



IKAR
CHAMONIX 2018

A blue EC145 helicopter is shown landing on a snowy mountain slope. The helicopter is viewed from a high angle, and its shadow is cast on the snow. The background is a vast, snow-covered mountain range under a clear blue sky.

FATAL ACCIDENT
EC 145
20 mai 2016

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BEAD-air-G-2016-008-A

Date de l'évènement	20 mai 2016
Lieu	Massif du Vignemale (Hautes-Pyrénées)
Type d'appareil	EC145
Immatriculation	F-MJBB / n°9014
Organisme	Gendarmerie nationale
Unité	Détachement aérien de la gendarmerie de Tarbes

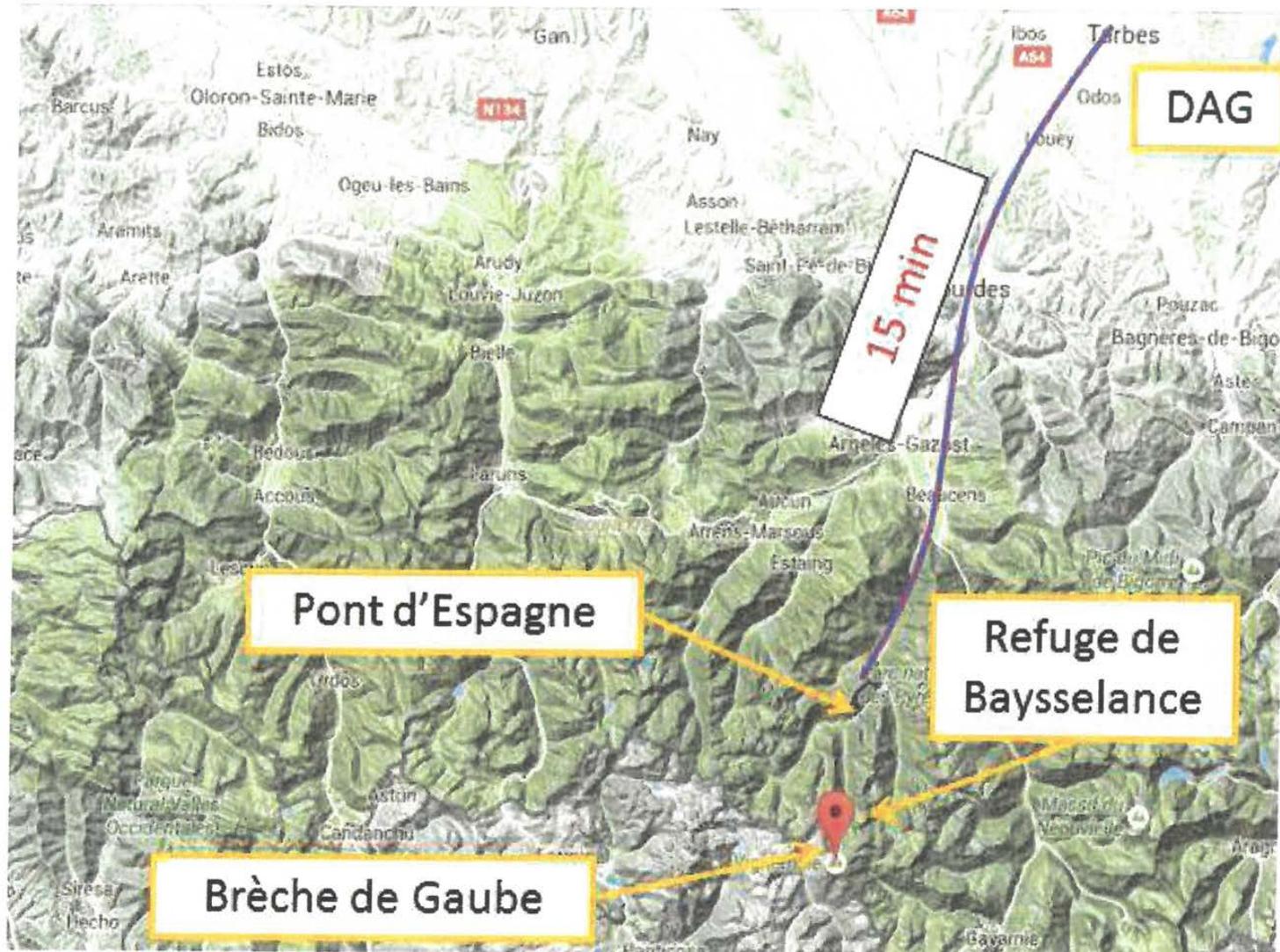
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USE OF THE REPORT

Only objectif is the accident and incident prevention,

without determination of the faults or the responsibilities

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Localisation des points de poser

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Summary of the event

Mission for the benefit of mountain rescuers

Take off 1130 am to get back rescuers put down
at 0830 am

Landing in the pass off the breach of Gaube
(10350ft), embark two rescuers

Take off and,

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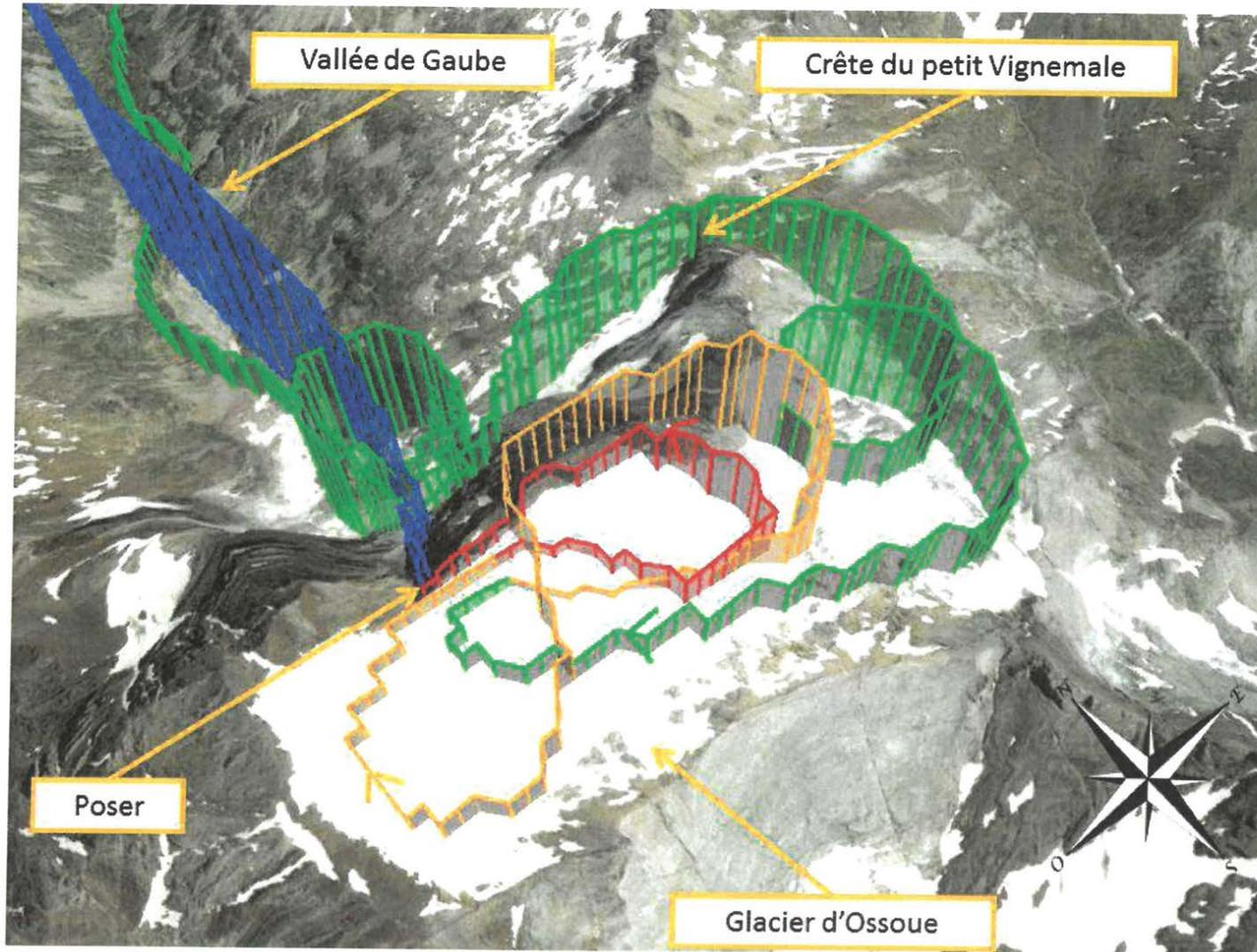
The blades of the main rotor strike the relief

The helicopter crashes 600 meters lower

The crew and two rescuers on board died

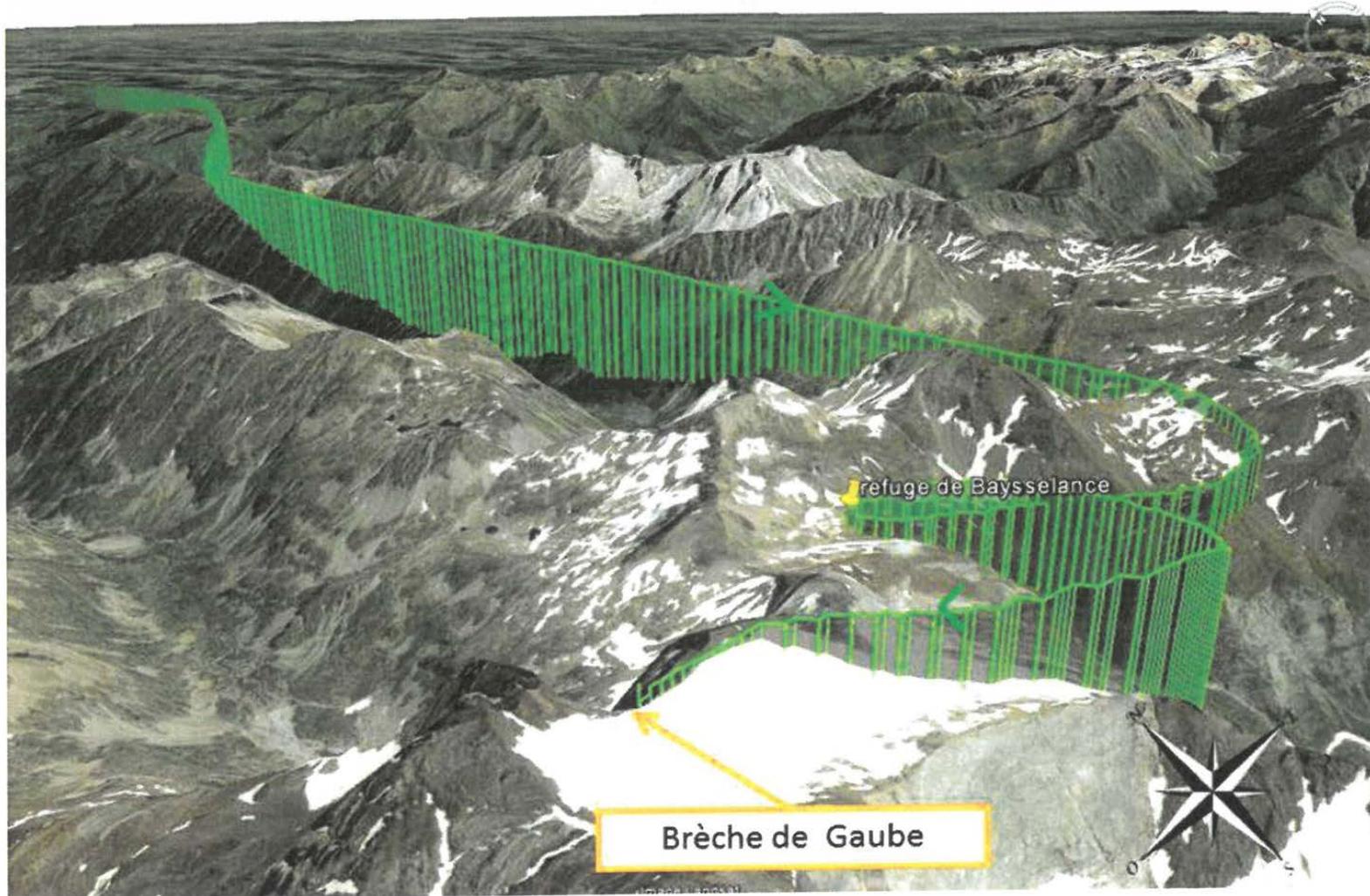
Helicopter destroyed

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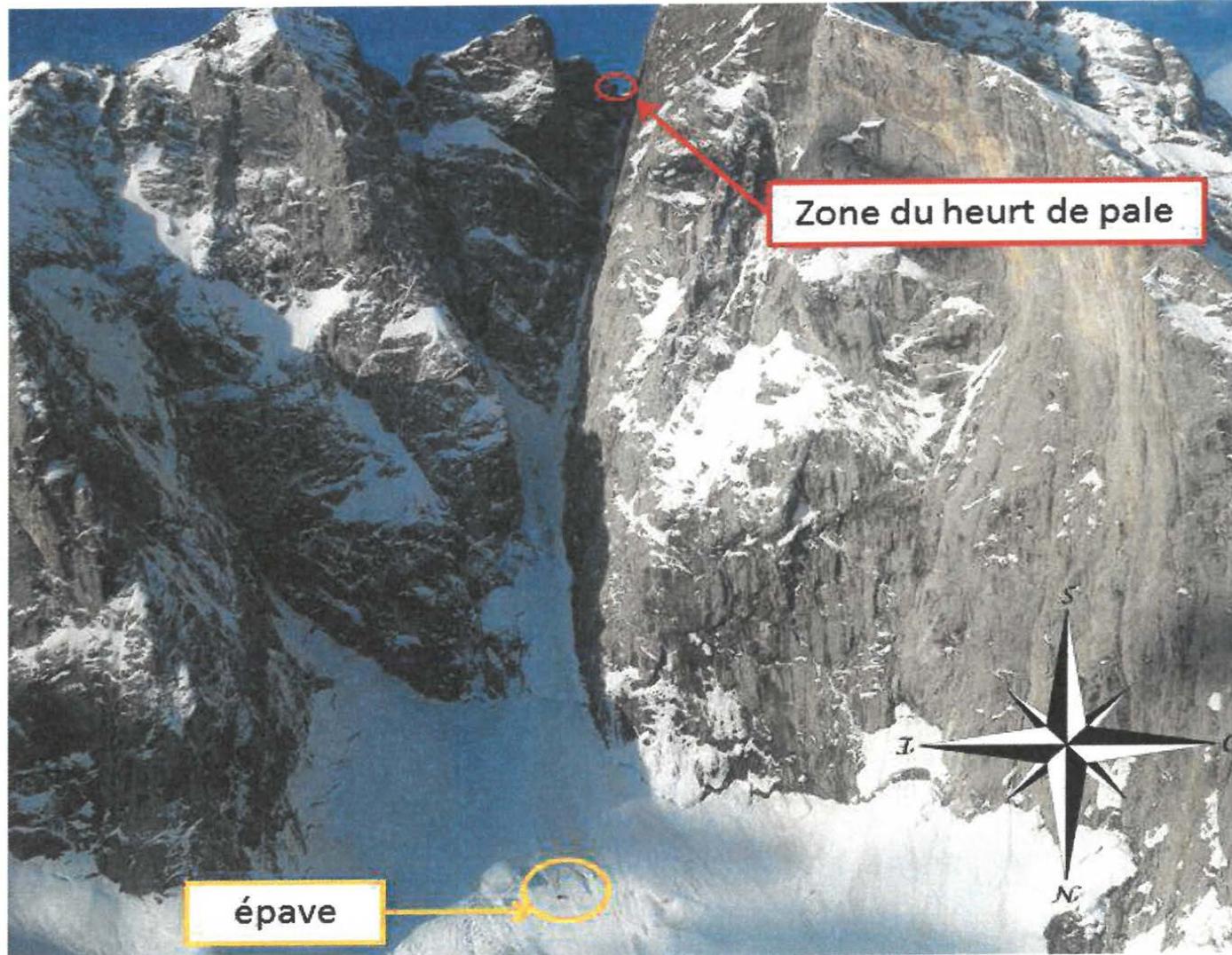
Trajectoire de la première rotation

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Trajectoire jusqu'au poser

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Vue générale du site

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Vue du moteur gauche



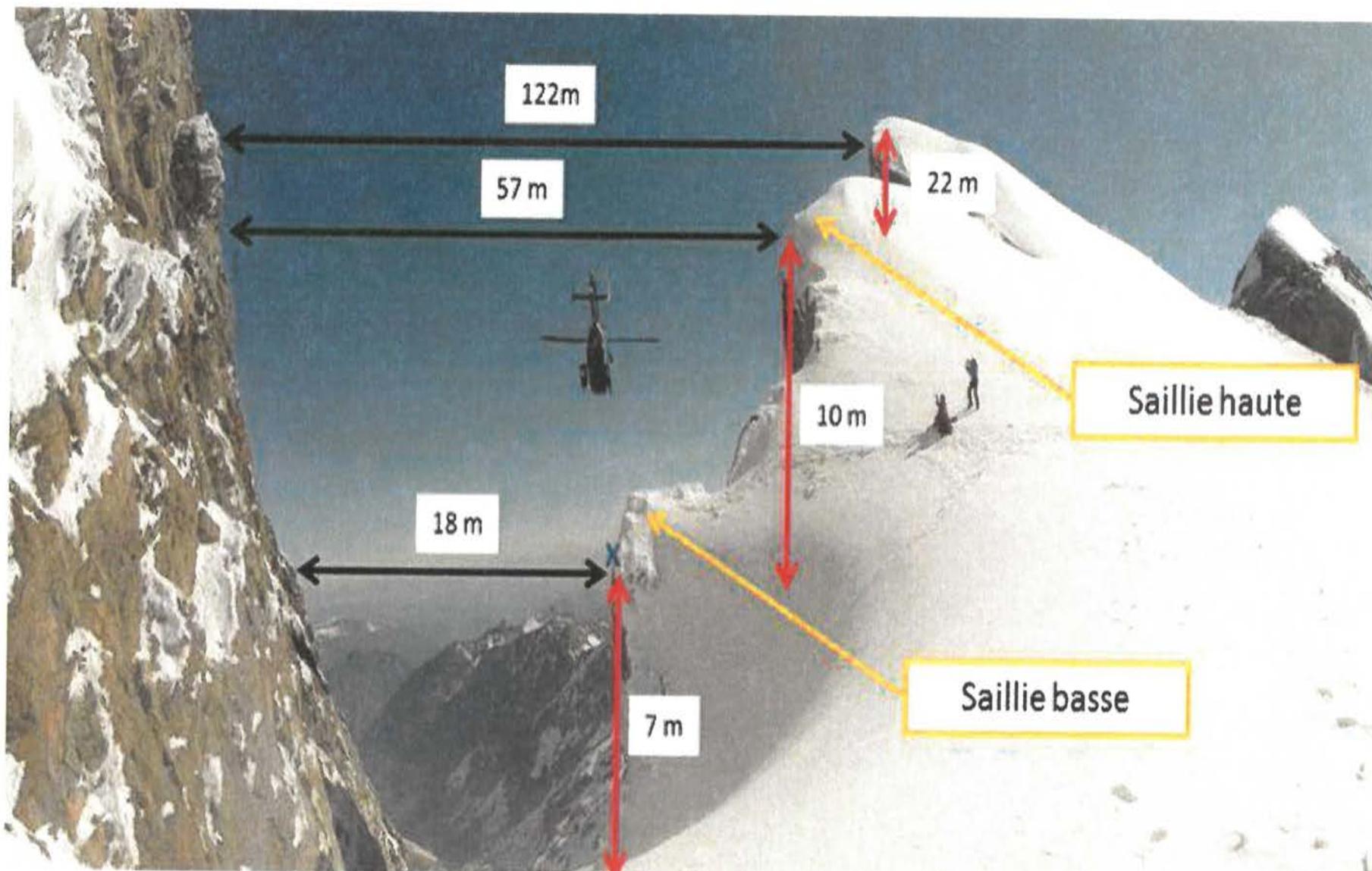
Vue du moteur droit

Un morceau du patin gauche est retrouvé dans le couloir.
Des traces de heurts de pale sont observées au niveau de la brèche.

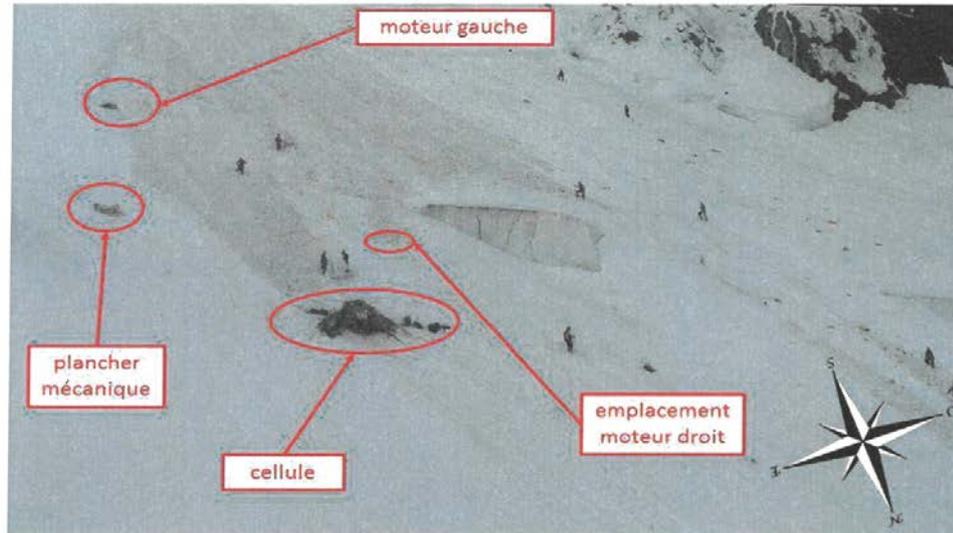


Vue de la zone heurtée par les pales

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Répartition des principaux débris

La cellule est disloquée et compactée.



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CREW

Pilot :

49 years, 4337 HDV which 2579 on BK 117 C2

HHO :

48 years, 3326 HDV which 1684 on BK 117 C2



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PERFORMANCE

10350 Ft, 3°C, maximal weight authorized for take off

- DES : 3440 kg
- HES : 3300 kg
- At the event the weight was : 3014 kg
- MTO : cavok, wind Nth FL 100/10/15 kt



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SYNTHESIS

- No mechanical failure, neither motorization nor transmission
- No anomaly of the commands of flight
- No unfavorable or meteo phenomenon

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Several causes of the accident

1- Recurrent rotations of flight :

Routine which brings the experimented pilot to perform an unusual take-off with no marge

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2- Imprecise representation of the relief

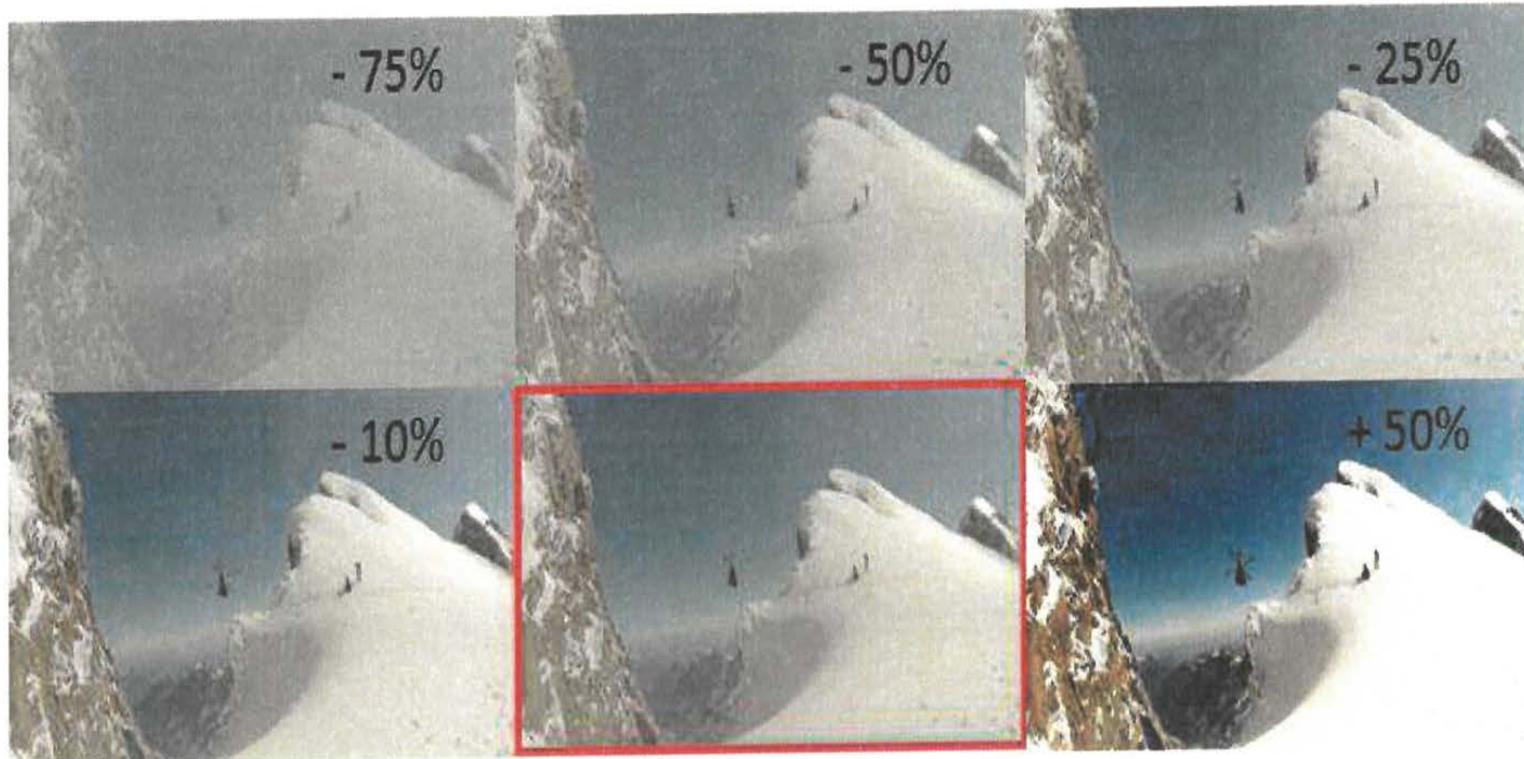
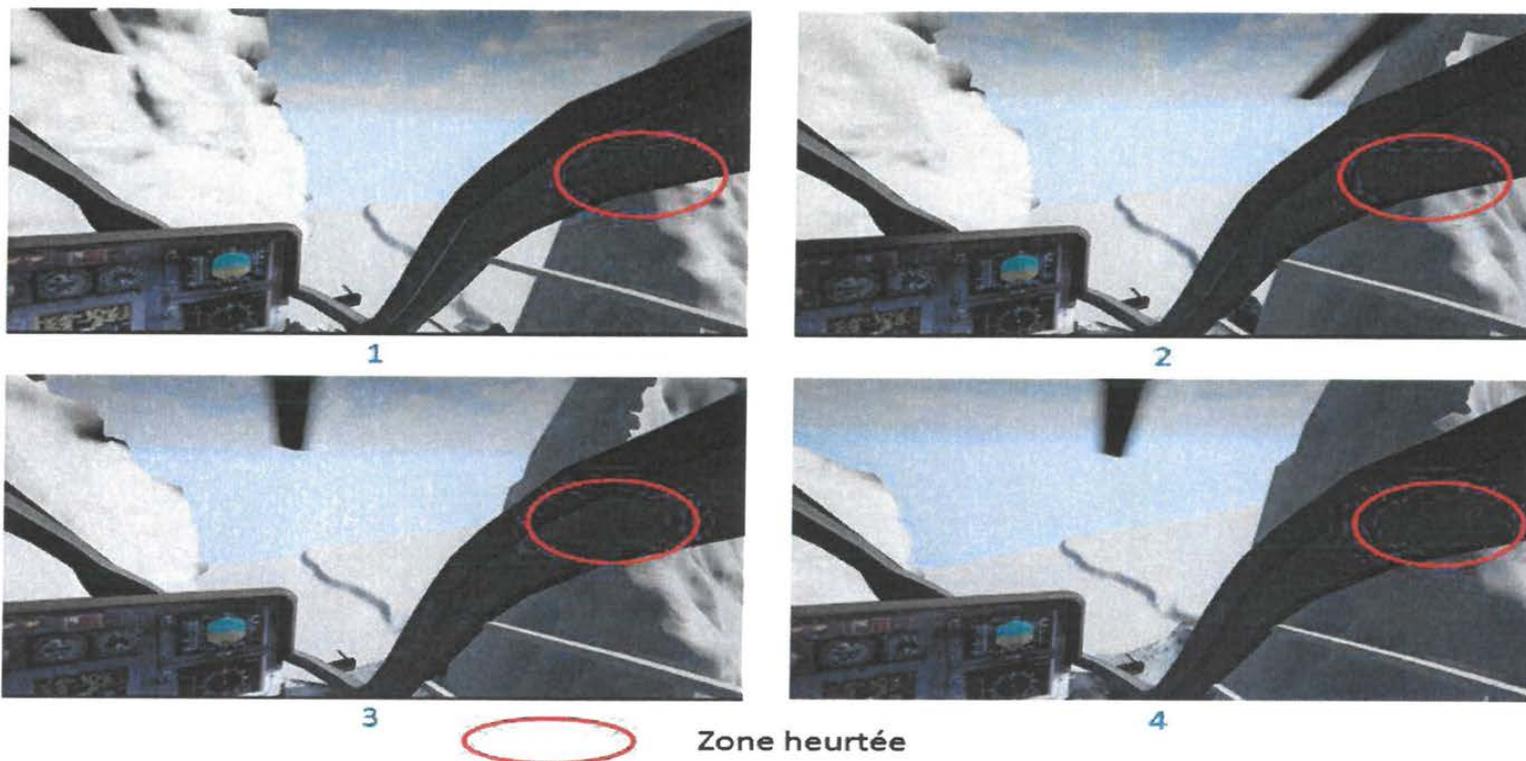


Illustration de l'effet du contraste sur l'acuité visuelle (la photo encadrée est celle produite par l'appareil le matin de l'évènement)

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3- Rough perception of the distances

Masking of the relief by the structure



Captures d'écran de l'animation 3D³⁰ dans les dernières secondes

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4- Snow on the windscreen



Photo du plexiglas lors de la troisième rotation

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Thank you for your attention