.2 Prime Contractor

2.2.1 Pat's Off-Road Transport Ltd.
PO Box 326
Medicine Hat, Alberta
T1A 7G1

2.3 Employer

2.3.1 Pat's Off-Road Transport Ltd.
PO Box 326
Medicine Hat, Alberta
T1A 7G1

2.4 Contractor

2.4.1 Cooter's Transportation Systems
PO Box 918
Sundre, Alberta T0M 1X0

2.4.2 NAL Resources Ltd.
1000, 550 6th Avenue SW
Calgary, Alberta
T2P 0S2

2.5 Worker

2.5.1

2.6 Others

2.6.1 RCMP
Sundre, Alberta Detachment

SECTION 3.0 DESCRIPTION OF PRINCIPAL PARTIES

3.1 Prime contractor

Pat's Off-Road Transport Ltd. (Pat's Off-Road) was the prime contractor of the site where the incident occurred and the employer of the deceased worker. Pat's Off-Road is a small company that operates tanker trailer trucks that service oil and gas well sites. Pat's Off-Road contracted Cooter's Transportation Systems to recover a tanker-trailer that rolled into the ditch at the site of the incident.

3.2 Employer

Pat's Off-Road was the employer of the deceased worker.

3.3 Contractor

3.3.1 NAL Resources Ltd., who operated the nearby well site, hired Pat's Off-Road to provide heating fuel at the well site.

3.3.2 Cooter's Transportation Systems is a small towing company that provided the tow truck to recover the rolled over tanker-trailer

3.4 Worker

The deceased worker (), was the driver/operator of a fluid heater tanker-trailer truck and had been doing similar work for more than 8 years.

SECTION 4.0 LOCATION OF INCIDENT

4.1 The incident occurred on the side of an access road, approximately 100 metres from a well site operated by NAL Resources Ltd. The well site was located at LSD 15-18-034-04 W5, approximately 30 km North East of Sundre, Alberta (Refer to Attachment A-Map and Attachment B- Photograph 1).

SECTION 5.0 EQUIPMENT, MATERIAL AND OBSERVATIONS

5.1 Equipment and Material

5.1.1 The workers were attempting to pull an overturned 1990 Wabash triaxle tanker-trailer (Vehicle Identification Number 2W9160W12LS041005, license plate number BBY8137) out of a ditch. The tanker-trailer was equipped with a tongue/hitch. The tongue/hitch was supported by a weight support spring connected to the body of the tanker-trailer by a welded attachment. A chain welded to the tongue/hitch was attached to the other end of the weight balance spring.

A Kenworth 25 ton tandem axle tow truck equipped with a hydraulic winch was used

in the attempt to pull the tanker-trailer out of the ditch. (Refer to Attachment B - Photographs 2, 3, 4, 5, 6 and 7).

5.2 Observations

5.2.1 At the time of the incident it was clear with a temperature approximately 0°C.

SECTION 6.0 NARRATIVE DESCRIPTION OF THE INCIDENT

- 6.1 On March 5, 2011, the tanker-trailer driver/operator () employed by Pat's Off-Road and his helper () brought a tanker-trailer filled with heating oil, to a lease site owned by NAL Resources. While attempting to park the tanker-trailer on the side of the access road near the lease site, it rolled into a ditch.
- 6.2 An attempt was made to use a truck on the lease site to pull the tanker-trailer out of the ditch. While attempting to pull the tanker-trailer out of the ditch, it rolled back and turned upside down in the ditch, spilling the oil in the tanker-trailer. A clean up crew with vacuum trucks arrived on site and started clean-up operations.
- 6.3 Pat's Off-Road manager () arrived on site and commissioned a tow truck from Cooters Transportation Systems to pull the overturned tanker trailer out of the ditch. The manager (), tanker-trailer driver/operator () and tow truck operator () discussed the plan for recovering the overturned tanker-trailer out of the ditch.
- 6.4 After positioning the tow truck on the road, manager () and tanker-trailer driver/operator () connected the winch cable from the tow truck to the hitch of the tanker-trailer. The tow truck operator () then pulled the tongue/hitch, rotating it to align with the tanker-trailer. As the hitch rotated, the weight balance spring became caught on the fender of the tanker-trailer. The spring was released by manager () and tanker-trailer driver/operator ().
- 6.5 The tow truck operator () continued to rotate the hitch. The spring became caught on the step of the tanker-trailer. As the tanker-trailer driver/operator () moved to release the spring, the weld connecting the spring to the tanker body failed and the spring flew from the tanker-trailer. The flying spring struck the tanker-trailer driver/operator () in the head. The manager () rushed to assist the injured tanker-trailer driver/operator (). He was unsuccessful in getting any response from the tanker-trailer driver/operator (). The manager () called Emergency Medical Services (EMS).

- 6.6 The workers followed instructions provided by EMS by mobile phone and provided emergency medical services to the injured tanker-trailer driver/operator ([REDACTED]).
- 6.7 EMS arrived on scene and attended to the injured tanker-trailer driver/operator ([REDACTED]). He was transported to the hospital by EMS where he passed away the same day.

SECTION 7.0 ANALYSIS

7.1 Direct Cause

- 7.1.1 The tanker-trailer driver/operator ([REDACTED]) was struck in the head by a weight support spring.

7.2 Contributing Factors

- 7.2.1 The weld attaching the weight support spring to the tanker-trailer failed.
- 7.2.2 The weight support spring caught on the step of the tanker-trailer and was under tension.
- 7.2.3 The tow truck operator ([REDACTED]) could not see that the weight support spring was caught on the step.
- 7.2.4 The tanker-trailer driver/operator ([REDACTED]) moved forward to release the weight support spring without warning the tow truck operator ([REDACTED]).
- 7.2.5 The tanker-trailer driver/operator ([REDACTED]) was in the path of the flying weight support spring.
- 7.2.6 The workers did not recognize the hazards associated with straightening the hitch.

SECTION 8.0 FOLLOW-UP/ ACTION TAKEN

8.1 Employment and Immigration, Occupational Health and Safety

- 8.1.1 On March 5, 2011, Occupational Health and Safety (OHS) received an incident notification. OHS Officers responded to the scene and commenced an incident investigation.
- 8.1.2 OHS issued a stop work order for tanker-trailer recovery operations until preventive measures were in place to prevent a recurrence of a similar incident.
- 8.1.3 OHS issued an order requiring the employer to conduct an incident investigation and prepare a report outlining the circumstances of the incident and the corrective actions

undertaken to prevent a recurrence of the incident.

- 8.1.4 OHS issued an order requiring the employer to conduct a hazard assessment for the operations involving salvaging operations.
- 8.1.5 OHS issued an order requiring the employer to develop safe work procedures for tanker-trailer recovery operations.

8.2 Industry

- 8.2.1 On March 5, 2011 following the incident the employer stopped tanker-trailer recovery operations.
- 8.2.2 The employer conducted an incident investigation and submitted a report to OHS.
- 8.2.3 The employer prepared a hazard assessment for the tanker-trailer recovery operations.
- 8.2.4 The employer developed safe work procedures for tanker-trailer recovery operations.
- 8.2.5 The employer complied with all orders issued by OHS.

SECTION 9.0 SIGNATURES

Shantha Nandana, Lead Investigator

Date

Chuck Samphire, Reviewer

Date

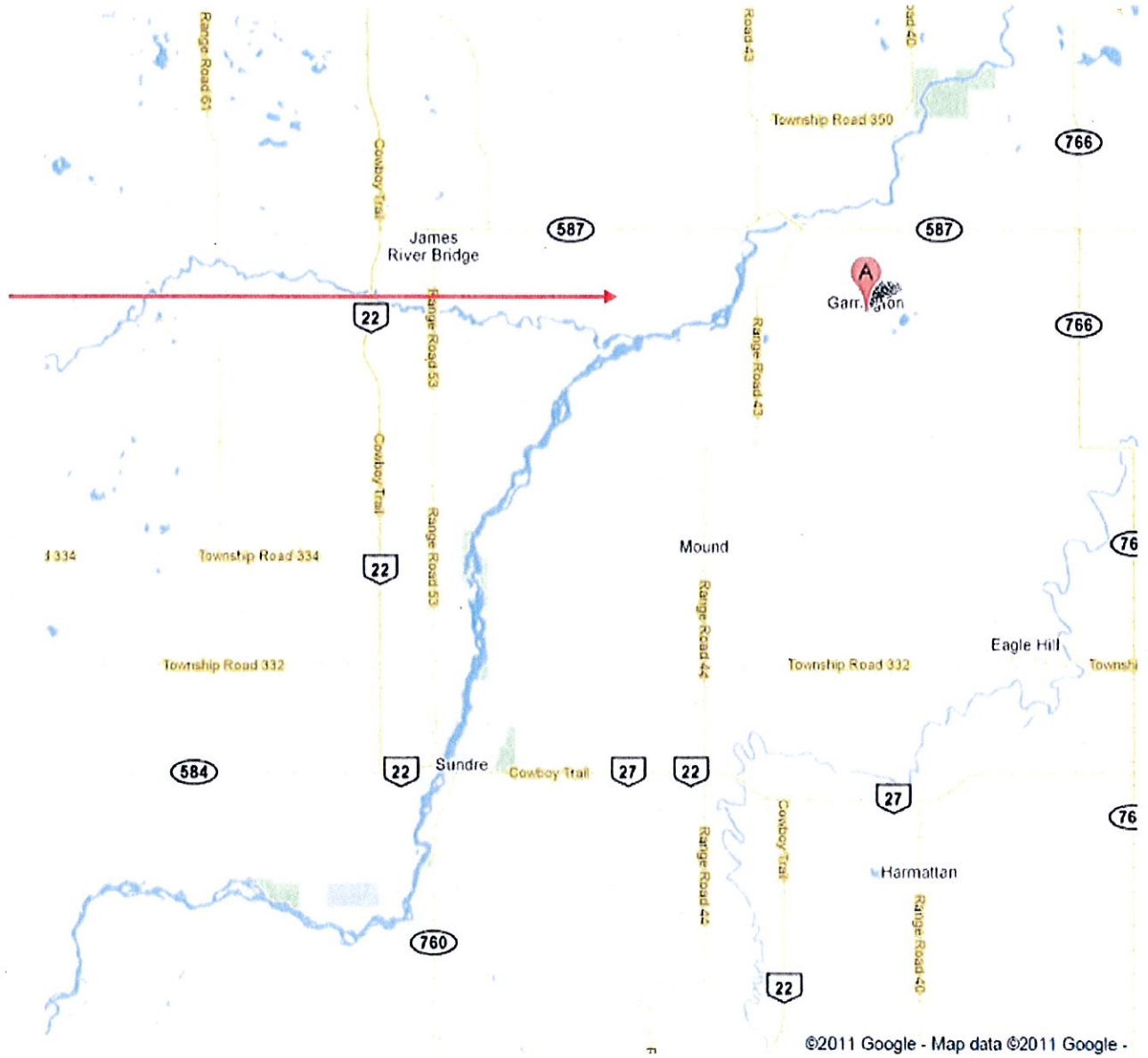
Karen MacDonald, Regional Director

Date

SECTION 10.0 ATTACHMENTS:

Attachment A
Attachment B

Map
Photographs



Map - Arrow shows the location of the incident, approximately 30 km NE of Sundre, Alberta.



Photograph 1 – Shows the overturned tanker-trailer at the site of the incident.

1 Shows the tongue/hitch.

Pat's Off-road Transport Ltd.

File: F-235448
Attachment B
Photograph 2 of 7



Photograph 2 –

Shows the weight
balance spring
that struck the
worker.



Photograph 3 – Shows close-up of the incident site.

- 1 Shows the approximate location where the worker () stepped forward to free the caught spring and was struck.
- 2 Shows the approximate location where the worker () was standing before he stepped forward to free the spring. (Marker was placed after the incident to show location.)
- 3 Shows the approximate location where the manager () was standing at the time of the incident. (Marker was placed after the incident to show location.)



Photograph 4 – Shows a close-up of the tanker-trailer.

- 1** Shows the marks of the broken weld where the weight balance spring had been attached to the tanker-trailer.
- 2** Shows the step on which the weight balance spring was caught.
- 3** Shows the chain attached to the tongue/hitch. This chain was connected to the weight balance spring prior to the incident.



Photograph 5 – Shows the relative positions of the overturned tanker-trailer and the tow truck.
(Reconstructed scene, as the tow truck was repositioned post-incident.)



Photograph 6 – Shows the approximate position of the tow truck on the road prior to the incident. (Reconstructed scene, as the tow truck was repositioned post-incident.)

1 Shows the tow truck.

Pat's Off-road Transport Ltd.

File: F-235448
Attachment B
Photograph 7 of 7



Photograph 7 –

Shows the tow truck operator's view of the overturned tanker-trailer.

(Approximate vantage point, from the scene reconstructed after the post-incident repositioning of the tow truck.)