

# Where in the South Island is DH 90A Dragonfly ZK-AFB?

By Gavin Grimmer



This presentation is a result of over 1 1/2 years of almost full time research into the mysterious disappearance of DH90A Dragonfly ZK-AFB on the 12<sup>th</sup> February 1962 along with it's five occupants.

This is based on the "Official Search Records" recorded at the time of the original search and a copy of these can be found in Richard Waugh's most excellent book "LOST ...without trace?"

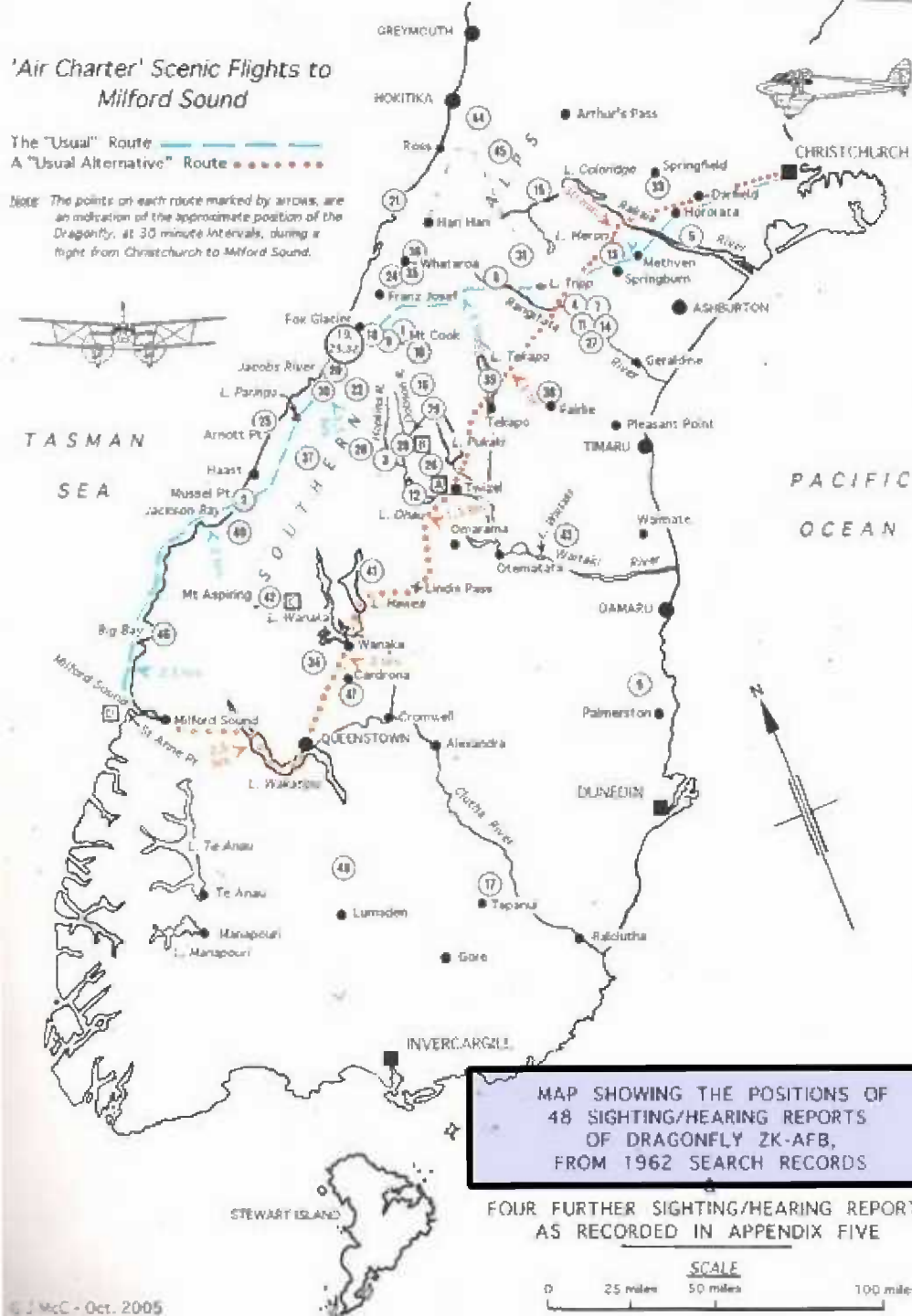
From a pilot's perspective, the author of this presentation Gavin Grimmer, has extensively researched each observation found in these Records, and also other observations that have come to "light" since then.

His research can be found in much more detail in his book "TRACED ...yet still missing!"

**'Air Charter' Scenic Flights to  
Milford Sound**

The "Usual" Route ————  
A "Usual Alternative" Route ————

Note: The points on each route marked by arrows, are an indication of the approximate position of the Dragonfly, at 30 minute intervals, during a flight from Christchurch to Milford Sound.



MAP SHOWING THE POSITIONS OF  
48 SIGHTING/HEARING REPORTS  
OF DRAGONFLY ZK-AFB,  
FROM 1962 SEARCH RECORDS

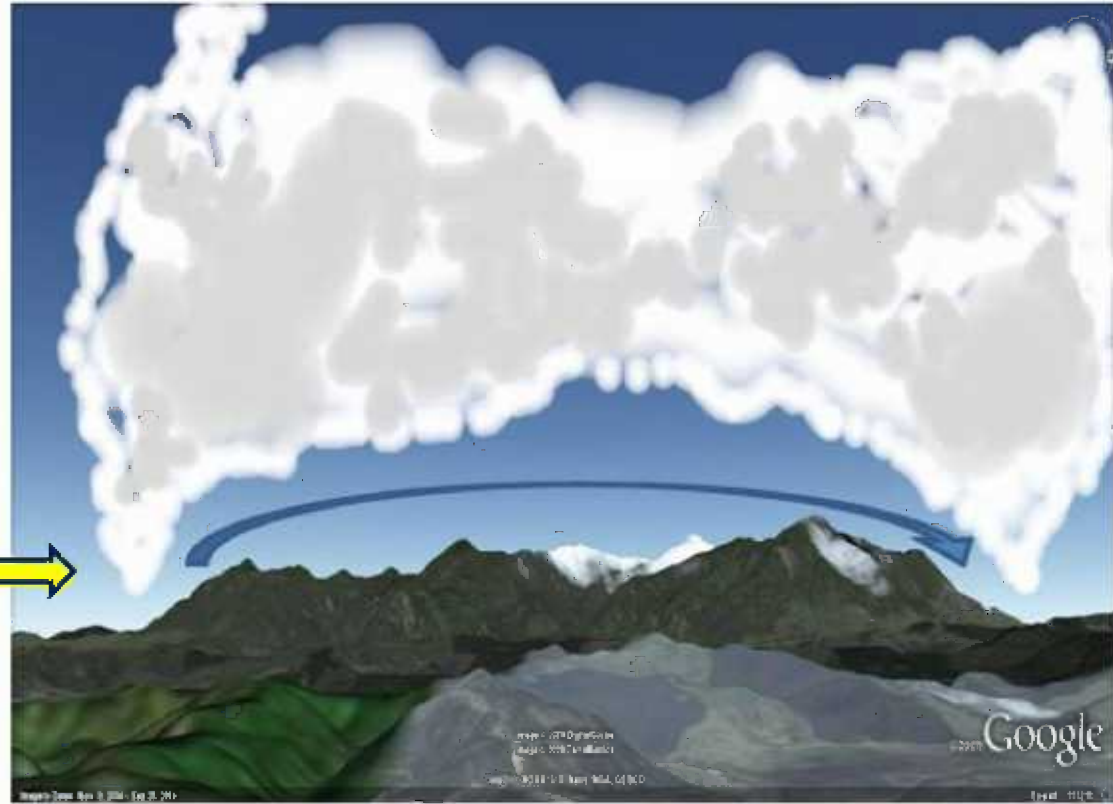
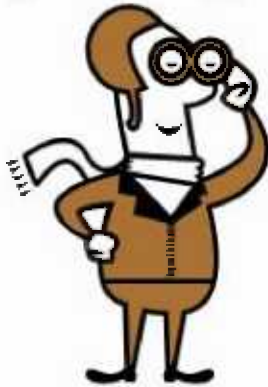
FOUR FURTHER SIGHTING/HEARING REPORTS  
AS RECORDED IN APPENDIX FIVE

SCALE  
0 25 miles 50 miles 100 miles

**There were many observations of ZK-AFB down the East Coast and down the West Coast.**

**ZK-AFB simply couldn't be on both sides of the mountains at the same time!**

***In this scenario, to an observer looking at the mountains, it would appear that you could not fly over them unless you were flying on instruments, whereas in reality you could easily fly through.***



**What looks impossible, may not be.  
It's all in the eye of the beholder!**

***To the  
person  
underneath  
this cloud,  
they also  
would think  
that the  
mountains  
were  
impassable***



Photo supplied by  
Paul Beauchamp Legg



***Another example!***



***First clue:*** Report 5 (Official 1962 Search Records) – “Saw a plane with two engines and silver wings, circling to gain height.”

***YOU DON'T NEED  
TO GAIN HEIGHT  
TO FLY DOWN  
THE  
EAST COAST!***

RECEIVED.  
2 MARCH 1962  
AIR DEPT.

NEW ZEALAND METEOROLOGICAL SERVICE  
INTERNAL MEMORANDUM

From: The Director

To: The Chief Inspector of Accidents, AIR DEPARTMENT

Date: 1 March 1962

Our Ref. 51/2/1

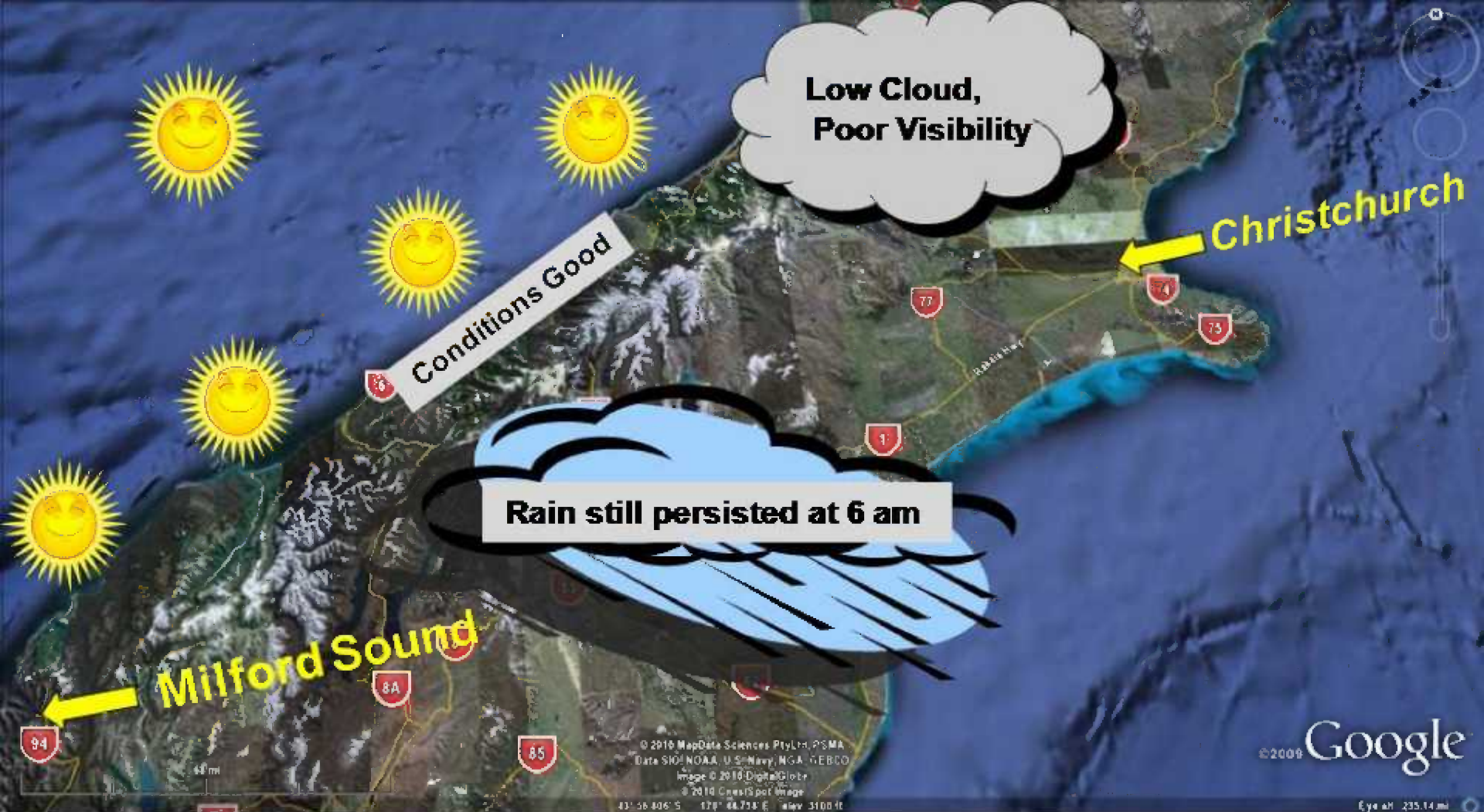
Your Ref. 25/3/1214 CIA of  
14.2.62

Subject: AIRCRAFT ACCIDENT : DRAGONFLY ZK-AFB MISSING 12.2.62

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... Attached at B and C are respectively the flight and aerodrome forecasts issued personally to Captain Chadwick by our Christchurch office. Captain Chadwick was informed verbally of the weather conditions en route when he called to pick up his forecast at about 0830M. The forecaster explained that a small depression was still located off the Westland coast and was responsible for the persistence of low cloud and poor visibility in the Hokitika area. He advised that a VFR crossing in the Arthurs Pass region was likely to be impracticable but suggested that, in general, more favourable weather and winds would be encountered if the crossing were made further south. It was pointed out, further, that conditions were good on the West Coast south of the Glaciers and that a rain area still persisted at 6 am over South Canterbury. Captain Chadwick said that he would probably fly by way of the Mackenzie Country rather than through Whitcombe Pass, his normal

**This is the advice given by the Met. Forecaster  
to Brian Chadwick that morning**



*(Weather stated as per previous slide.)*

If this was the forecast that you were given when you intended to fly to Milford Sound, then which way would you go?

25/3/1214



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**Report 6 and 31 -Erewhon Station (50 miles south of Arthurs Pass) heard an aeroplane heading towards the Mountain Ranges**

# Report 36 – Hungarian named Purda saw twin-engined aircraft come out of Whataroa Gorge and head towards coast



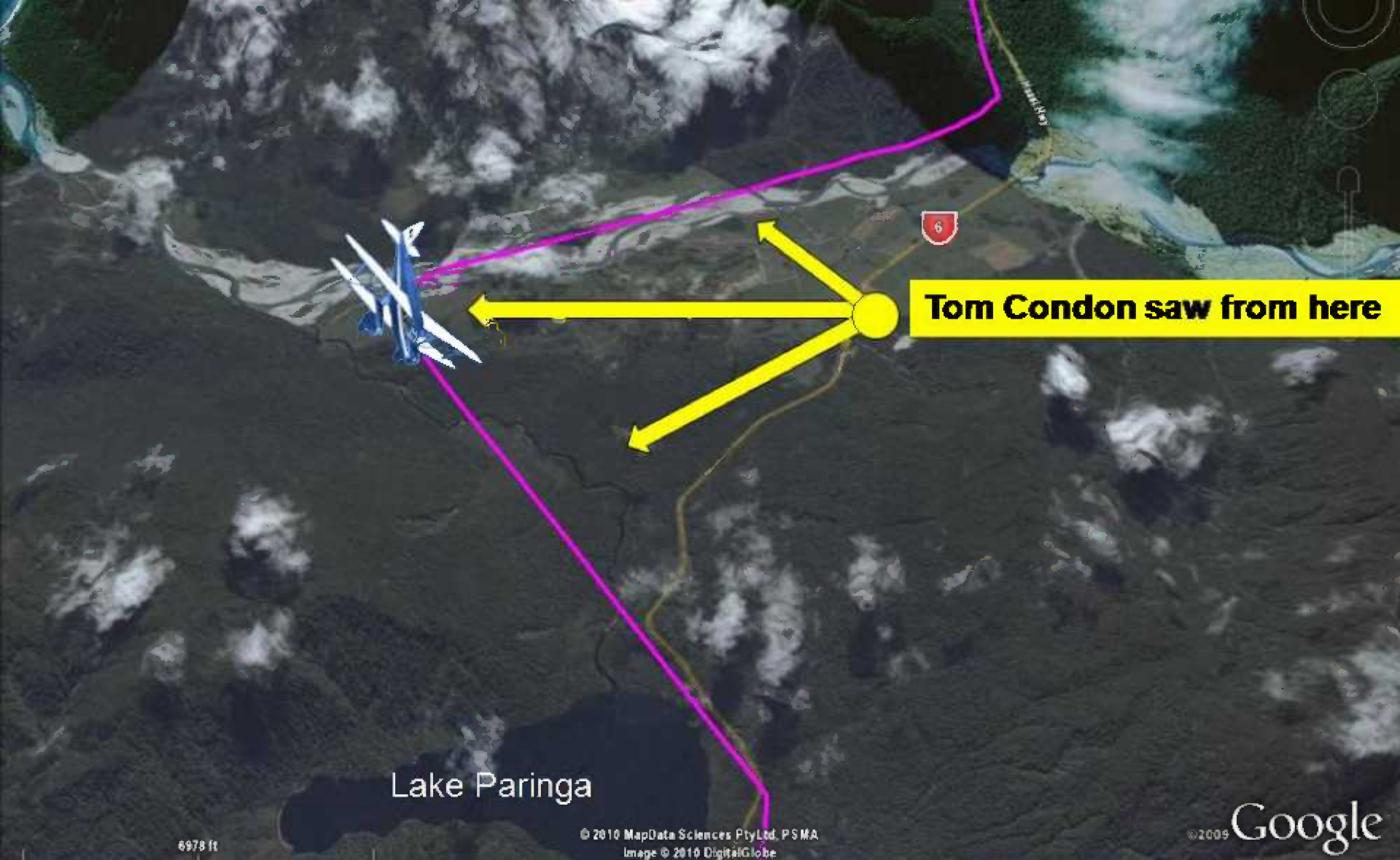
**Reports 1,8,18,19,23,32 – Five different people saw biplane at Fox – “Definitely had two wings and was like a Dominic”- “Having two engines and two wings”  
All reported it going in different directions which doesn’t add up!**



**The fact that they all reported it going in different directions means that they all observed it at differing times and that can easily be explained as shown above. These originally apparent confictions gives more credence to their sightings as it proves there was no collusion between the observers.**



**Report 22 – Jacobs River**  
**“Saw a blue and silver biplane heading southwest at about 2000 feet”**



**Page 128 "LOST ...without trace?" – Tom Condon saw the Dragonfly flying down the river.**

**Keith Turner said Tom saw it going down past the fork in the river and then come back again**



**Report 37 – Gordon Ferguson heard an aircraft flying high. He thought it was about over the headwaters of the Blue River. As it was blowing a strong westerly wind, he couldn't have heard it, if it was that far away, so it had to be closer.**

**Shortly after, Gordon heard the West Coast Airways' Dominie flying back up the coast.**

*In the next slide you'll note discrepancies in the "Recalled Observation Times".*

*This can easily be explained by the following article:*

### **Memory an unreliable witness**

03/11/2009 6:44:05

New research into the way people form memories is raising concerns about the weight placed on eye witnesses in court cases.

Professor Maryanne Garry from Victoria University studies how people's memories become distorted. She says most people believe their minds are like a tape recorder, but humans tend to remember the gist of events rather than actual details.

She says that means even 20 minutes after a crime has occurred, the recollections of eye witnesses will begin to blur.

Her research shows people also invent memories and believe them to be true.

Prof Garry says memory very quickly becomes something that is unusable after a period of time.

"Memory evidence is really another kind of trace evidence, so we all look at shows like CSI and see how carefully they treat the trace evidence so it doesn't get contaminated. You've got to treat memory the same way. You've got to collect it quickly and preserve it."

Prof Garry says innocent people have been convicted on the power of eye witness testimonies.

"There's some evidence in the US to suggest that three to 3.5 percent of all convictions for serious crimes are wrongful convictions and about half of those would be a memory problem."

## Times Calculated at the Cruise Speed of Dragonfly ZK-AFB

<u>Place or Report No.</u>	<u>Recalled Observation Time</u>	<u>Calculated Time</u>
Harewood (Christchurch)	09.52 am	09.52 am
5 - Hororata	10.30 am	10.13 am
<b>Page 136 "Turbulent Years"</b>		
Rakaia Bridge	10.15 am	10.15 am
31 – Erewhon Station	within few mins 10.45 am	10.39 am
36 – Whataroa	11.00 am	10.54 am
8 – Fox Glacier	not later than 10.50 am	11.06 am
18 – Fox Glacier	between 11.00 and 11.30 am	11.07 am
1 – Fox Glacier	approx 10.30 am	11.08 am
19a – Fox Glacier	between 10.30 and 12.00 am	11.09 am
19b – Fox Glacier	11.00 to 11.15 am	11.10 am
23 – Fox Glacier	11.05 am	11.11 am
32 – Fox Glacier	between 11.00 and 11.15 am	11.11 am
20 – Hunts Beach	between 10.45 and 11.45 am	11.17 am
22 – Jacobs River	between 10.30 and 11.00 am	11.18 am
30 – Mahitahi River	about 11.00 am	11.21 am
37 – Between Blue & Little Rivers	between 10.00 to 11.00 am	11.29 am

**From this we now know that Gordon Ferguson heard probably the Dragonfly go past heading South at around 11.29 am and he also heard West Coast Airways' Dominie flying back to Hokitika shortly after. In Report 36 Chief Inspector Hansen made enquiries and found that West Coast Airways' Dominie was at Haast at 11.00 am.**

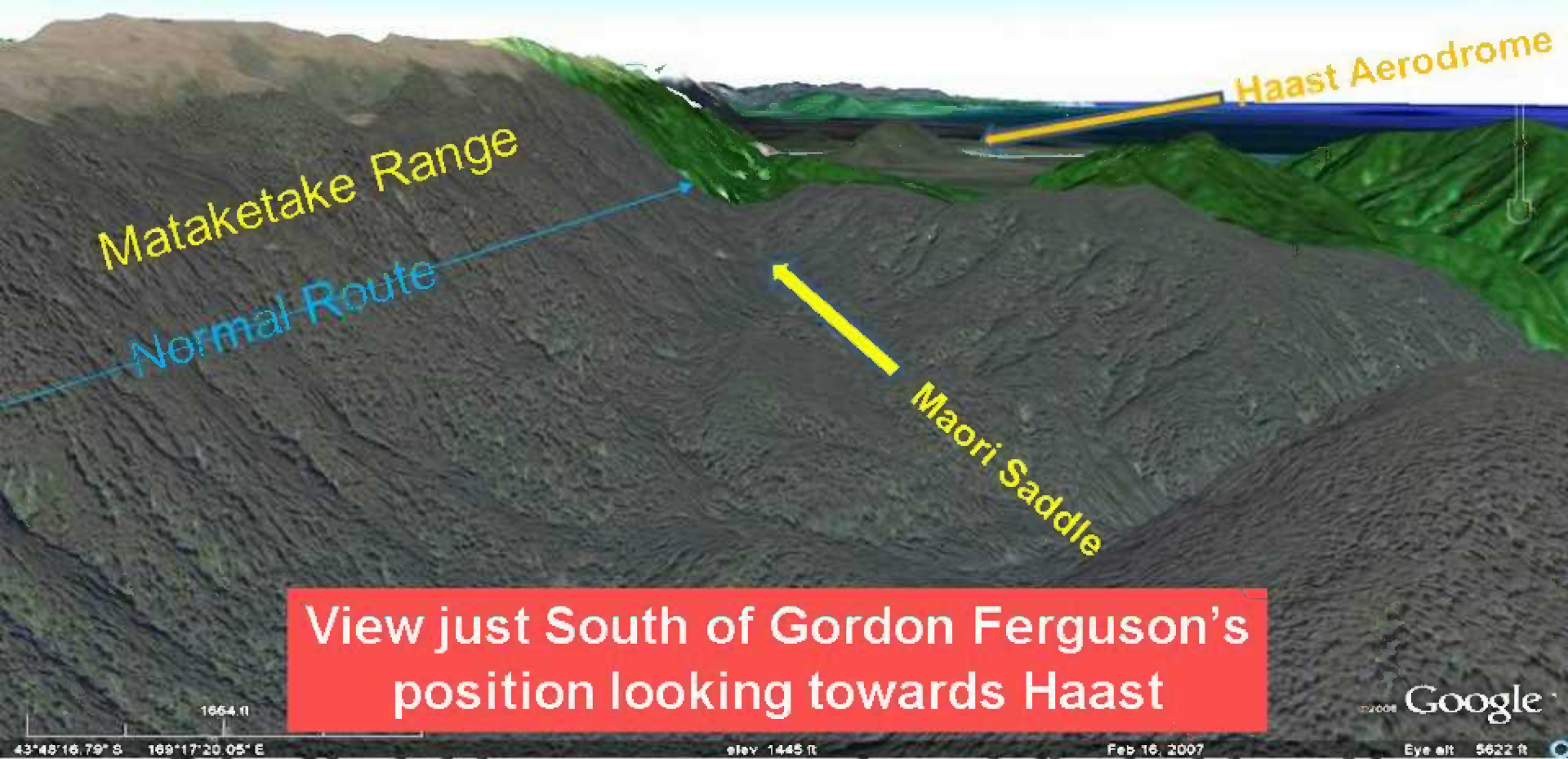
**In Report 44 Basil Pimer heard a plane just south of Hokitika circling and the motors were "cutting out and starting up again" – a classic case of an aeroplane descending, and in this case, the Dominie about to land in Hokitika.**

**The time given was approx. 12.10 to 12.25 pm. Pity he wasn't more accurate as then we could refine it more accurately!**

**Whatever the time, this places the Dominie passing Gordon Ferguson's position fairly close to our calculated time of 11.29 am.**

**One thing that is certain though, Gordon heard an aeroplane heading south just before he heard the Dominie heading north, so there was an aeroplane heading south that cannot be explained as the Dominie! I have had further West Coasters contact me to say that they also heard the two different aircraft on opposing courses soon after each other.**

***I've also had it explained that the reason why West Coast residents took notice of Chadwick's flights was because he flew inland close to the mountains, whereas everyone else flew along the coast-line.***



View just South of Gordon Ferguson's position looking towards Haast

***Brian Chadwick was a very experienced pilot, had done this trip Christchurch to Milford – return, over 130 times. This course along the Mataketake Range was part of his normal route purely due to the lift that he would have gained due to the up-draughts caused by the sea-breeze. This would have saved him a lot of fuel – a normal strategy a private operator would have done to increase profits!***

Alan Cron and Noel Brown (at Haast) observed that Chadwick did not fly over that day, whereas they normally always saw him fly over whenever he flew down the West Coast, "About two thousand feet about halfway between our place and on to Jacksons Bay."

*Conclusion:*

**Chadwick never made it as far as Haast!**



**Chadwick disappeared somewhere between Gordon Ferguson's observation and Haast.**

25/3/1214  
Met. 222

RECEIVED  
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AIR DEPT.

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**Evidence From Met. Office  
of adverse weather**



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**I disagree with this statement.  
I believe it did affect it!**

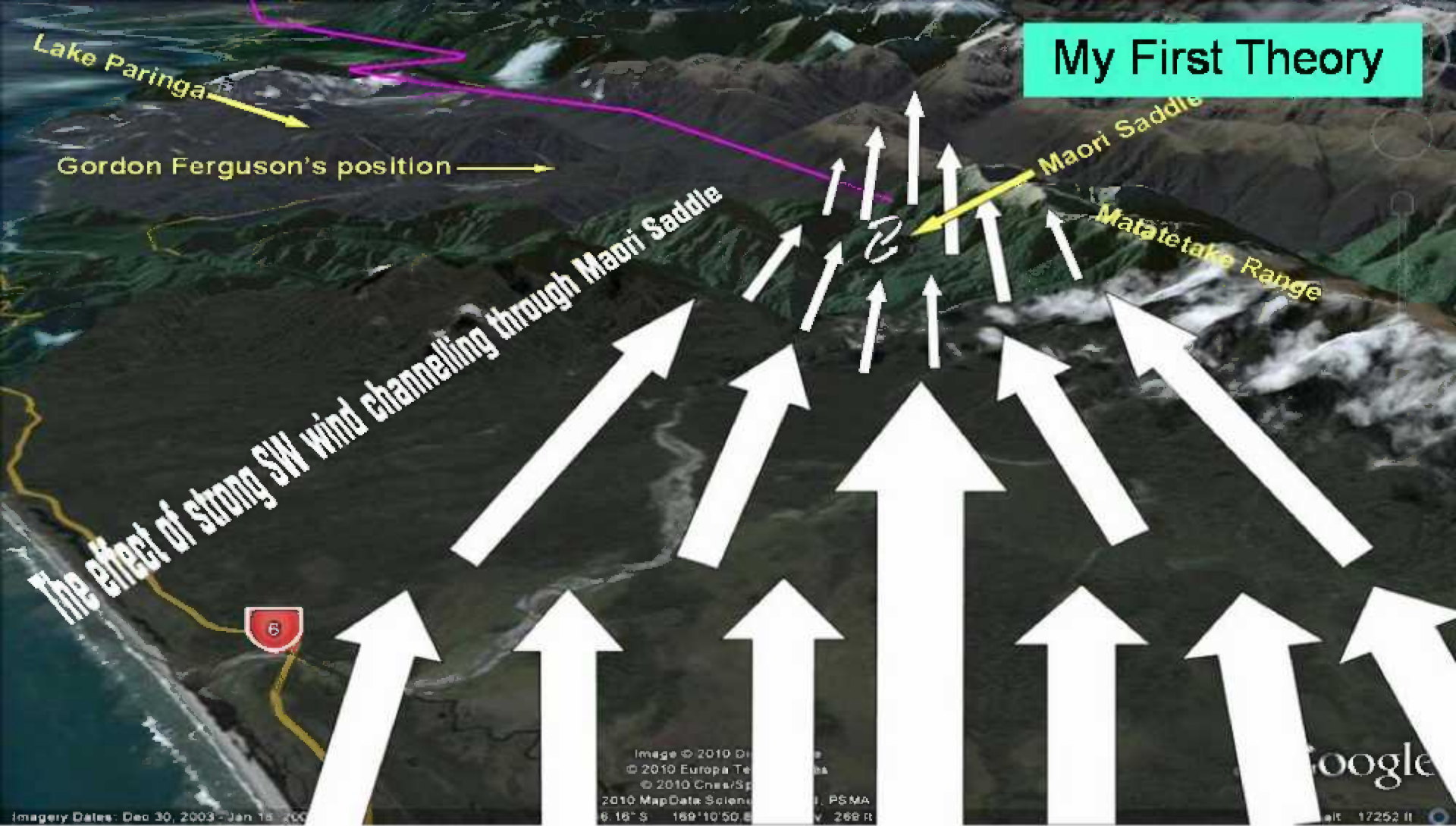
**Cu (Cumulus) and  
Cb (Cumulonimbus)  
are both clouds formed  
by updraughts,  
and in the case of  
Cumulonimbus ...severe  
updraughts!**

**Page 176 -“LOST ...without trace?”**

***The skipper of the fishing boat  
“Miss Geraldine” working directly off  
The entrance to Milford Sound  
reported:***

***“While the weather was sunny and clear, it was  
blowing a 25 – 30 knot wind from the south-west  
coming up the coast. A hard wind!”***

***Des Nolan in an interview with Paul Legg said,  
“There was a huge build-up of cumulus cloud  
and quite a strong south-west wind”.***



**The hills leading up to the Maori Saddle from the south would act like a “funnel” to a south-west wind producing a very strong updraught. This combined with the low pressure on the day would mean the cloud base would remain low.**

**Mataketake Range**

Maori Saddle

Wind direction showing  
updraught and rotor

View just South of Gordon Ferguson's  
position looking towards Haast

**If Chadwick flew into this strong updraught, it would have exceeded the Dragonfly's maximum descent capability and would have pushed him into the cloud.**

## Latest Theory

The weather observer at Haast on the day said that there were Cb's (thunderstorms) along the range and he had always believed that these Cb's were responsible for ZK-AFB's disappearance!

← Gordon Ferguson's approx. position

© 2010 Ches/Spot Image  
© 2010 MapData Sciences PtyLtd, PSMA  
Image © 2010 DigitalGlobe

©2009 Google

Imagery Dates: Apr 14, 2005 - Jan 18, 2008

43°45'11.51" S 169°20'08.19" E elev 1951 ft

Eye alt 21967 ft

**Gordon Ferguson heard a plane “flying high”, south of Lake Paringa, so it is likely Chadwick was already in the cloud by then, sucked up by a developing Cb.**



Report 20 – Two women in separate houses at Hunts Beach reported hearing, “A plane cutting it’s engines off and on; thinking back...a crash noise occurred soon after”.

**“Cutting it’s engines off and on” can be explained as a standard practice of keeping the engines warm whilst descending rapidly through a hole in the cloud to avoid the carburetors icing.**

**Green line shows probable distance “crash noise” could be heard from.**

***Page 173 “LOST...without trace?”***

**Colin Tuck was flying world famous clairvoyant Doris Stokes in a helicopter down Jacobs River as part of a search for the Turner family that disappeared in Cessna 172 ZK-CSS.**

**Doris got very upset at a spot in there, crying, “This is where they are...please don’t leave them!”**

**As there were no other leads in the immediate area of Hunt’s Beach, it begged the question, “If she had ‘picked up’ Chadwick, why would he have ended up in the Jacobs River Valley?”**

**In the wee hours of the morning, I awoke with a jolt, “I wonder if the valley looks like another valley in the area that Chadwick was familiar with – (the Copland River Valley)?”**

**I checked it out on Google Earth and here is the results:**



Jacobs River Valley in low cloud  
- facing east

Image © 2008 DigitalGlobe  
Image © 2008 TerraMetrics  
© 2008 MapData Sciences Pty Ltd. PSMA

© 2007 Google™

485 ft

Pointer 43°39'32.62" S 169°43'16.87" E elev 437 ft

Streaming 100%

Eye alt 1763 ft



Copland River Valley in low cloud –  
facing West

(Brown area is satellite imagery overlay)

Google™

Image © 2008 DigitalGlobe  
Image NASA

Pointer 43°34'58.00" S 169°54'02.72" E elev 717 ft

Streaming: 100%

Eye alt 1498 ft



Jacobs River Valley facing East  
Turn right at the end and straight into rising ground!



Copland River Valley facing West  
Turn right at the end and straight out to the coast

© 2010 Map Data Sciences Pty Ltd, PSMA  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
43°38'26.33" S 169°52'04.31" E elev. 801 ft

©2009 Google

Eye alt 4522 ft

Imagery Dates: Jan 16, 2004 - Jan 18, 2008

Chadwick had recently fitted a Radio Compass (which would not have worked in this valley) and for some reason had removed the main compass, so he had no way of knowing he was going in the wrong direction!

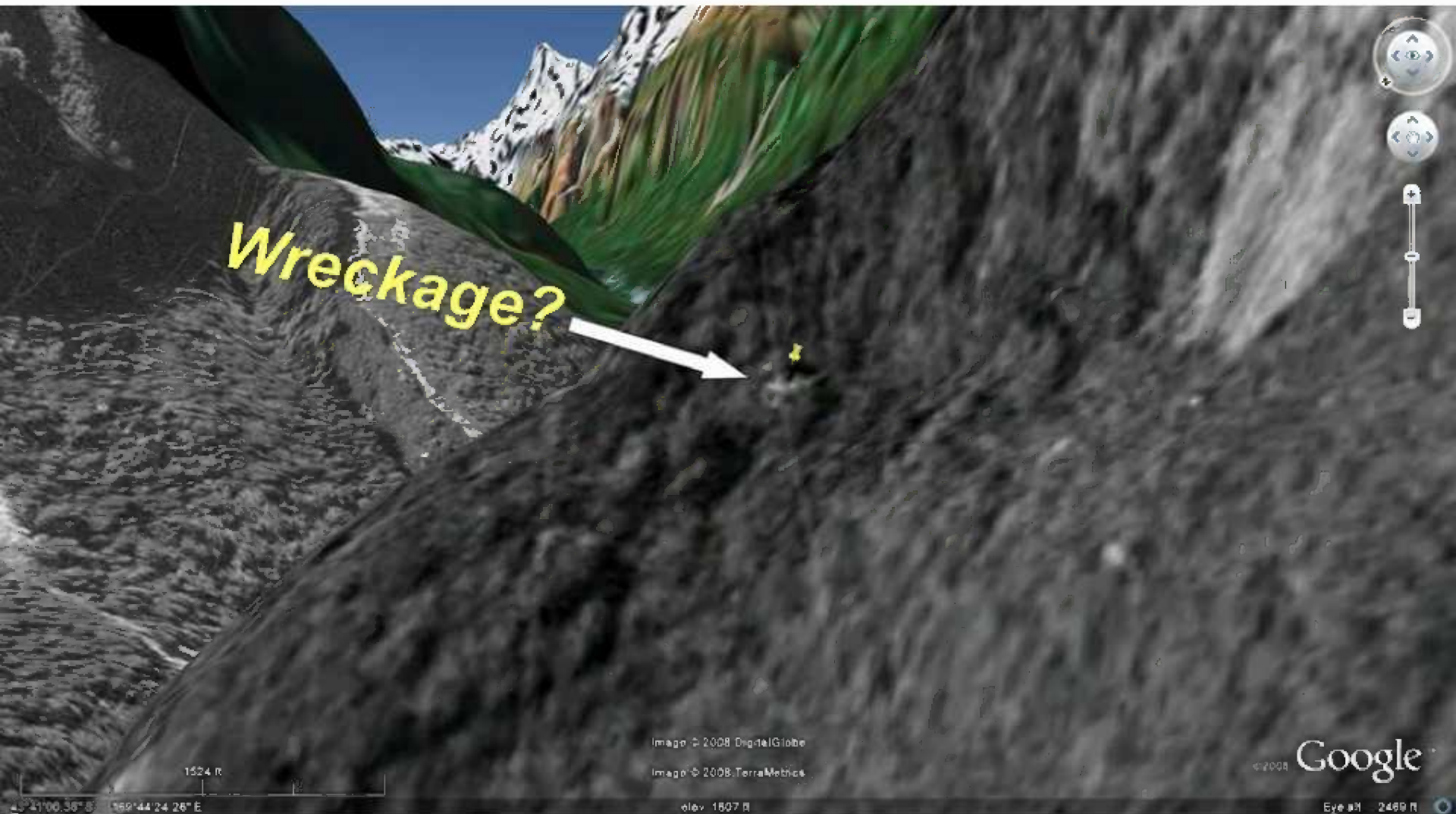
Under severe stress there is a phenomena known as “tunnel-vision” and his head would have told him that he knew where he was (seeing is believing... right?), so he would not have noticed that the river was flowing the wrong way!

***When flying in the “murk” a common practice for pilots is to follow something like a river, as in this case. The Dragonfly was flown from the left-hand seat, so Chadwick would have kept the river on the left. In Report 20 (Hunts Beach) the women reported a light southerly wind and cloud inland down to a thousand feet.***

***In my experience I’ve observed that sometimes the cloud base tends to follow the rising ground, so I allowed a height of 1500 feet and “flew” on Google Earth up Jacobs River Valley at that height keeping the river on my left.***

***When I turned the corner there was a ridge jutting out and I estimated Chadwick would have crashed there.***

***I had obtained an old aerial photo taken in 1965 off Aerial Mapping, and I worked out how to overlay it on Google Earth. When I checked the area out that I estimated Chadwick to have crashed on this overlaid photo, this is what I found:***



Wreckage?

Image © 2008 DigitalGlobe  
Image © 2008 TerraMetrics  
elev. 1527 ft

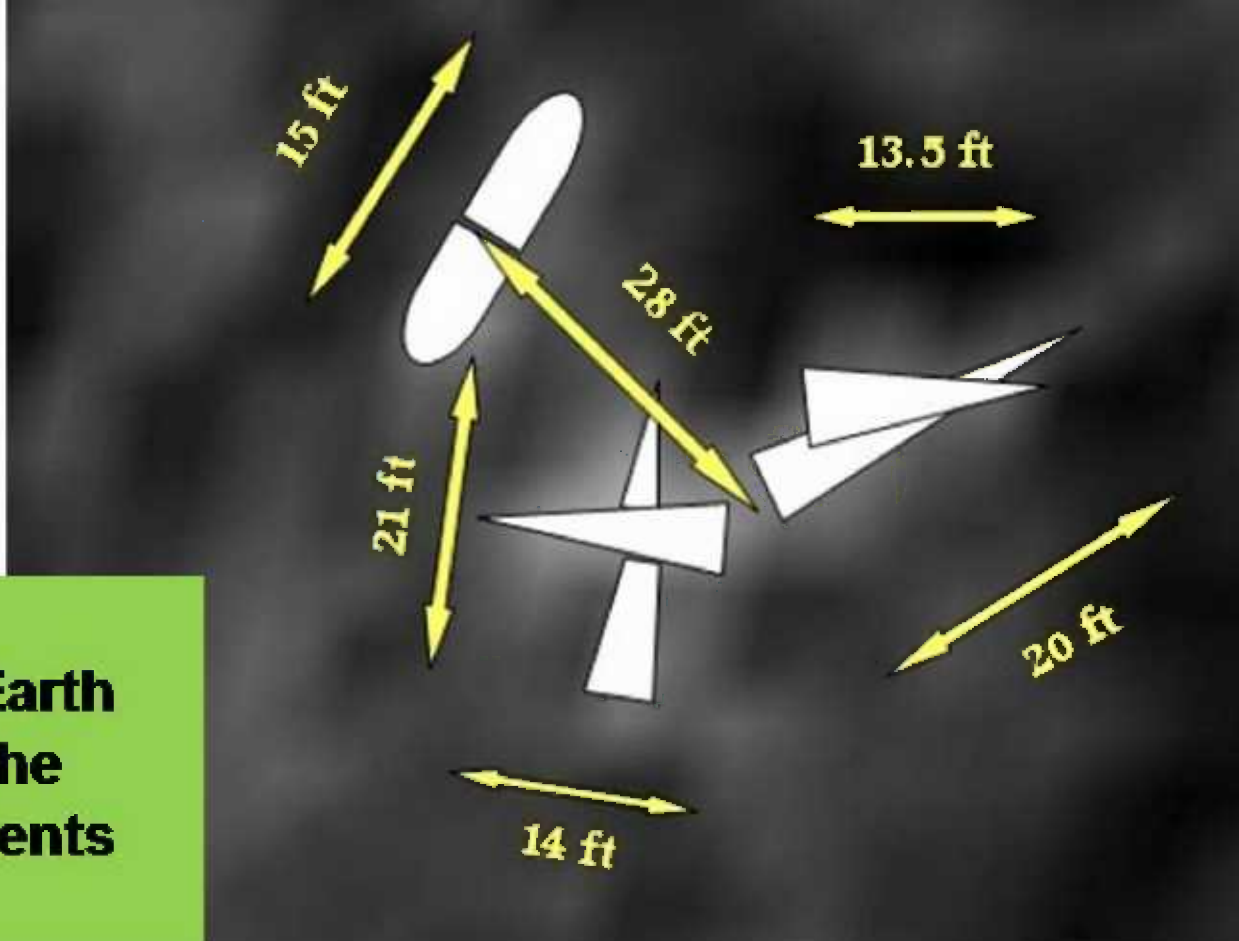
©2008 Google  
Eye alt 2489 ft



## **Zoomed in Closer...**

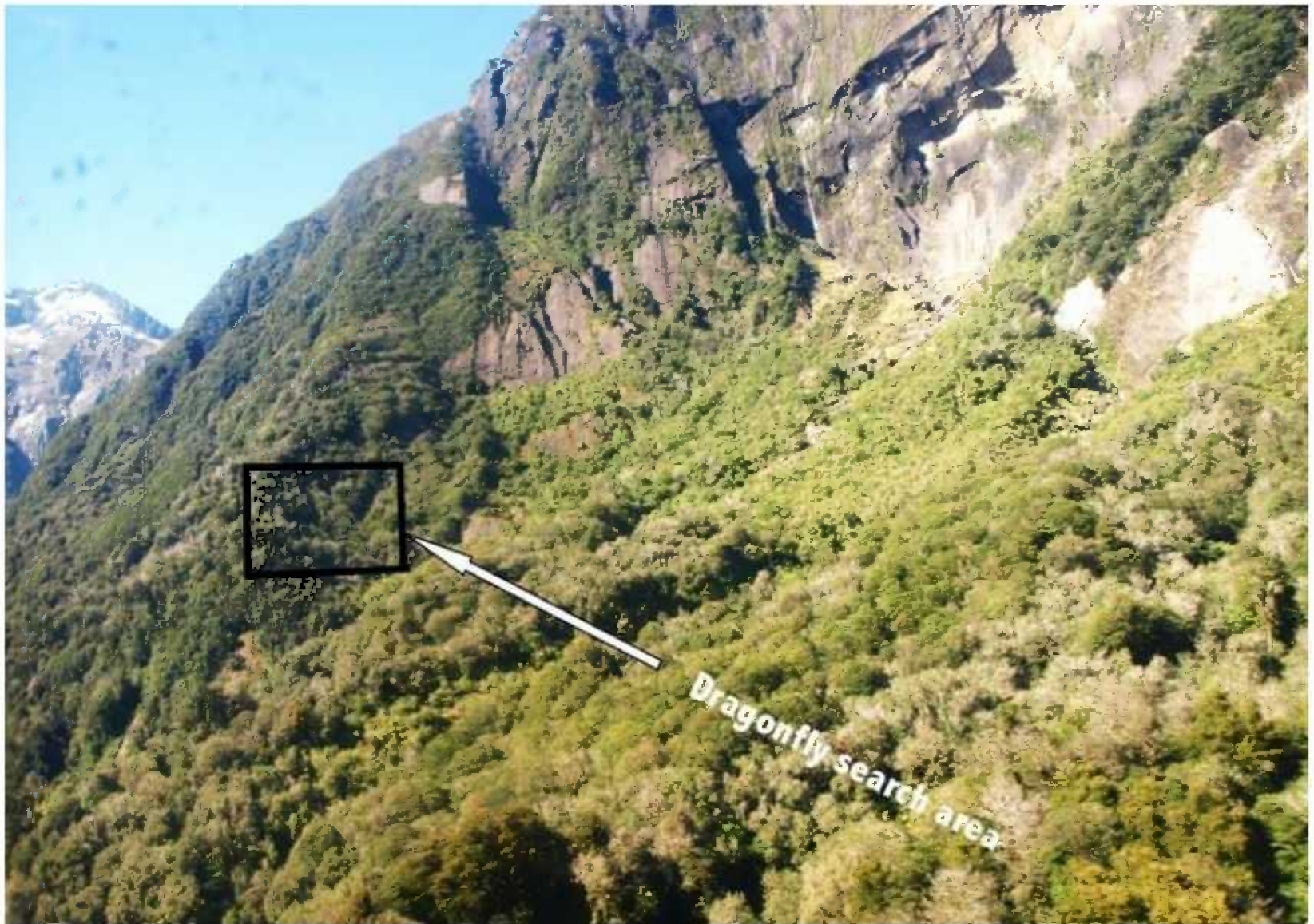
***Please note:***

***The resolution on the computer screen is much clearer than it can be reproduced here.***



**There is a measuring instrument on Google Earth and by using it, this is the approximate measurements I recorded.**

**You will note that the shorter “wings” are lying on top of the longer “wings” and the “tail-planes” are further east, which is exactly where you would expect them to be if a fixed under-carriage aeroplane heading east, had crashed into the bush and flipped up-side-down.**



**This is an actual photo showing the same location**



**The only scenario that fits to all these observations is that it appears Chadwick was forced up into the cloud and travelled with the wind until he came across a hole in which to descend through. This hole happened to be at the entrance to Jacobs River and the two independent women's observations lend weight to this. Unfortunately the rear view visibility from the Dragonfly is virtually nil so Chadwick would mistakenly believe he was in a valley that he was very familiar with – the Copland – and flew towards where he believed was the Coast.**



**With the light southerly wind it becomes even more likely that the women could have heard the crash. This theory was later reinforced on hearing that Peter Polson on his death bed said, “He was the last person to see the Dragonfly... and he saw it fly into the Jacobs River Valley!”**

**In a recent experiment carried out in England, a noise blast of 150 decibels was heard 22 miles away on the coast of France!**

*The following slides  
explain some more of the  
other  
observations in the South  
Island that day*

# Aircraft observed at Rangitata Gorge



Chapelton

Ashburton

Geraldine

7- Saw Auster a/c hdg SW, 2000, 11:00am

14-flying very low heading into Rangitata Gorge 10:45, thought it only had single wing

11-heard small plane, 10:45am.

4-Heard motor of small aircraft hdg E 10:30 -11:00 North of Rangitata River, from Coal Creek

7- heard light aircraft in area 10:30

© 2010 MapData, Science Pty Ltd, PSMA  
Image © 2010 Digital Globe  
© 2010 Europa Technologies  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
43°52'23.17" S 171°18'18.18" E elev 695 ft

Google  
2009

Eye alt: 13.03 mi

Date: Feb 26, 2006 - Mar 19, 2007

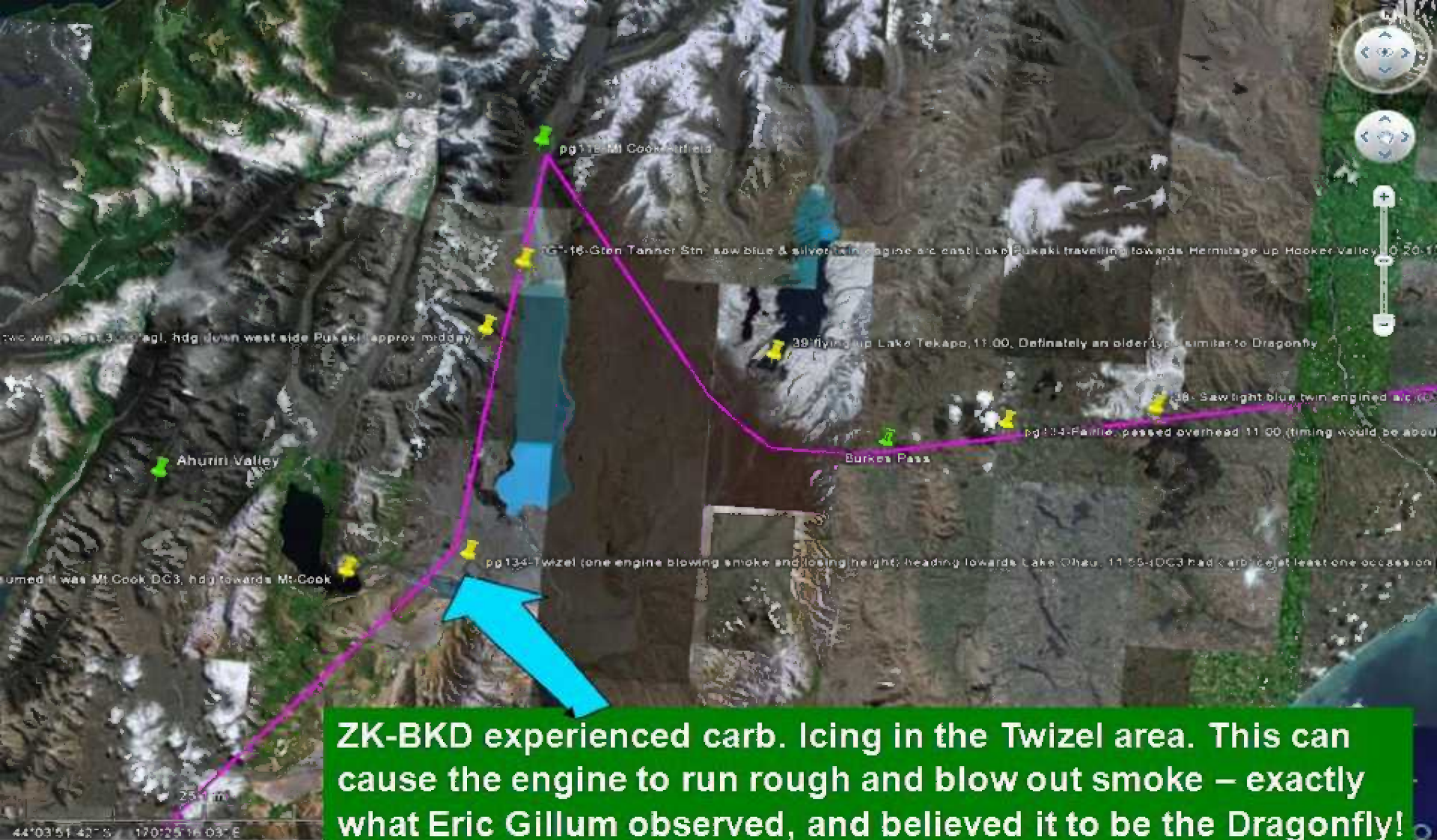
**Reports 4, 7, 11 & 14 were all obviously of the same aircraft – a silver and blue Auster. I managed to eliminate all bar one of the Austers based in the area but it had crashed and burnt. It more than likely had the logbooks in it as no-one knows where they are!**

# The course that was flown by Mt Cook's DC3 ZK-BKD

Report 16 – Saw aircraft, two engines, blue and silver, flying towards Hermitage

Report 26 – Seen flying down west side of Pukaki

Report 38 – Saw light blue twin-engined aircraft through break in the clouds. Thought it was a Dominie. ZK-BKD was light blue and silver in colour and flew through on this course and at the time observed.



ZK-BKD experienced carb. Icing in the Twizel area. This can cause the engine to run rough and blow out smoke – exactly what Eric Gillum observed, and believed it to be the Dragonfly! (LOST...without trace? - Pages 134 - 136)

**This is the track taken by Mount Cook's DC3 ZK-BKD on the 12<sup>th</sup> February, 1962. Eric Gillum also said, " It was far too low!". Yes, it would have been far too low to get over the ranges if it was going to Milford, but it wasn't.. BKD was going to Cromwell!**

# ***South of Haast***

**Des Nolan's Place - Okuru**

**Waitoto Valley**

**Haast  
Aerodrome**

**Location of Ted and Myna's  
Observation Point**

**Arawhata River**

**Actual photo at  
Ken's landing spot**

(Eden Collection)



**Report 2 and Report 40 – Ted Buchanan was on the**


**Waitoto bridge and Myna Buchanan was at her house on the southern end of that bridge.**

**Both saw an aeroplane flying in a southerly direction, high up at around mid-day  
(just before lunch). Ted said it was just a dot on the horizon.**

**Myna thought that it appeared to be heading up the Waitoto Valley towards Mt. Aspiring.**

**Ken Eden flew Piper Cub ZK-BNJ from Amberley – Okuru – Arawhata that day, at that time,  
so this is the aeroplane that they would have seen. Ken recorded a three hour total flight  
time, so this means that he left Amberley sometime before 9.30 am.**

**All the "hearings" in the Huxley area that can be explained by Ken Eden's flight.**

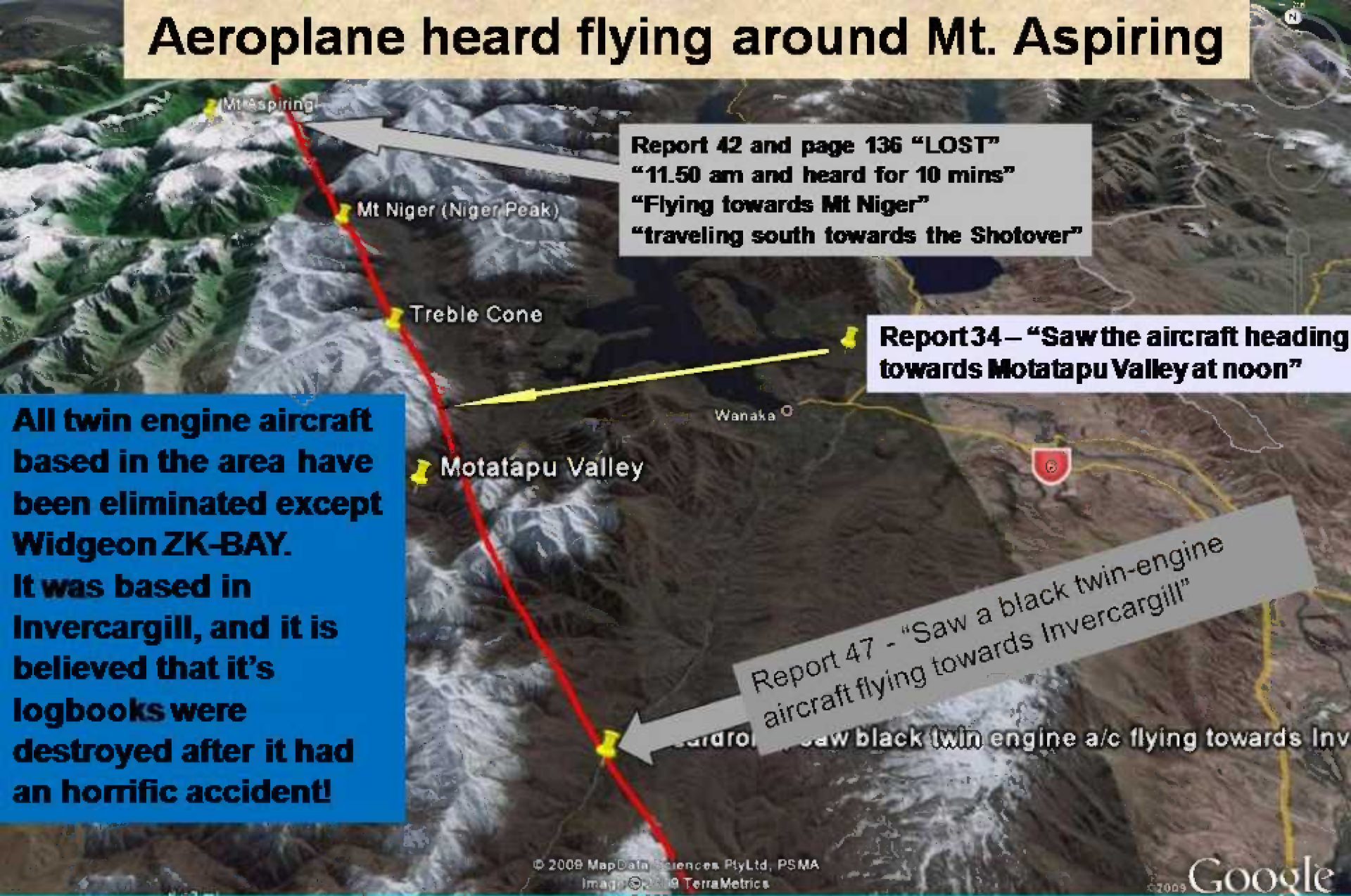


28-above cloud Mt Trent area 5000'+ 11.20  
Pg 195- Heard crossing between ridges, cloud approx. 1000ft above valley floor  
Burkes Pass pg134-Fairlie, passed overhead 11.00 (B)  
26b-Heard over Huxley Station around 11.30  
3-heard crossing in front of Mt Glenmary heading up Huxley Fork 11.30  
B) and page 174- heard aircraft to the West with engines revving loudly - above

## Ken Eden's Track?

**This is would have been the only course he could have taken to enable the 3 hour flight time that he recorded in his logbook, given the cruise speed of a Super Cub.**

# Aeroplane heard flying around Mt. Aspiring



Report 42 and page 136 "LOST"  
"11.50 am and heard for 10 mins"  
"Flying towards Mt Niger"  
"traveling south towards the Shotover"

Report 34 – "Saw the aircraft heading  
towards Motatapu Valley at noon"

Report 47 - "Saw a black twin-engine  
aircraft flying towards Invercargill"  
"Saw black twin engine a/c flying towards Inv"

All twin engine aircraft based in the area have been eliminated except Widgeon ZK-BAY. It was based in Invercargill, and it is believed that it's logbooks were destroyed after it had an horrific accident!

It is unlikely to have been Dragonfly ZK-AFB as previously shown, there were no positive sightings on this coast that could confirm that it flew this way.

# Mount Aspiring aircraft's destination?



More information can be found in

Richard Waugh's:

**LOST**... without trace?

and my book:

**TRACED**... *yet still missing!*

Check out my website [www.findlostaircraft.co.nz](http://www.findlostaircraft.co.nz)

Both books can be bought there.