# SCENE 6
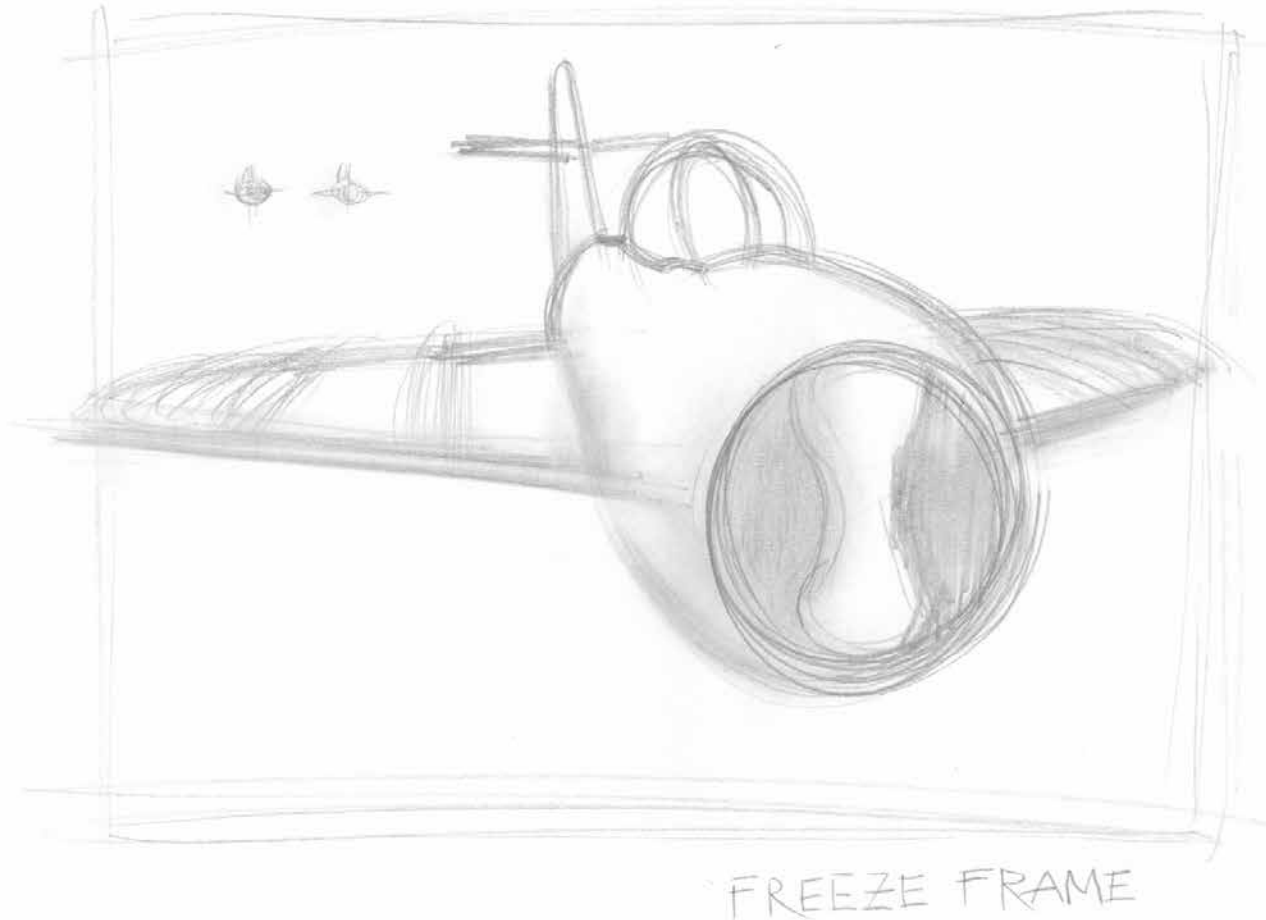## LETHAL SIDEWINDER

FREEZE FRAME

Freeze-frame: MiG in the foreground, on right side; 2 F-100s in the background, on left side
(leader on extreme left of the screen, wingman a bit behind). Aircraft in transparent polygonal modeling.

**MIG–17 FRESCO–A**

**MAX. SPEED:**   900 km/h

Same shot.

Circular tracking out with an angle of 180°. Profile view of MiG on right side and F-100s on left side.

– Voice-Over (VO): "the MiG-17 Fresco-A can fly at 900 km/h but the current speed
   of Capt. Tran Hanh is 600 km/h, ready for maneuvering in a combat at short range".

– Indication under MiG of the max speed.

**F–100 SUPER SABRE**

**MAX. SPEED:**   1390 km/h

**CANNON:**        four 20mm
                   100 rounds/second

**MIG–17 FRESCO–A**

**MAX. SPEED:**   900 km/h

Same shot, in background, transparent images of F-100s coming close to MiG and opening fire.

– VO: "Thanks to their supersonic speed of 1390 km/h, the F-100s could quickly approach and engage the MiG with their four 20 mm cannon with a rate of fire of 100 rounds per second…"

– Indication under F-100 of max speed, number of cannon, rate of fire.

## F–100 SUPER SABRE

**MAX. SPEED:**  1390 km/h

**CANNON:**       four 20mm
                  100 rounds/second

## MIG–17 FRESCO–A

**MAX. SPEED:**  900 km/h

**CANNON:**       one 37 mm + two 23 mm
                  20 rounds/second

Same shot, slow fire of MiG. Indication under MiG of number of cannon and rate of fire.

– VO: "… while the MiG has only 3 cannon of 37 mm and 23 mm with a low rate of fire of 20 rounds per second. "

## F–100 SUPER SABRE

**MAX. SPEED:**    1390 km/h

**CANNON:**    four 20mm
100 rounds/second

**MISSILE:**    four AIM–9B Sidewinder

## MIG–17 FRESCO–A

**MAX. SPEED:**    900 km/h

**CANNON:**    one 37 mm + two 23 mm
20 rounds/second

**MISSILE:**    NO

Same shot.

Fade out transparent image of F-100s. The F-100s are back to their initial position.

– VO: "But the F-100s are not looking for a cannon attack.
The leader is intending to use a greater range weapon: the AIM–9B Sidewinder.
The old MIG does not have such a modern weapon".
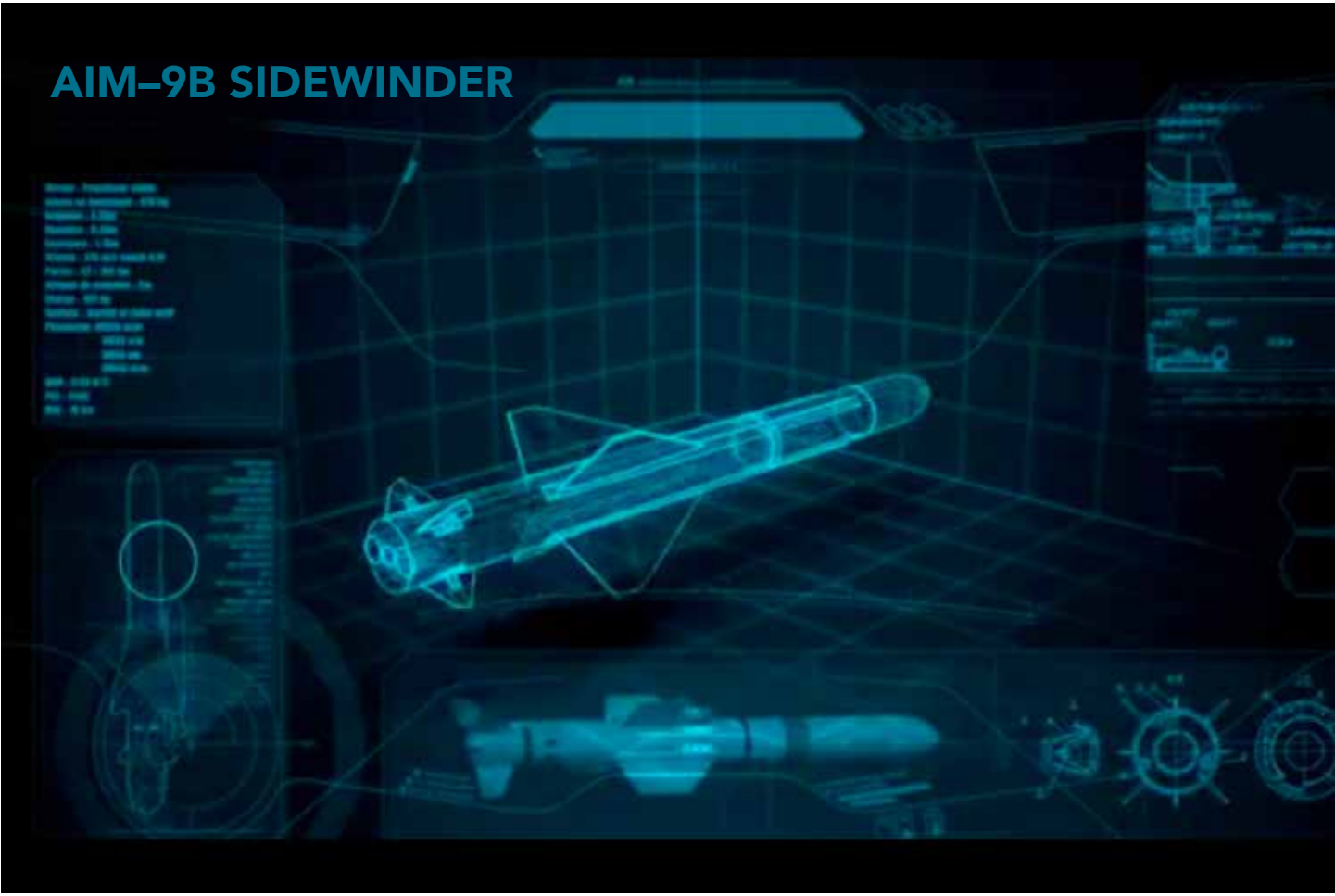
Example of polygon view of the missile (here an Exocet).
The missile is constantly rotating, we see its specifications.
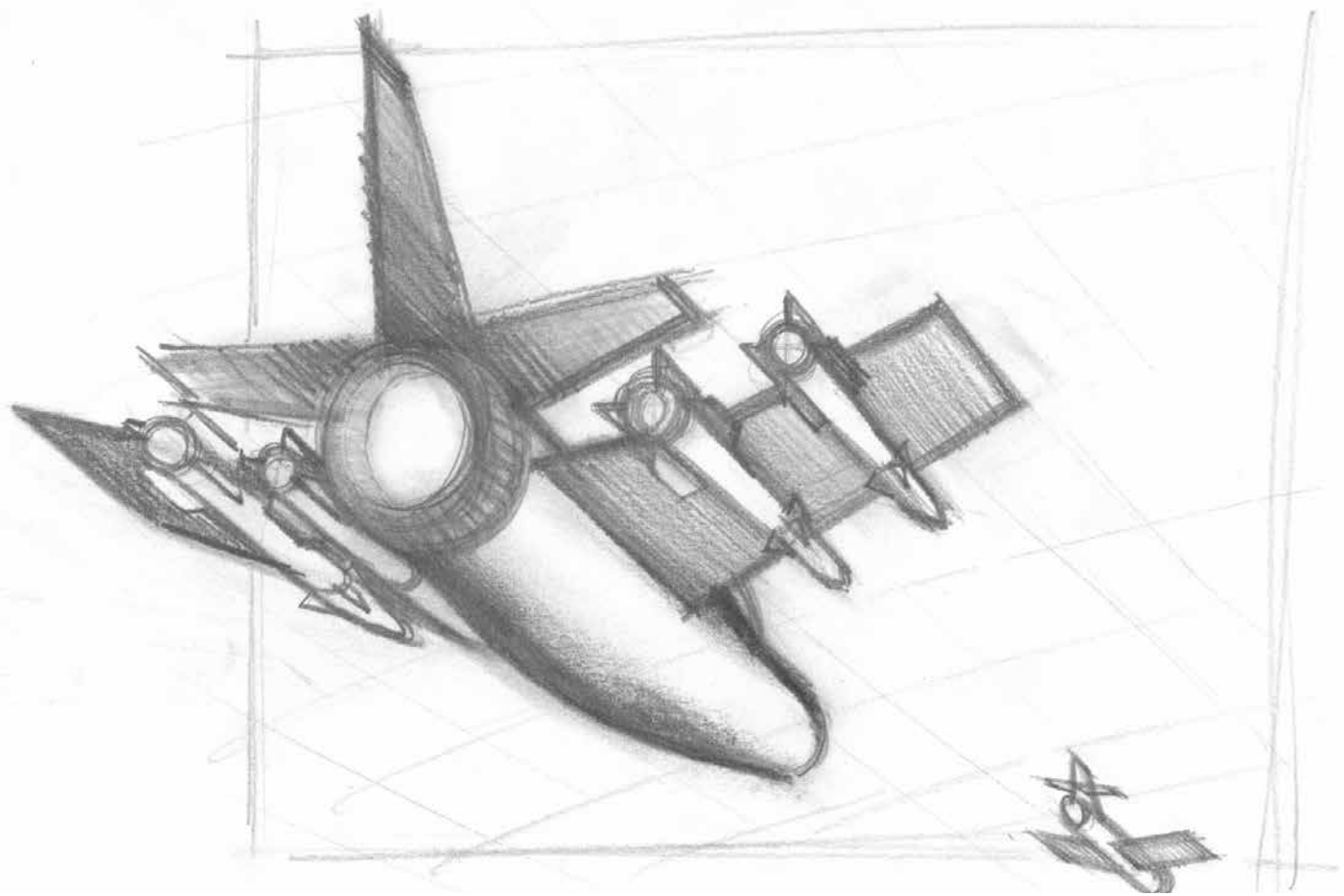
**AIM–9B SIDEWINDER**
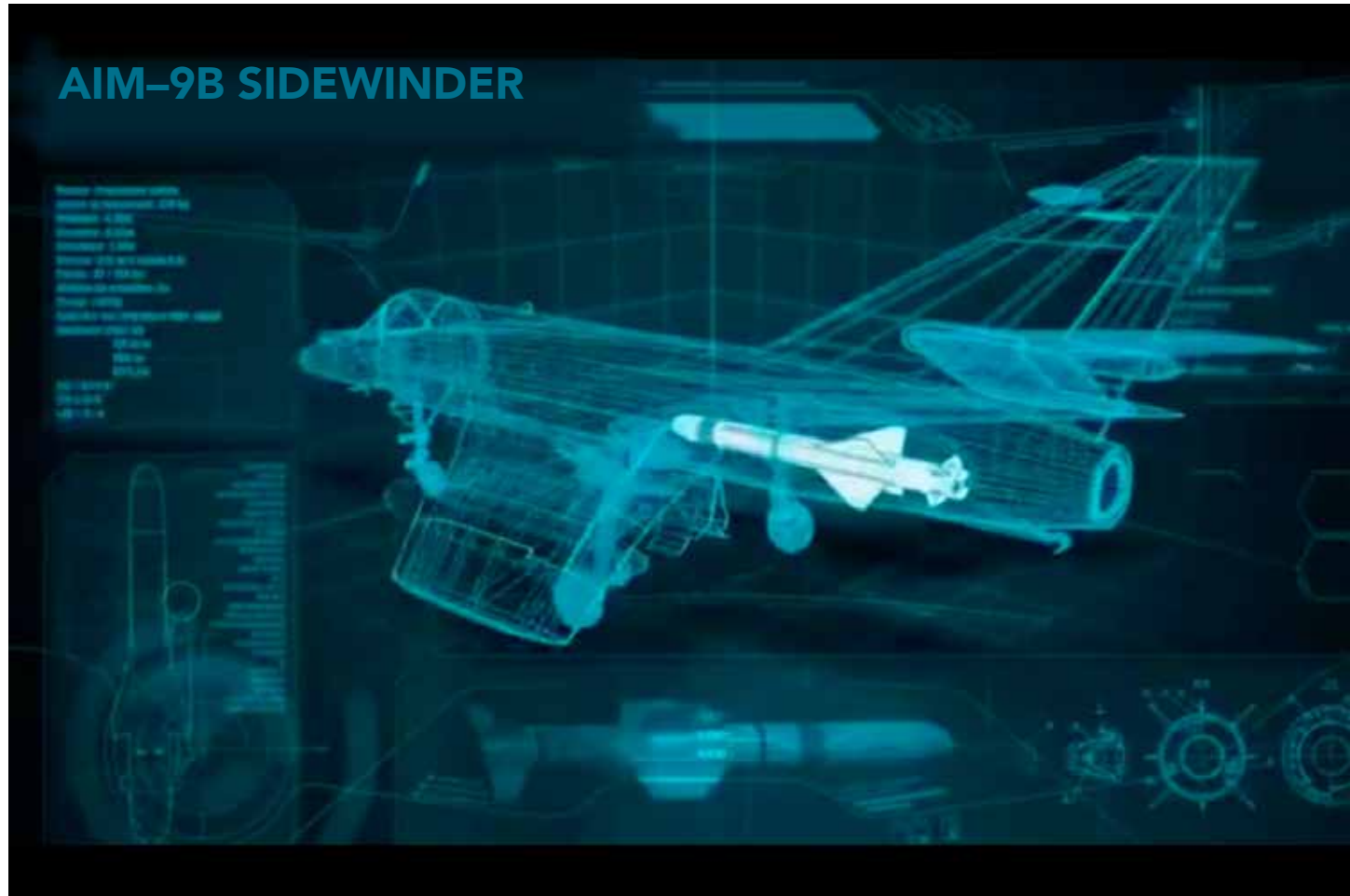
The polygon view of the F-100 appears rotating in harmony with rotation of the missile (here the Super Etendard with Exocet missile).
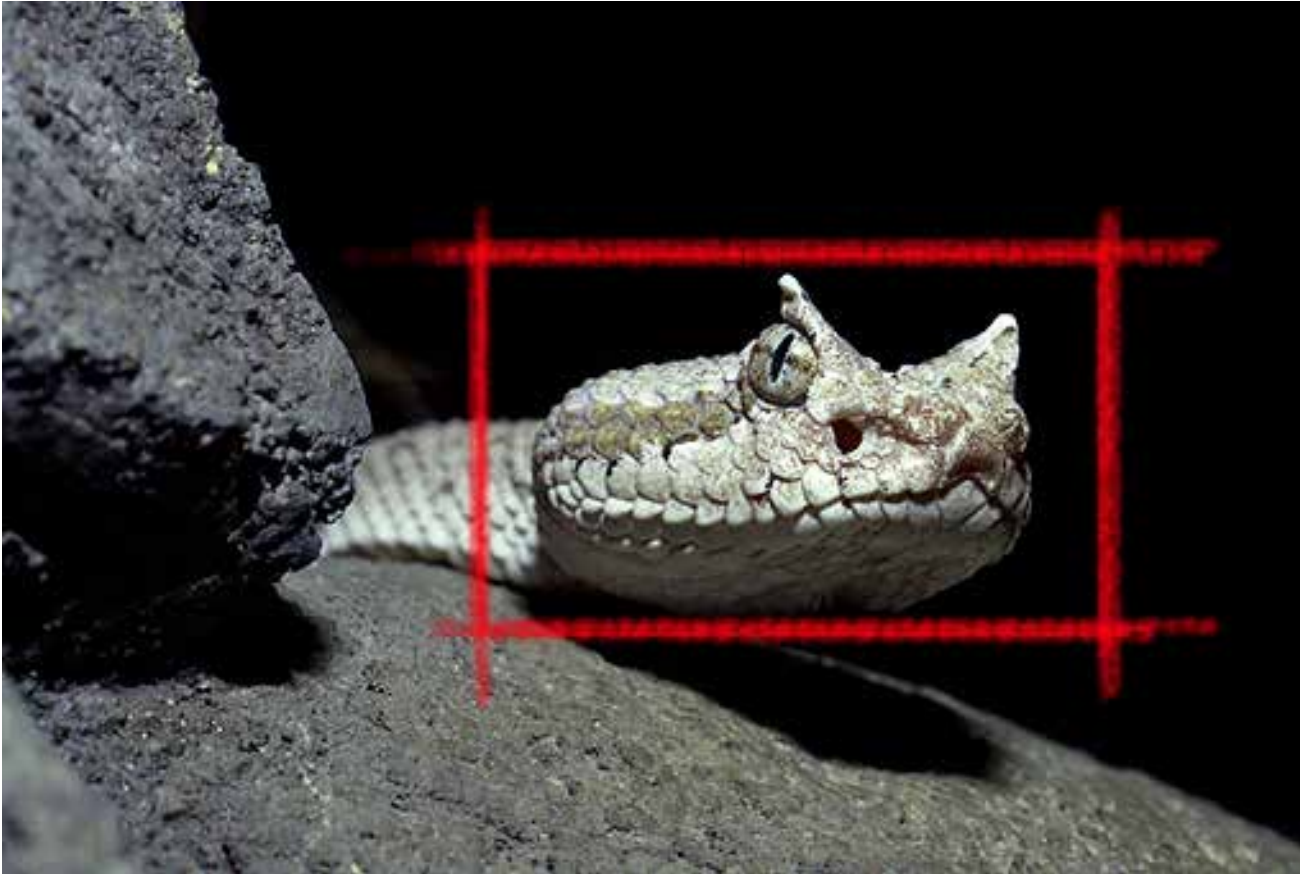The missile is gradually texturing.

– VO: "The F–100 is equipped with four air–to-air missiles…"
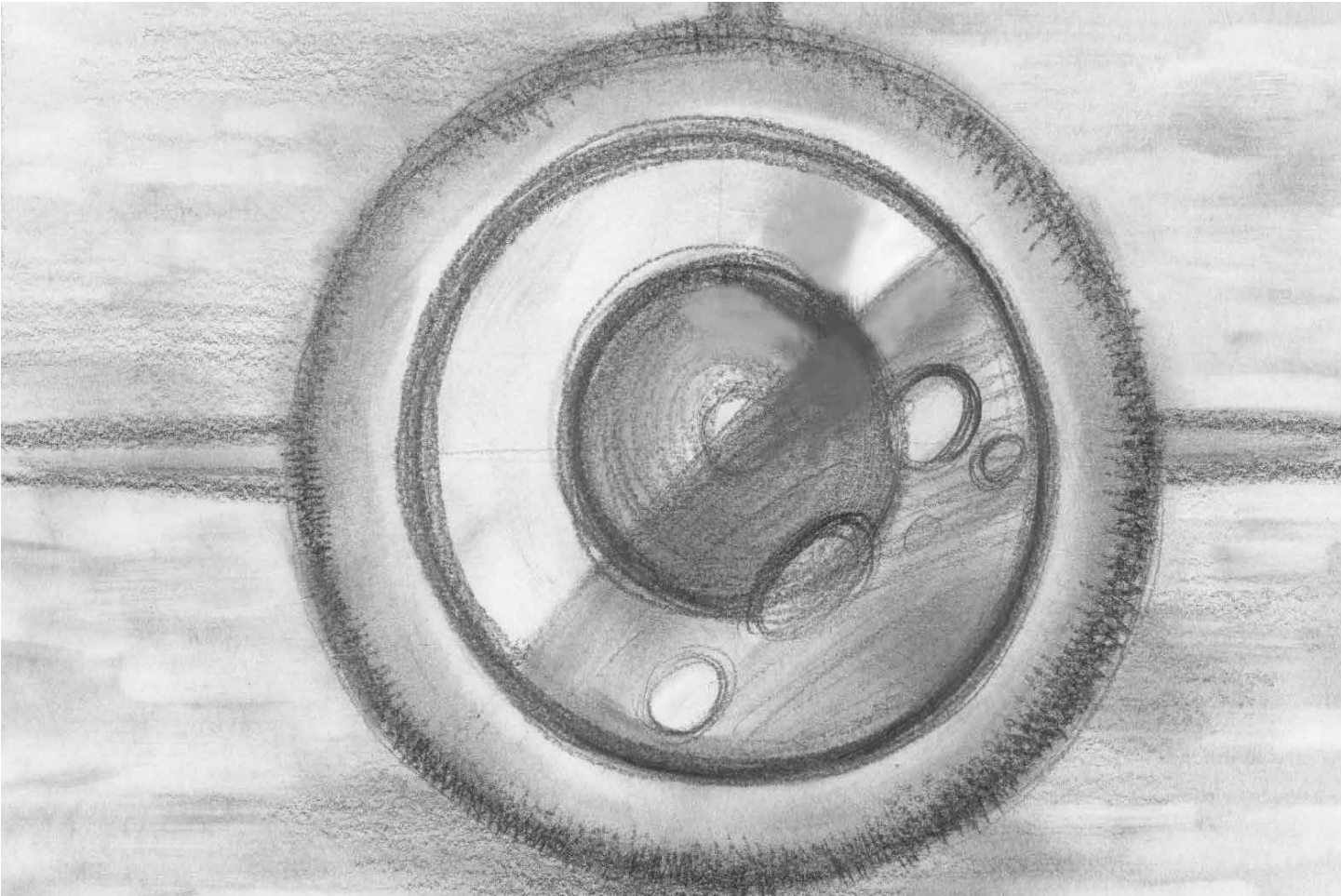
Rear view of the 4 missiles under the wing of F–100 Leader.
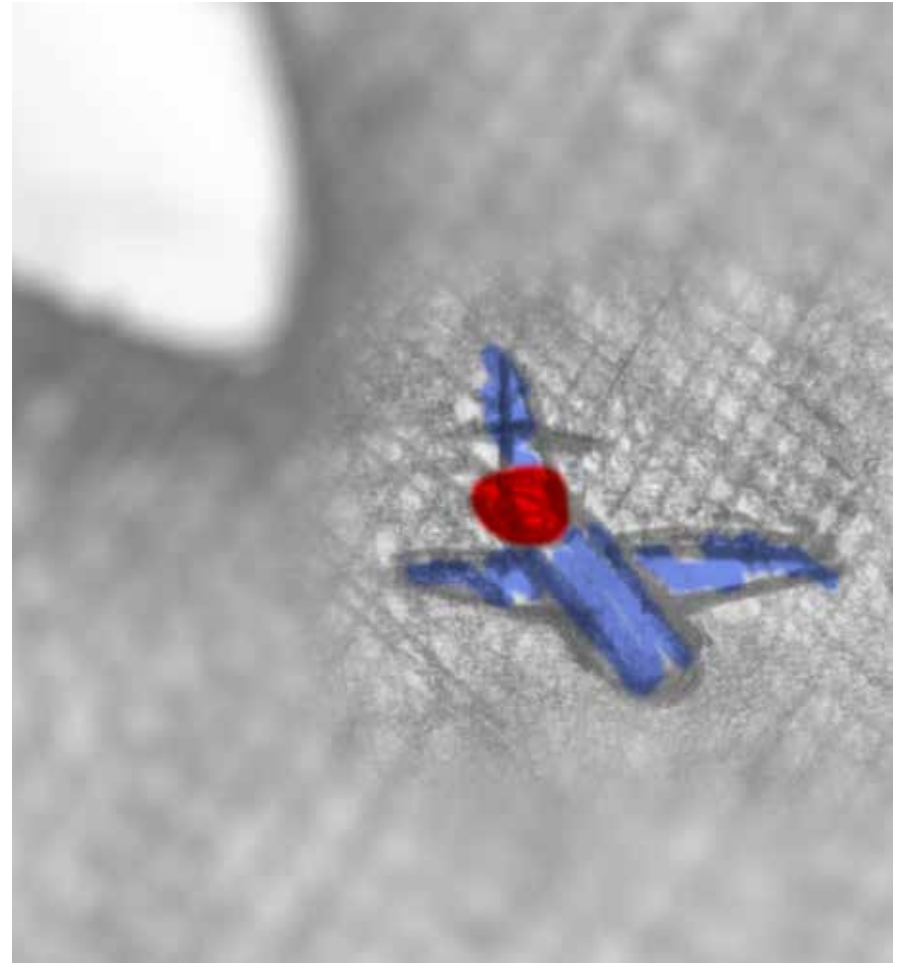
Zoom in. Image of the Sidewinder rattlesnake.

–   VO: "...named Sidewinder in reference to the California's Mojave desert rattlesnake which detects its prey by sensing the animal's heat emissions."

Cross dissolve effect...

...Cross dissolve effect.

Close-up of the heatseker.

Close-up rear view of a Sidewinder located under the right wing of the leader.

–   VO: "Ideally positioned in the rear of the MiG, the sophisticated infrared seeker senses the heat of the target: the tailpipe of the MiG.  The eye of the missile talks by emitting growls, indicating missile readiness and target lock."

Slight zooming in and focus on the infrared image MiG in the background.
The tailpipe is in red color (hot), the rest in blue (cold)
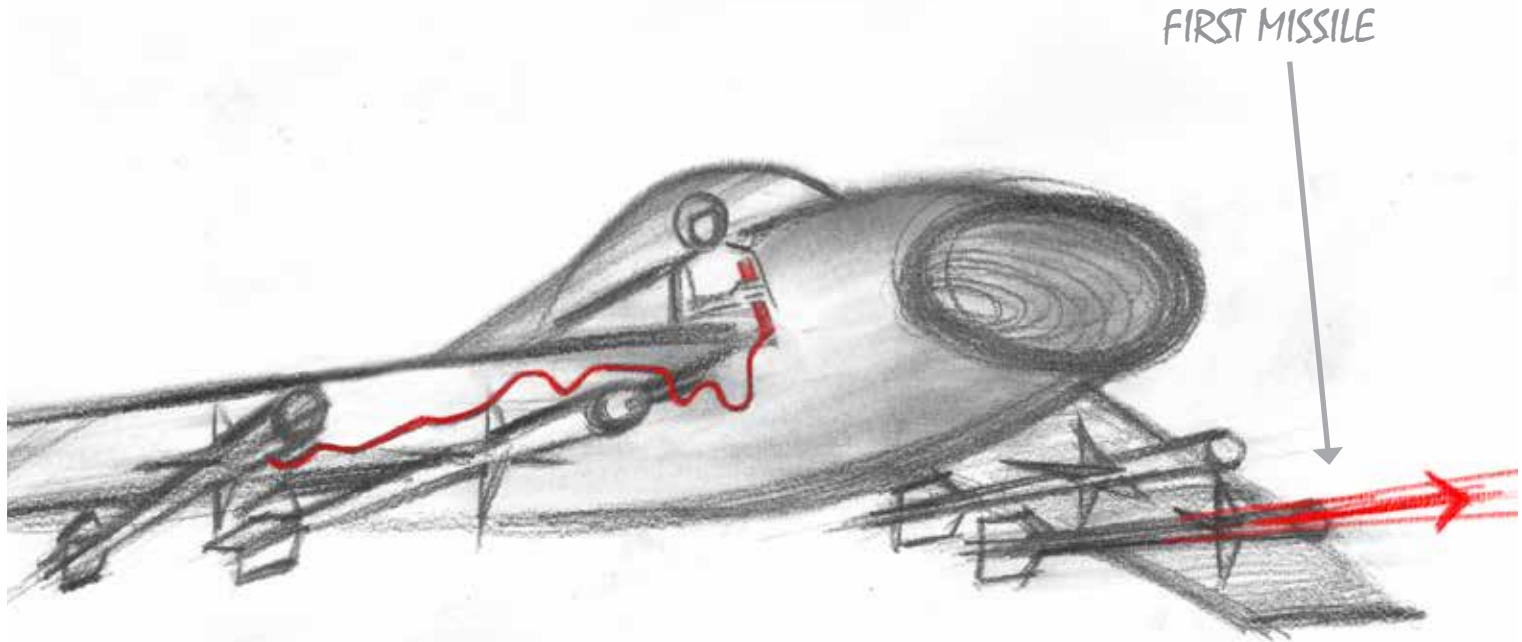
FIRST MISSILE

– VO: "To secure the kill, another missile is usually fired a couple of second after the first one."

Tracking to the left. Light right banking of the F-100. The 2nd Sidewinder is fired from the left wing.

SECOND MISSILE
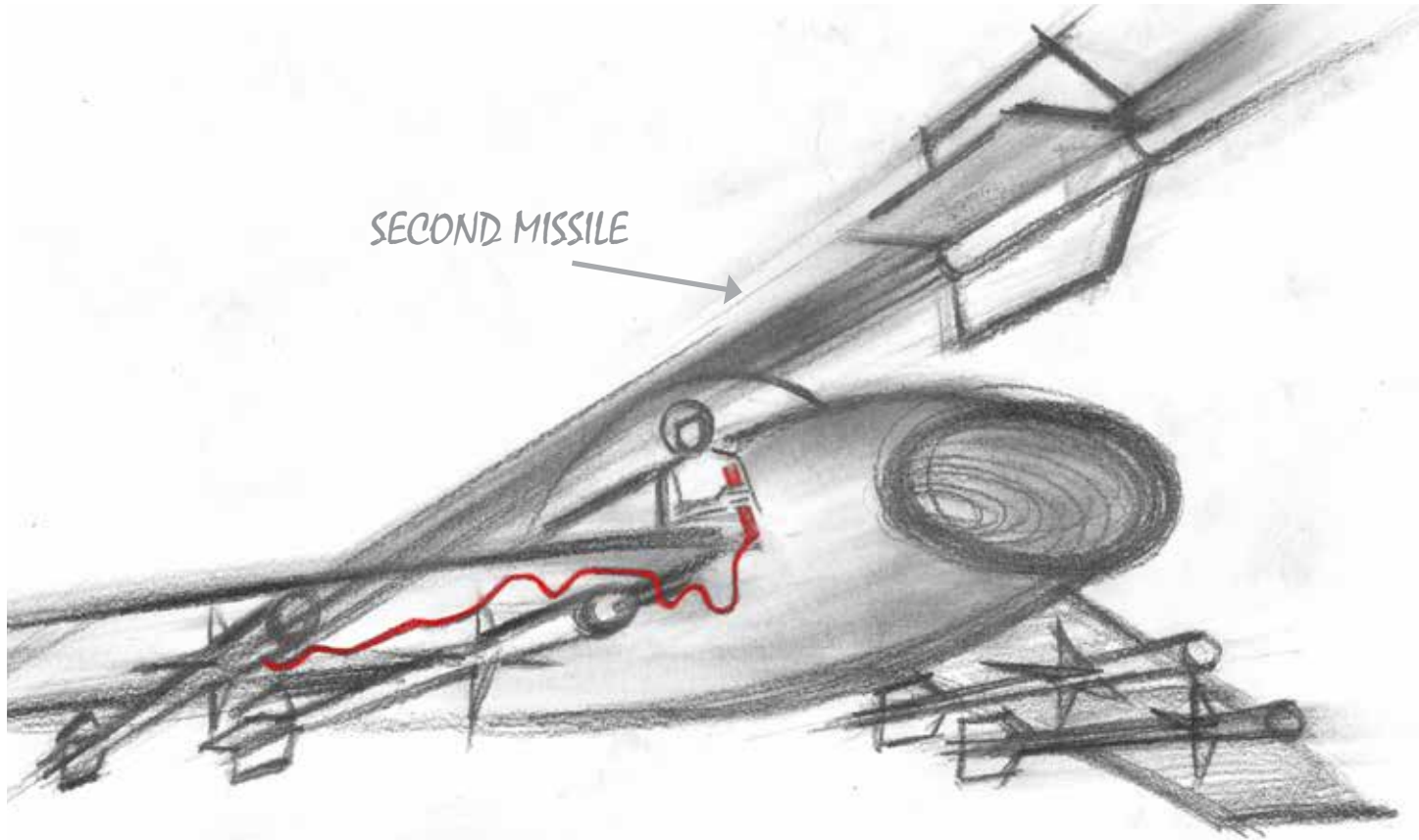
– VO: "An umbilical cable near the nose of the missile connects the onboard electronic control system to the aircraft's computer system.

A tone signal is sent in the headset of the leader pilot who just needs to squeeze the trigger."
Same shot. Tracking in and tilt up. Low-angle view of the cockpit.
The cable from the missile to the onboard is highlighted. Headset of the pilot is highlighted. Sound: pitched tone signal.
Camera tilt down. Medium front view of the 1st Sidewinder fired from the right wing (left on screen).
Missile fires and goes straight from left to right.
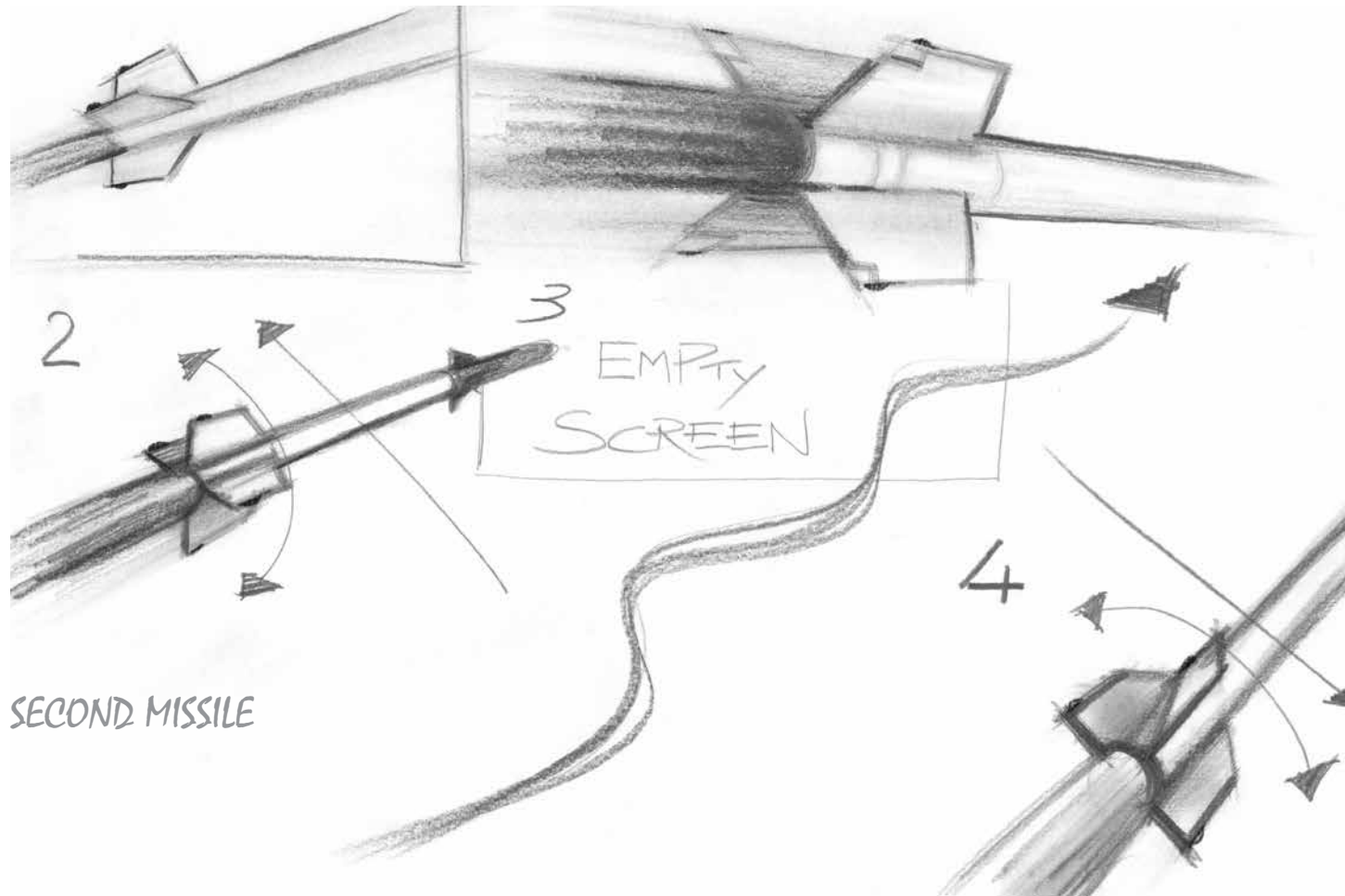
The missile starts to have a sinuous course.

– VO: "During the early part of its flight, the missile follows a sinuous trajectory
   that resembles the sidewinding motion of the rattlesnake"

Medium shot, camera follows the profile view of the 2nd missile having a corkscrewing course.

## SECOND MISSILE

– VO: "Each of the four rear wings
of the missile is outfitted with a rolleron,
an ingenious stabilizing device.

As the missile speeds through the air,
the air current spins
the metal discs like a pinwheel,
creating a rattling sound similar
to that of the snake's tail.
The rolleron counteracts
the missile's tendency to roll and makes it
a lot easier to track the target".
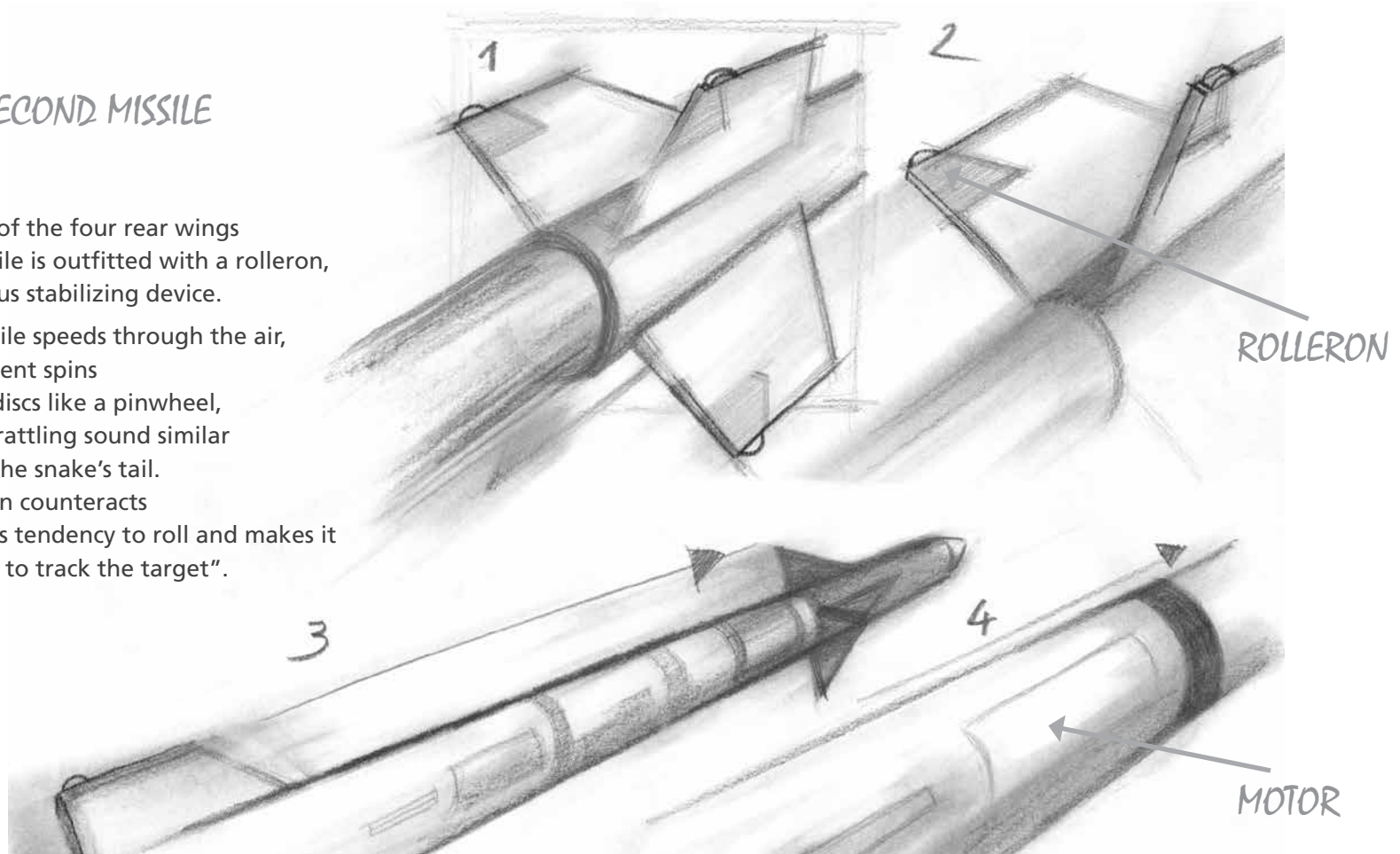
ROLLERON

MOTOR

Close-up, tracking to the rear wings, rear ¾ view of rollerons in action. Extreme close-up of, one rolleron.
Sound: like the tail of the rattlesnake.

– VO: "Powered by a rocket motor, the Sidewinder flies at 2082 km/h,
3 times faster than the current speed of Capt. Tran Hanh's MiG-17.

SECOND MISSILE

1

2
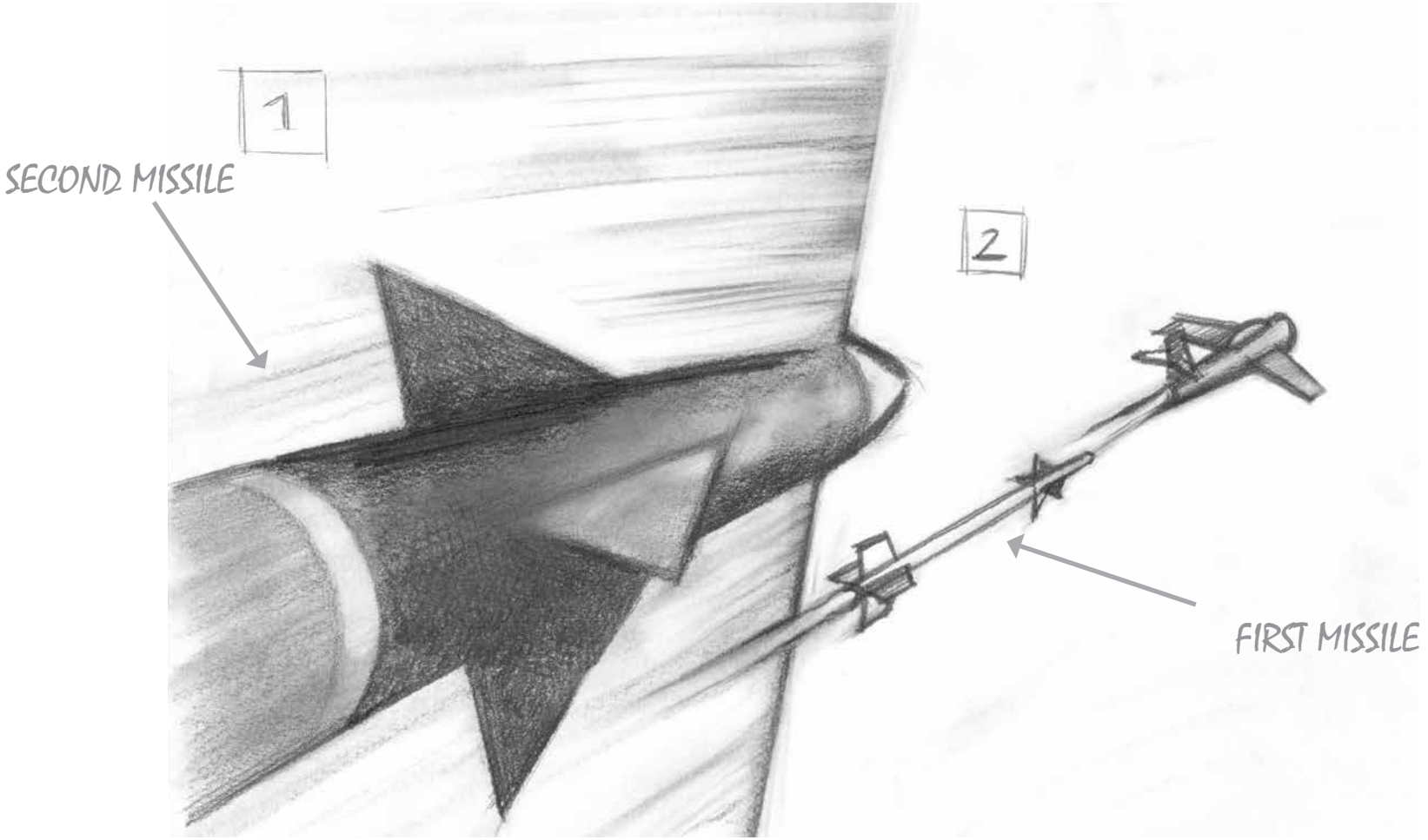
FIRST MISSILE

Close-up, rear view of the flame produced by the rocket motor. Indication of the speed under the missile.
Tracking in shot, slightly right side, until the rear of the 1st missile locked on the MiG tailpipe.
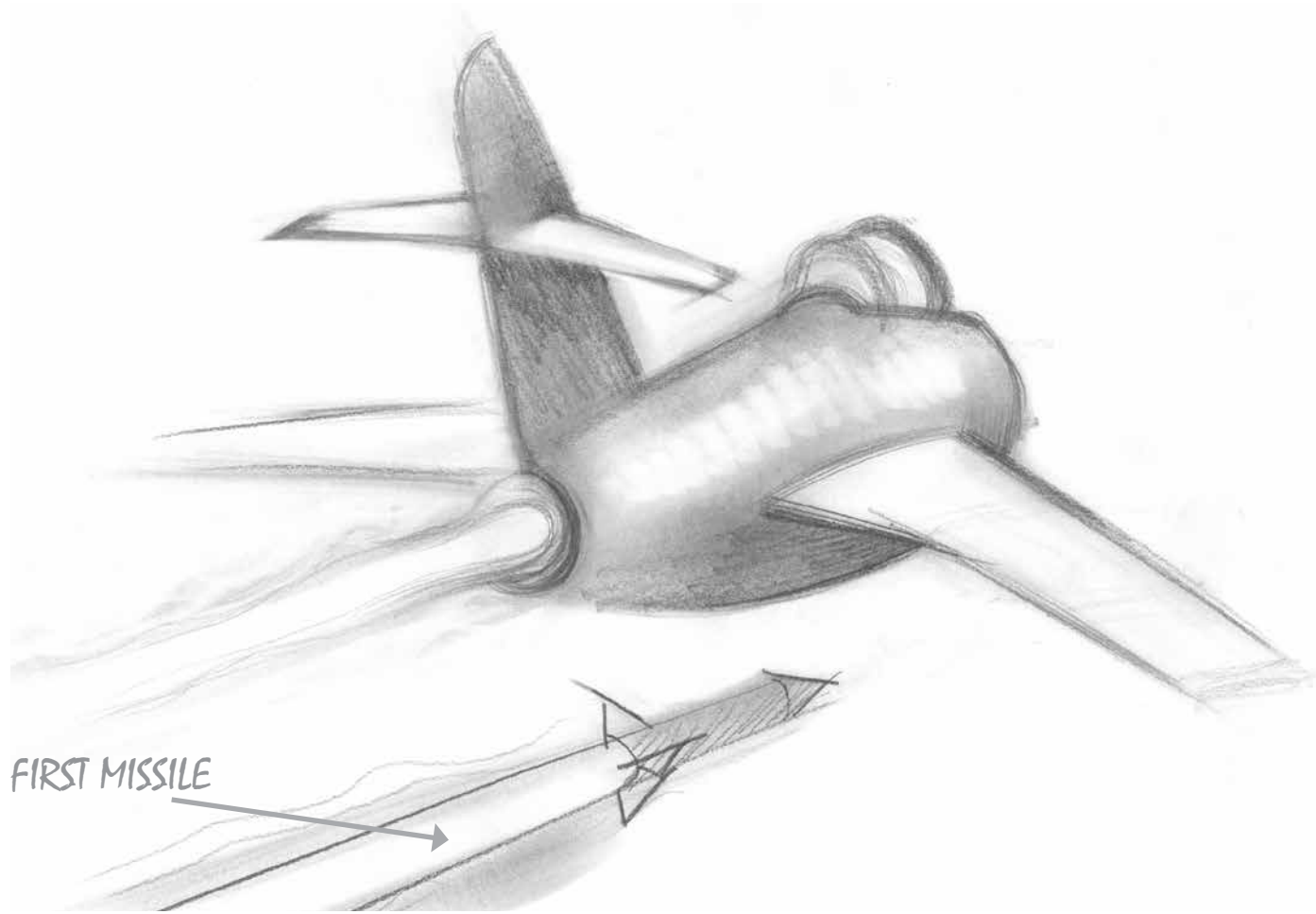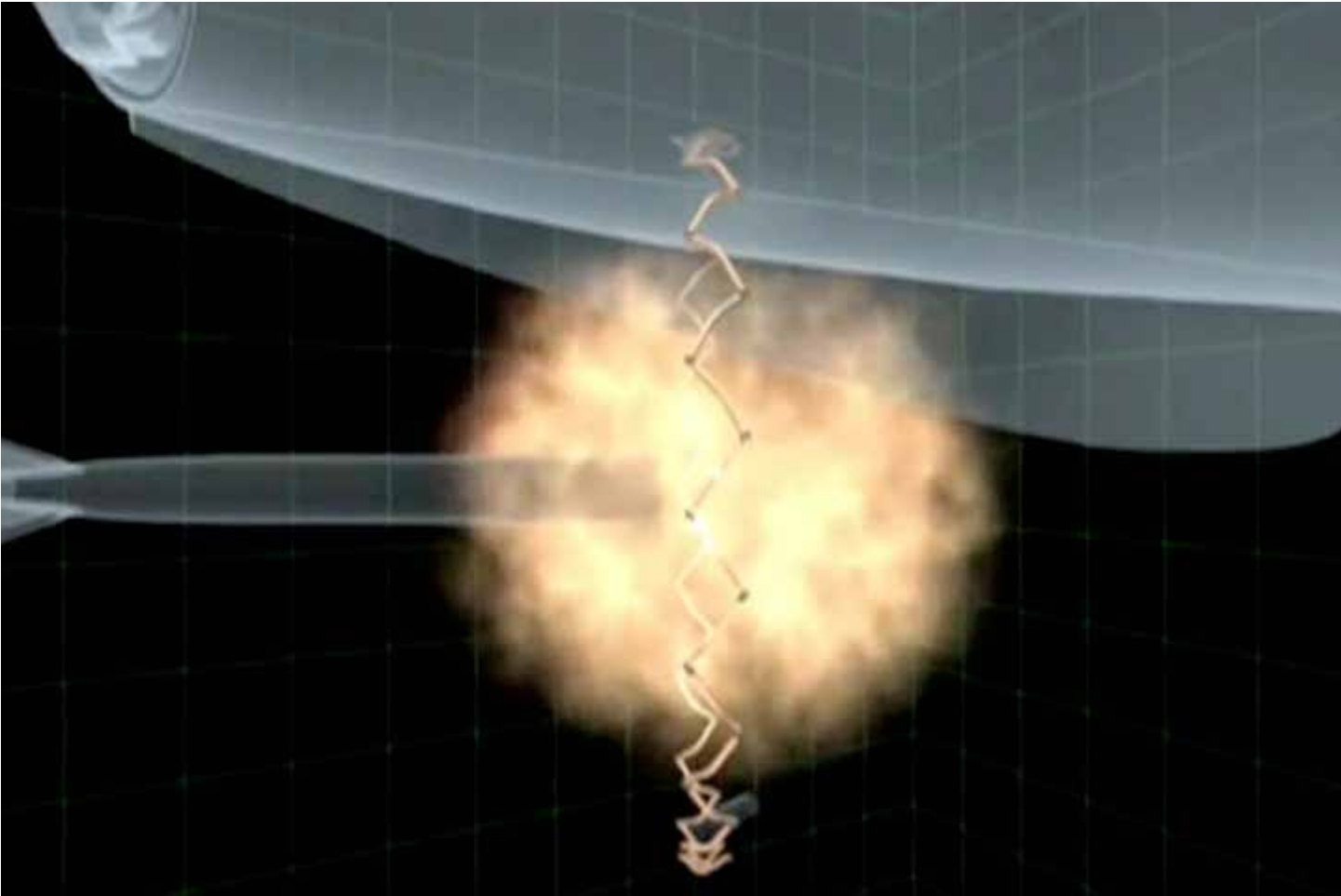
FIRST MISSILE

– VO: "The aim of the heat-seeker is not to wire where the target is,
  but where the target would be and to outmaneuver it to make the kill.
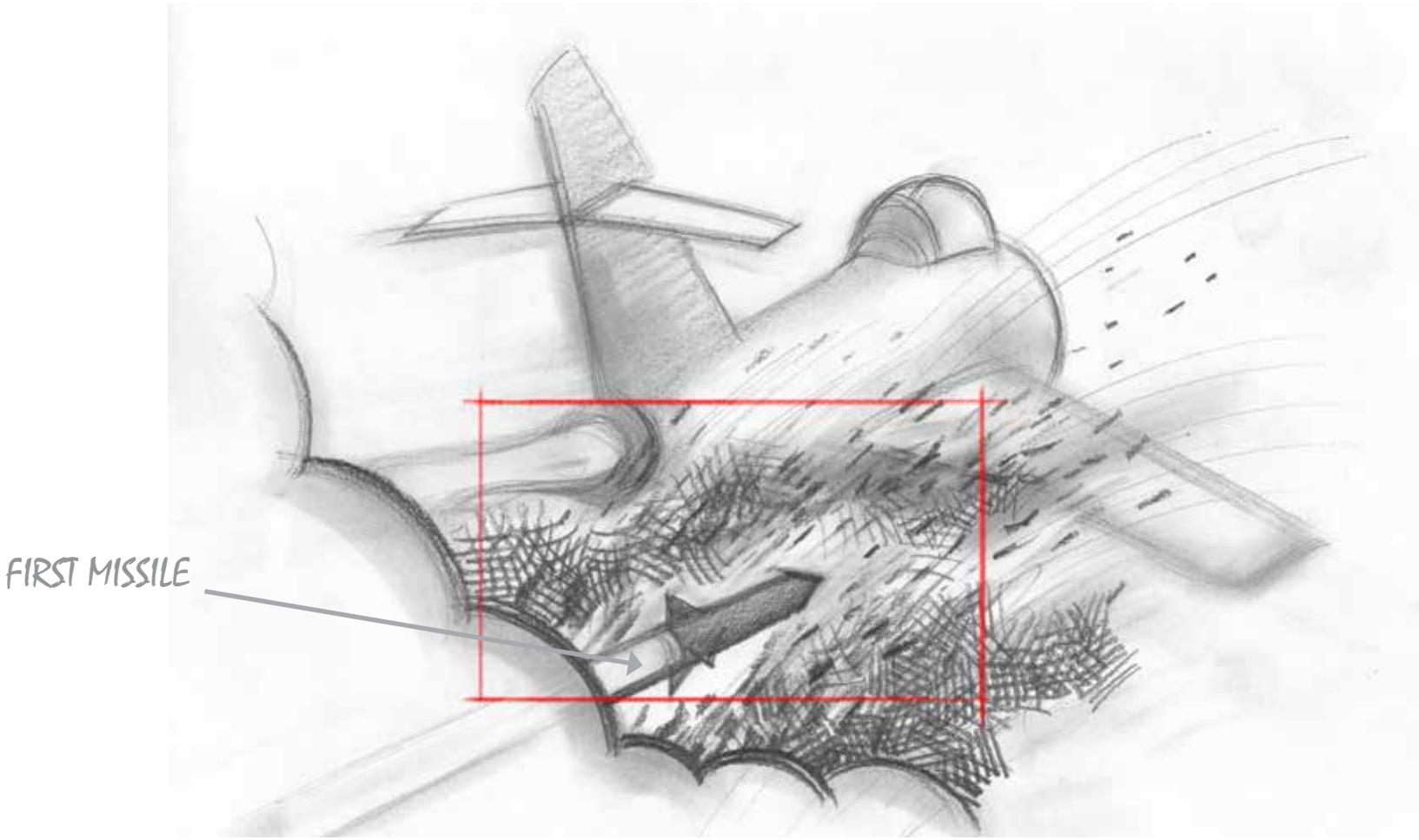
FIRST MISSILE

Medium shot, with pan to right. Detonation and fragments of the 1st missile that chop the MiG's tail and right wing.

– VO: "A direct hit is not necessary: the warhead on the Sidewinder has a proximity fuse that detonates
when the missile passes close to the target. The fragments that have an effective kill radius of 9 meters
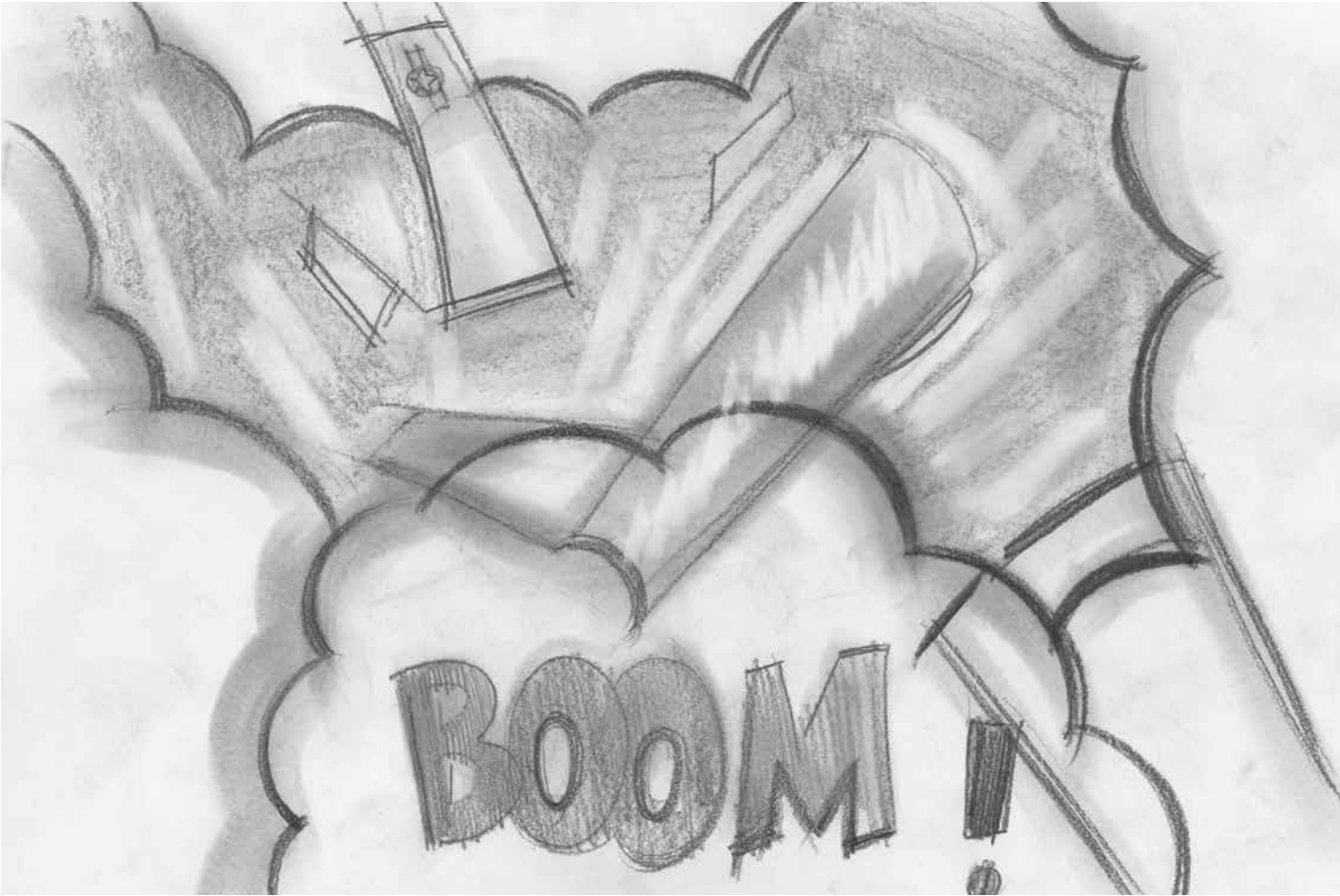are like knives which chop into the structure of the target."

An example of polygon view of the proximity fuse detonation and fragments.

SECOND MISSILE
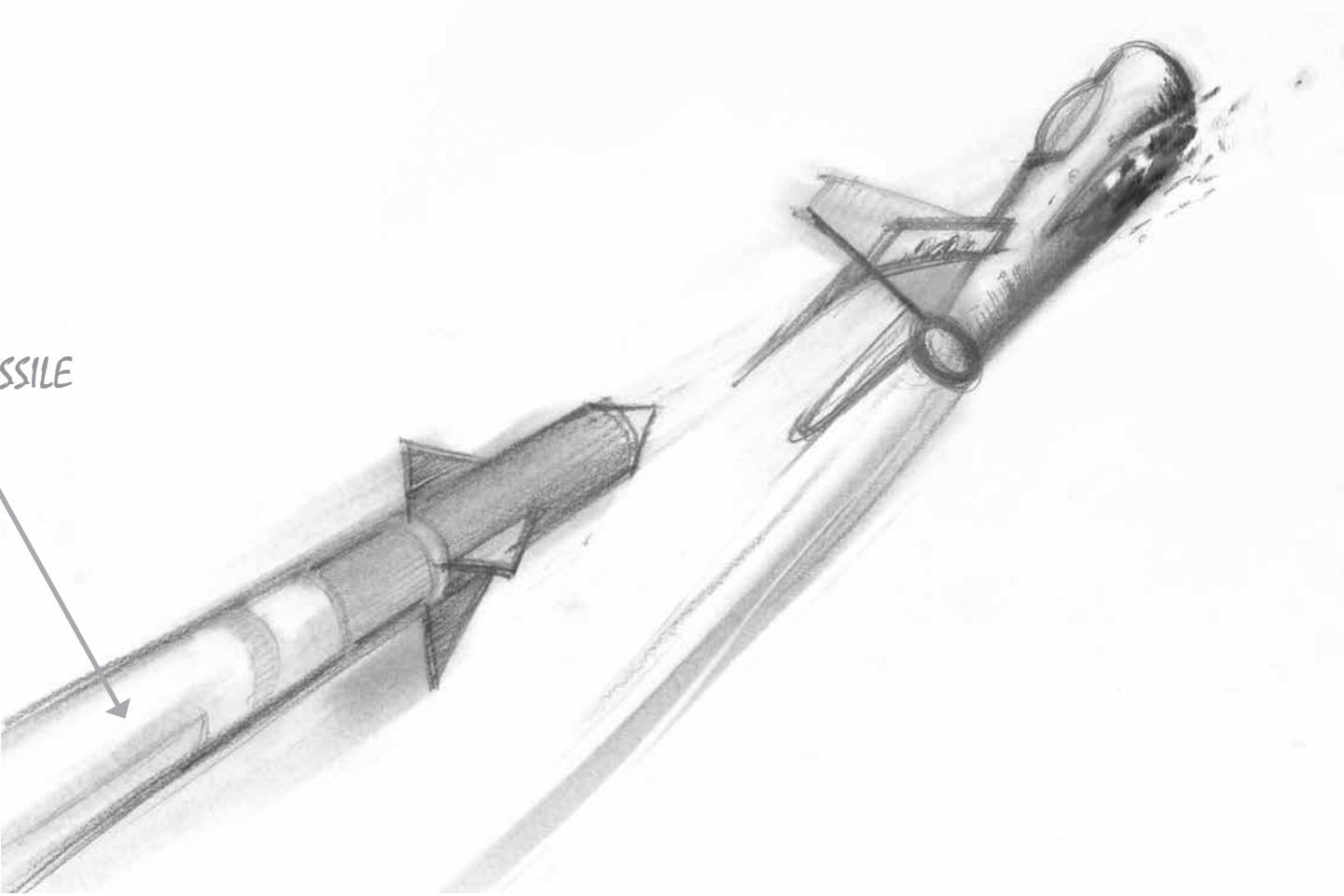
–   VO: "Only carried by US fighters, the Sidewinder is the first air-to-air missile of the modern air warfare."

Same shot.

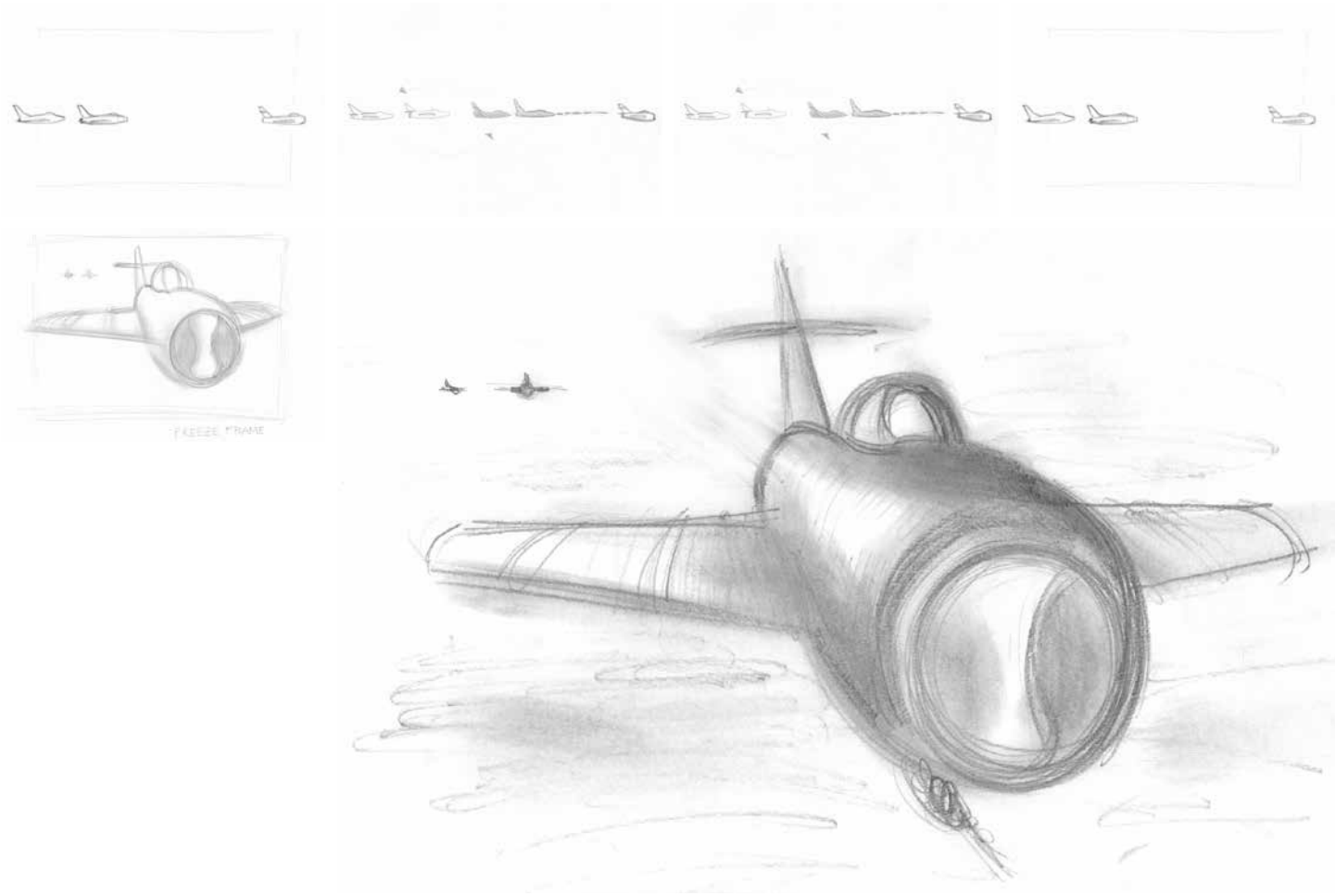The MiG rolls to the left side. The 2nd missile appears on left side of the screen

and detonates near the other wing. The MiG is dismembered, destroyed.

– VO: "This was the ideal scenario of the Sidewinder… against a relatively non maneuvering target"
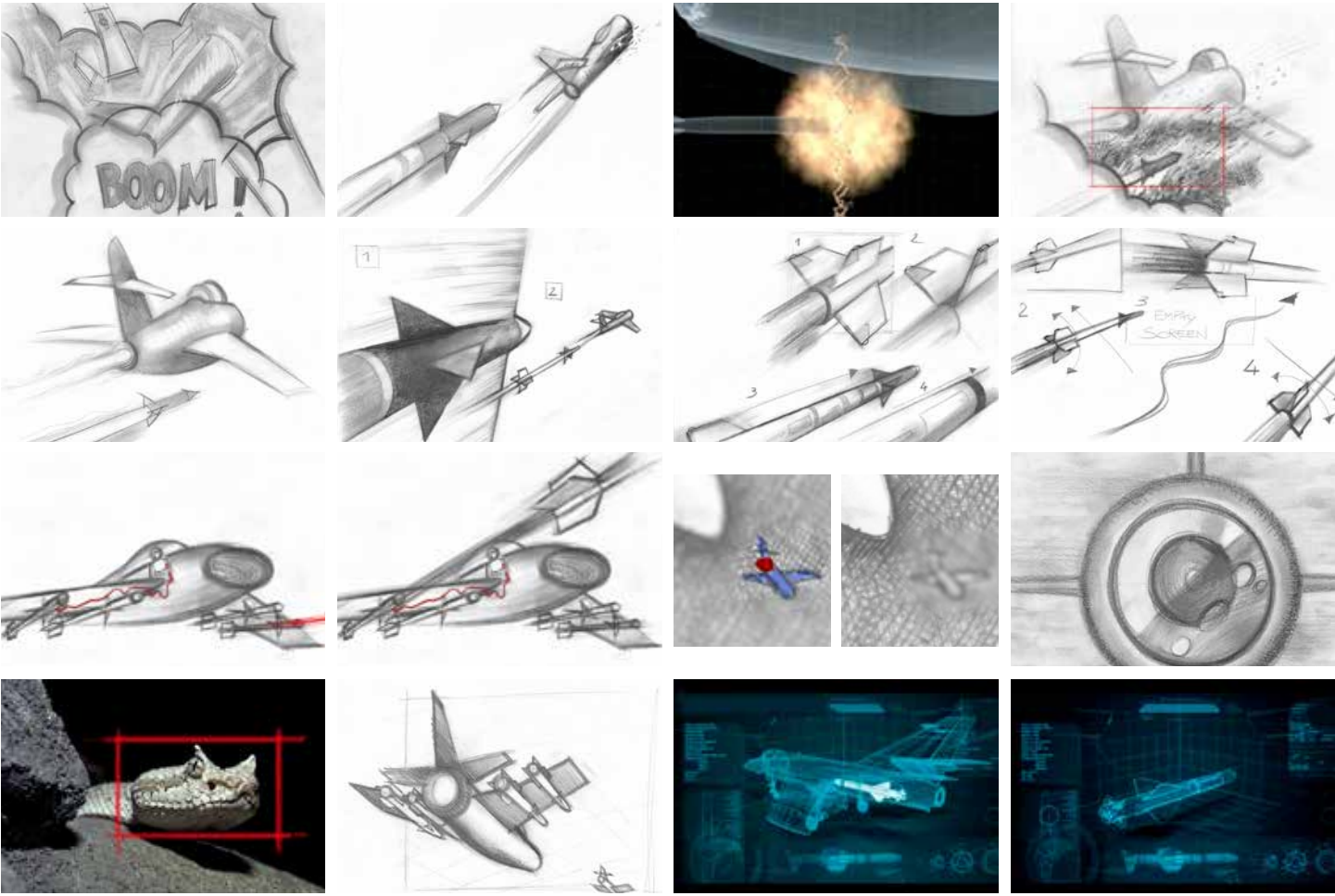
Freeze-frame + fast rewind...

...to the last shot of part I.