



CORONER'S REPORT
INTO THE DEATH OF

SEWELL

SURNAME

LAUREN PATRICIA

GIVEN NAMES

OF

SURREY
MUNICIPALITY OF RESIDENCE

I, Andrew Cave, a Coroner in the Province of British Columbia, have investigated the death of the above named, which was reported to Coroner Burns on the 14th day of August, 2012, and as a result of such investigation have determined the following facts and circumstances:

Gender: MALE FEMALE
 Age: 24 YEARS
 Death Premise: KELOWNA GENERAL HOSPITAL
 Place/Municipality of Death: KELOWNA Date of Death: AUGUST 14, 2012
 Municipality of Illness/Injury: PEACHLAND Time of Death: 1543 HOURS

MEDICAL CAUSE OF DEATH

(1) *Immediate Cause of Death:* a) Subdural Hemorrhage

DUE TO OR AS A CONSEQUENCE OF

Antecedent Cause if any: b) Head Injury

DUE TO OR AS A CONSEQUENCE OF

Giving rise to the immediate cause (a) above, stating underlying cause last. c) Aircraft Incident

(2) *Other Significant Conditions Contributing to Death:*

BY WHAT MEANS Rear seat passenger in an aircraft (Piper PA-30 Twin Comanche) that collided with the ground

CLASSIFICATION OF DEATH ACCIDENTAL HOMICIDE NATURAL SUICIDE UNDETERMINED

Date Signed: JUNE 13, 2014


Andrew Cave, Regional Coroner
Province of British Columbia

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INVESTIGATIVE FINDINGS

On August 13, 2012, at 1454 hours, a commercial aircraft flying over the region of Brenda Mines, near Peachland, received a radio distress beacon. This was relayed to the Joint Rescue Coordination Centre. A search aircraft was dispatched and the wreckage of a small aircraft was located at approximately 1730 hours. Rescuers parachuted into the scene and were assisted a short while later by emergency personnel who arrived by ground.

On arrival they found that one occupant (Dallas Smith, associated BCCS file 2012-0586-0099) was deceased and the three other occupants were seriously injured. Despite treatment, another passenger identified as Lauren Patricia Sewell, died in Kelowna General Hospital on August 14, 2012.

The aircraft involved in the incident was a Piper PA-30 Twin Comanche. It was built in 1968. It was a twin propeller aircraft powered by two turbocharged engines. It had seating for four occupants, configured in two rows, two seats in the front (both with access to flight controls), and two seats in the back. Luggage was stowed behind the rear seats. All seats were fitted with a lap belt. On August 13, 2012, a pilot and three passengers were on the flight. Investigation revealed that Ms. Sewell was seated in the rear left seat.

The pilot submitted a visual flight plan to Kamloops Air Traffic indicating travel to Boundary Bay Airport via Princeton and Hope, with the intention of flying to 5000 feet above sea level (asl).

On August 13, 2012, at 1432 hours the aircraft left Penticton airport. Due to reduced performance it did not reach the intended altitude, and within 20 minutes of takeoff it crashed at 4595 feet above sea level near Brenda Mines. The crash site was level, with dense trees. After making initial contact with the trees the aircraft continued for approximately 75 feet before coming to rest.

At the time of the incident visibility was reduced due to haze.

The Transport Safety Board carried out an investigation into the incident and identified a number of combined factors that led to the incident.

Although the take off altitude at Penticton airport was 3100 feet asl, and the crash site was at 4595 feet asl, due to the weather conditions the calculated density altitude was over 7000 asl. As altitude increases air pressure is reduced. This considerably reduced air pressure would have had a detrimental effect on engine performance. Reduced air pressure reduces the lift of the aircraft. In addition combustion in the engine is created through the mixing of air and fuel. As air pressure is reduced so is power output. To assist in increasing air pressure within the engine a turbocharger is fitted. This utilizes the exhaust gases which are redirected into the air intake manifold thus increasing air pressure within the combustion chamber increasing power output. The turbocharger was not activated by the pilot to provide additional engine power as the aircraft attempted to gain height. A post crash engine disassembly also revealed a partial obstruction of one fuel nozzle with rust. Each engine has four fuel nozzles.

The pilot held a Canadian commercial pilot licence, but was relatively inexperienced with 338 hours of flight time. The pilot flew towards an area of rising terrain while the aircraft was unable to climb sufficiently to avoid a collision. The pilot's ability to determine a safe flight path was further impeded by reduced visibility. The aircraft exceeded its maximum gross weight by 150 lbs at take off from Penticton.



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Of the four occupants in the aircraft two survived and two died. All four occupants were wearing lap belt restraints. These did prevent the occupants from being ejected from the aircraft, but would not have prevented the rapid movements that caused the head, facial and chest injuries. Currently, the Canadian Aviation Regulations do not require the installation of a shoulder harness in small airplanes manufactured before July 18, 1978.

Previous BC Coroners Service investigations into deaths in similar circumstances have recommended mandatory shoulder harness restraint systems for small aircraft. (BCCS File #1992-0603-0010 and #2000-0442-0027). ←

In addition, the BC Coroners Service has made three previous recommendations to Transport Canada regarding the implementation of standards for mountain flying training (BCCS File #2006-0322-0008, 2007-0196-0039 and Death Review Panel into Four Fatal Aviation Accidents Involving Air Taxi Operations on British Columbia's Coast.) ←

CONCLUSION

I find that Lauren Patricia Sewell died in Kelowna on August 14, 2012, of a subdural hemorrhage due to a severe head injury sustained in the aircraft incident. I classify this death as accidental.

Pursuant to Section 16 of the Coroners Act, the following recommendation(s) are forwarded to the Chief Coroner of the Province of British Columbia for distribution to the appropriate agencies.



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RECOMMENDATIONS

To: Laureen E. Kinney
Assistant Deputy Minister, Safety and Security Group
Transport Canada
330 Sparks Street,
Ottawa,
Ontario
K1A 0N5

1. It is recommended that the Canadian Aviation Regulations be amended to require that all small airplanes manufactured prior to July 18, 1978 be retrofitted to have a safety belt that includes a shoulder harness, where retrofit kits are available.
2. To consider the development of an approved Mountain Flying Course.

A handwritten signature in blue ink, appearing to read "Andrew Cave".

Andrew Cave, Coroner
Province of British Columbia