COMMONWEALTH OF AUSTRALIA-BUREAU OF AIR SAFETY INVESTIGATION AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT	REFERENCE NO SI/814/1043

1. LOCATION OF OCCURRENCE

Bond Springs Aerodrome, N.T.		Elevation: 2379 feet
Date: 27.12.81	Time: 1745 hours	Zone: CST

2. THE AIRCRAFT

Make and Model: I.C.A. IS-29D	Registration: VH-GWA
Certificate of Airworthiness: Valid from 21.3.76	
Certificate of Registration Issued to:	Operator:
Degree of Damage to Aircraft: Destroyed	Other Property Damaged: Nil
Defects discovered: Nil	

3. THE FLIGHT

Departure Point:	Bond Springs	Time of departure:	1744 hours
Destination:	Bond Springs		
Purpose of flight:	Gliding Practice	Class of Operation:	Private

4. THE CREW

Name	Status	Age	Class of Licence	Hours on Type	Total Hours	Degree of Injury
	Pilot	24	"C" Certificate	8	62	Fatal

5. OTHER PERSONS (ALL PASSENGERS AND PERSONS INJURED ON GROUND)

Name	Status	Degree of Injury

6. RELEVANT EVENTS

The pilot was one of three members of the North Australian Gliding Club who had travelled to Bond Springs to participate in the Northern Territory gliding championships. VH-GWA was also transported to Bond Springs for this purpose.

VH-GWA was constructed with two towing hook attachment points; a forward point for aero-tow launching and a rear point for winch or auto-tow launches. The glider's Flight Manual indicated that if winch or auto-tow launches are made utilizing the forward tow point, and full elevator deflection is applied during launch, then pitching instability (porpoising) may occur. This should cease if airspeed is reduced or the elevator deflection is removed. VH-GWA was normally operated at Batchelor, where aero-tow launches were employed, and was fitted with only one hook, at the forward position. A cover plate had been fitted over the rear attachment point.

The pilot had commenced his initial glider training at Bond Springs in 1979 and was familiar with the winch and auto-tow launch procedures in use at that aerodrome. He had moved to Darwin in early 1981 and joined the local gliding club. All his flying from Batchelor had been associated with aero-tow launches. To refresh himself on winch launch procedures, he carried out a dual flight with an instructor in a two-seat glider at Bond Springs on 26.12.81. On the same day, another pilot from Darwin made two flights in VH-GWA. Auto-tow launches were made for these two flights and minor porpoising was experienced.

On 27.12.81, the pilot made a brief flight in VH-GWA. A winch launch was carried out and he experienced porpoising during the launch. He returned for landing via a low right-hand circuit pattern, instead of the normal left-hand pattern, and during the landing roll experienced directional control difficulties. A collision with a parked vehicle was narrowly avoided. Shortly afterwards the pilot undertook a second flight. Once more porpoising occurred during the winch launch and on the return to land the pilot forgot to lower the landing gear, even though the gear warning horn sounded, until reminded of his oversight by a radio call from an observer on the ground.

After this flight the pilot advised his companions that he was unhappy with his performance and would not fly solo again that day. He expressed the intention of arranging a check flight with an instructor. Another pilot then flew VH-GWA and experienced porpoising during the winch launch. He considered it was due to an excessive speed on launch and that also a take-off without flaps might reduce the porpoising. When the aircraft returned from this flight, indicated he now wanted to make a third flight in VH-GWA. The other pilot agreed and briefed Mr Wardale on his assessment of how the porpoising might be overcome. The glider was prepared for a launch into the northwest, into a headwind of about 10 knots. After boarding the glider, the pilot spoke by radio to the winch operator and asked that the launch be made at reduced power. A member of the local gliding club who heard this exchange then intervened to advise that the standard procedure was to call 'slower, slower' on the radio if the launch was too fast and 'faster, faster' if it was not fast enough. The pilot acknowledged this advice.

AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT (CONT)	REFERENCE NO. SI/814/1043

6. RELEVANT EVENTS

The ground roll and initial climb by VH-GWA appeared normal to ground observers. As requested by the pilot, winch power was applied slowly and then reduced when the glider was airborne. After reaching a height of approximately 300 feet above the ground, the pilot called 'slower, slower' over the radio and the winch operator reduced power even further. As the glider continued to climb, observers noticed the onset of porpoising and also instability in both yaw and roll. The winch operator, considering that the pilot was in difficulty, closed the winch throttle and applied the cable brake.

The cable was seen to release and fall away to the strip. The glider stalled and entered a rapid spin to the right. It briefly recovered from the spin at a very low height but then entered a further spin to the left. Ground impact was in a steep nose-down attitude, 72 metres north of the airstrip and approximately 430 metres from the point where take-off had commenced.

7. OPINION AS TO CAUSE

The probable cause of the accident was that, when longitudinal instability was encountered during launch, the pilot did not maintain a safe airspeed. The use of a forward tow hook attachment point contributed to the longitudinal instability. A likely contributory factor was incorrect spin recovery action.

Approved for publication under the provisions of Air Navigation Regulation 283(1)	G.V. Hughes (G.V. Hughes) Director	Date: 2.12.82