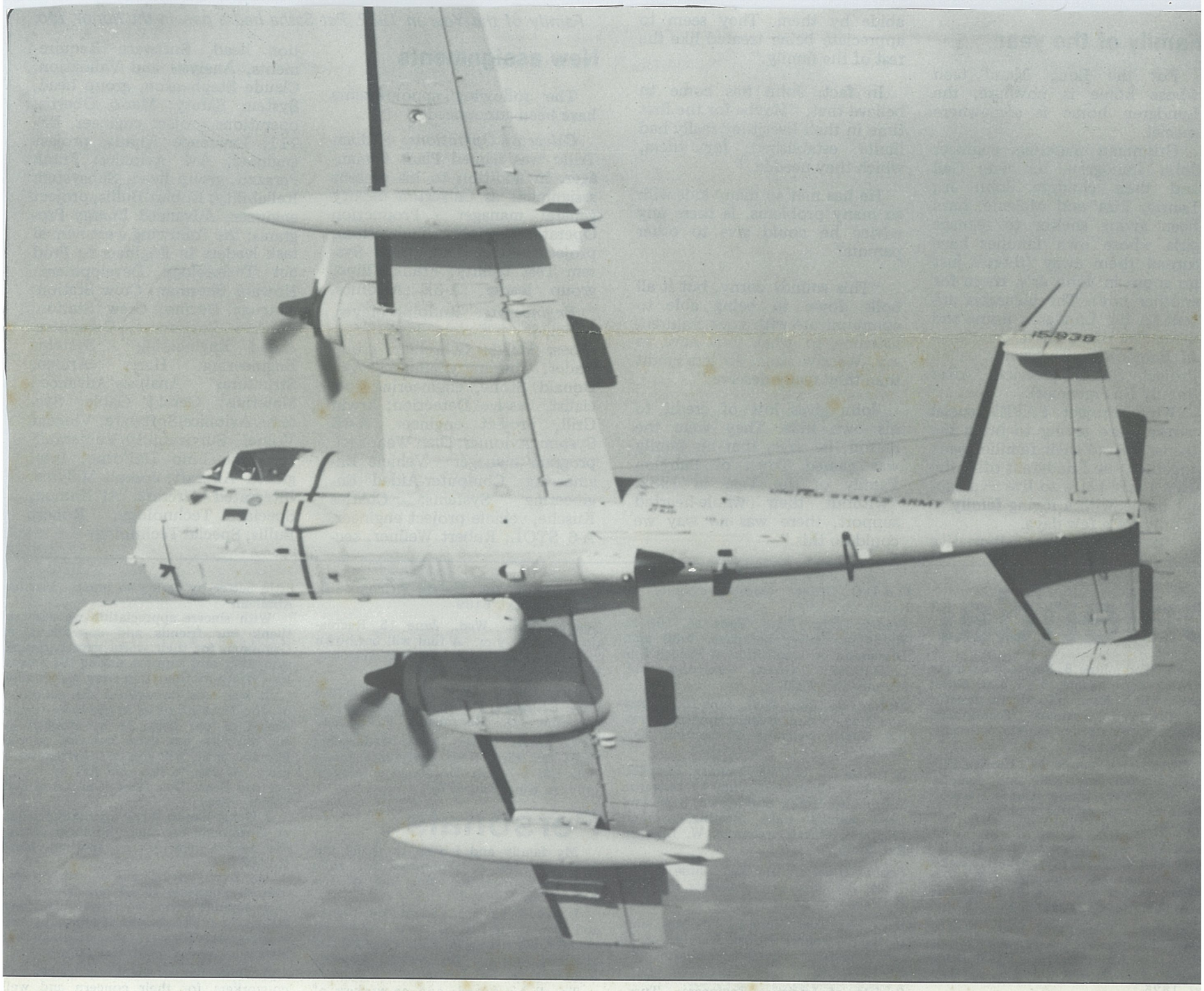

Mohawk: Army's battlefield scout

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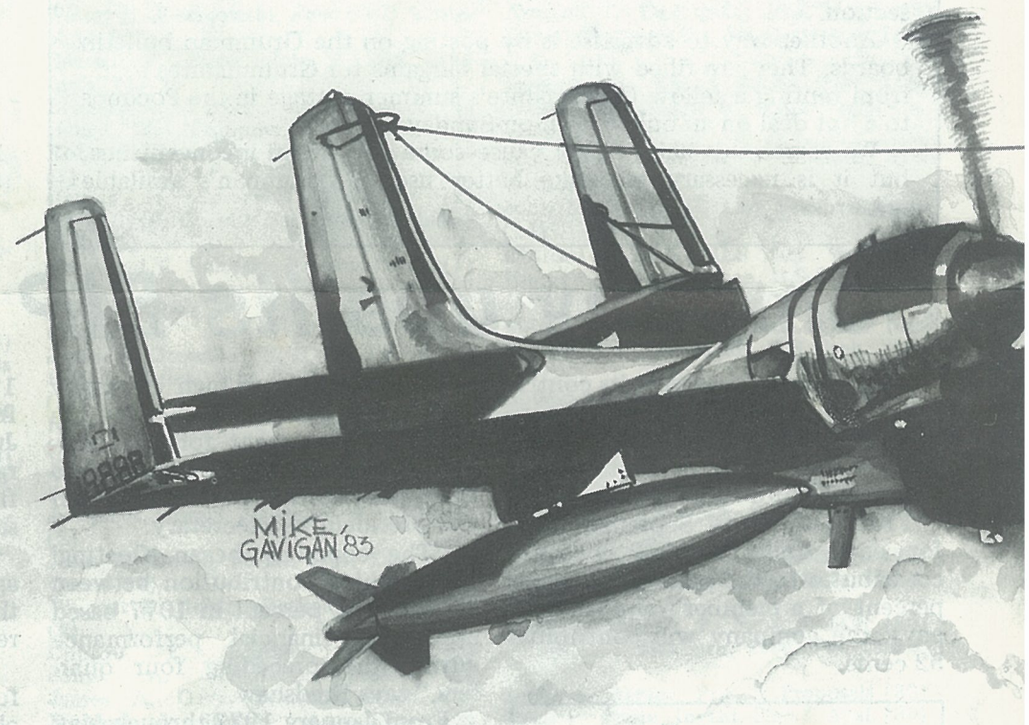
Packed with the late technology, the Grur to serve Army battle well into the Ninetie



Strong, powerful and ugly, the Grumman OV-1 Mohawk is one tough bird. Overshadowed by today's sleek surveillance jets and all-seeing satellites, this versatile aircraft continues to serve as the backbone of the Army's battlefield surveillance force. Hot-stuff for a twin turboprop plane designed in the late Fifties.

The Mohawk's longevity is attributed to its rugged Grumman Ironworks airframe and its adaptability to change. Packed with the latest sophisticated radar and infra-red systems, the OV-1 is on line to serve battlefield commanders through the mid-Nineties.

From 1960 to 1970, Grumman built 380 Mohawks; 153 are still in active service. The three earlier versions of the OV-1 family were: the OV-1A with its fuselage mounted camera; the "B" version with its sidelooking airborne radar (SLAR); and the "C" version with its infra-red (IR) sensors. The updated OV-1D features interchangeable IR and SLAR pods, new flight and navigation systems and a panoramic camera.

Welcome to Mohawk country

Since 1973, Grumman has been overhauling and converting older Mohawks to the latest OV-1D configuration at Stuart Operations in Florida. To date, the Stuart team has overhauled 96 Mohawks and installed new equipment on another 40.

The Grumman Mohawk team has a lot of pride and confidence in its bug-eyed surveillance plane. These Grummanites have seen their Mohawks return from the Vietnam Conflict riddled with battle scars, and they've built a strong relationship with the men who fly the OV-1. Scores of Army pilots visit the Stuart facility to ferry older Mohawks for induction into the Stuart overhaul line and to pick up "brand new" OV-1 aircraft.

"Because there are not that many Mohawks in the Army inventory, the Mohawk is a family community," says Colonel Max Davison, Commander of Defense Contracts Administrative Services (DCAS) at Stuart. "Everybody gets a chance to know each other. It's a fraternity."

Major Dick Wolfe of the Oregon National Guard who's at Stuart to pick up an overhauled OV-1D, adds, "There is an unbelievable esprit de corps involving the Army Mohawk community, Grumman and its many subcontractors."

Test of fire

Both Col. Davison and Maj. Wolfe flew Grumman Mohawks during the Vietnam Conflict. Davison piloted the earlier versions of the OV-1 on visual reconnaissance and night "red haze" infrared missions. His Mohawk was armed.

"We flew against some very sophisticated weaponry," remembers the colonel. "You were flying on the ragged edge — weight-wise. Two Mohawks would go out on a daytime photo reconnaissance mission. One would take photos and the other would provide cover. You really had to have a lot of faith in the guy behind you."

Flying low over enemy-infested terrain, the Mohawk proved to be a reliable reconnaissance platform — a tribute to the Grumman Ironworks tradition. "One pilot had 19 missions in a row where he was hit but still was able to fly back to the base. One time, I had 1,300 holes in my Mohawk — and she still got me back," says Davison, pointing to faded photos on his glass-topped desk in his Stuart office.

The rugged constitution of the OV-1 proved a godsend to flight crews — especially when the Viet Cong forces got heavier weapons and learned how to use them against low-flying aircraft. One Mohawk was nicknamed "Old Yeller" because of all the zinc chromate painted over its battle scars.

When the OV-1Bs and Cs entered the Army inventory, battlefield commanders were supplied with better information than ever before. In any weather — day or night — the Mohawks could obtain details of enemy movement and positions on continuous film strip of the terrain below. The SLAR system could look right or left of the plane's path or scan both sides at once.

During "Red Haze" infra-red missions, the battlefield commanders got a picture of the ground directly under the plane's flight path, complete with heat traces of truck engines, campfires and other activities hidden by darkness, camouflage or the natural, dense jungle cover.

When the OV-1D version joined the Army in the late Sixties, Army commanders had the most versatile of all Mohawks at their disposal. The "D" version featured more powerful T53-701 engines and improved avionics, and its interchangeable mission pallets made it possible to switch the aircraft from IR to SLAR configura-

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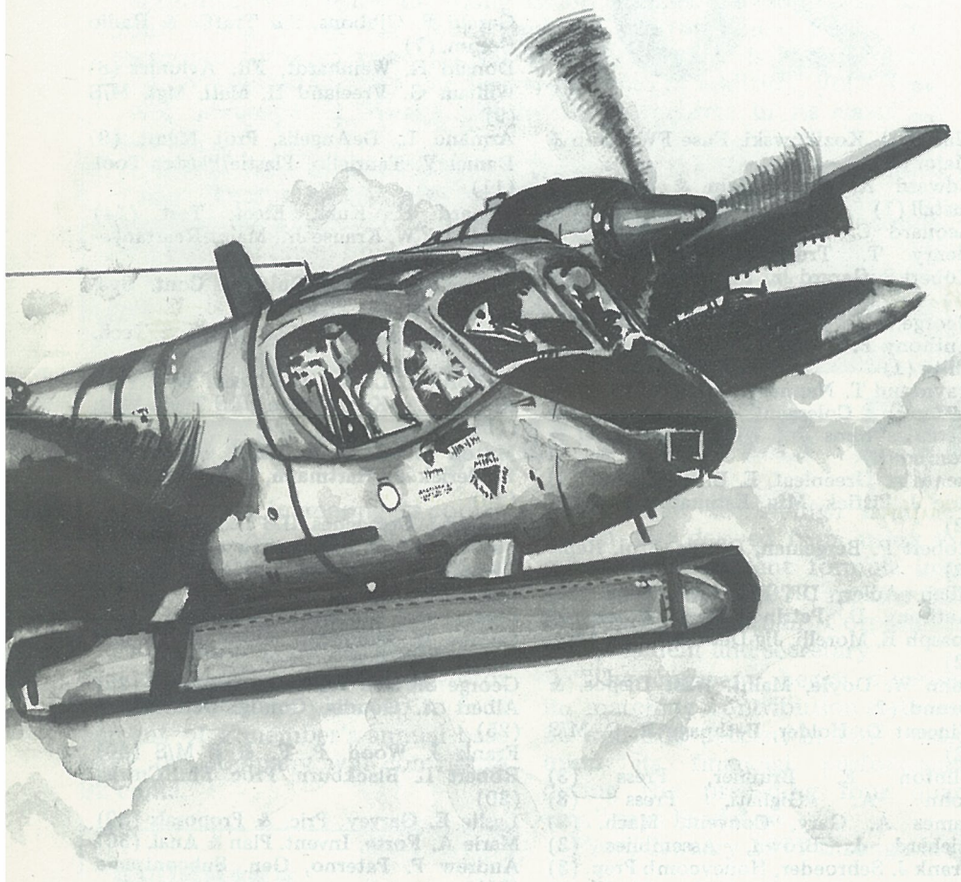

tion in about an hour.

The other American services also used the information gathered by the Mohawk. The Air Force used precision targeting data from OV-1s to direct B-52 strikes. The Navy's coastal patrol forces were directed to infiltration points detected by Mohawk radar and the Marines used the OV-1's night reconnaissance data.

'A fine tooth comb'

Maj. Wolfe describes what it was like to fly a solo IR night mission:

"Usually four hours before your flight, you check the board and get the tail number. Briefed by intelligence about air defense, etc., you go over the entire mission with your technical observer. You had to do a large amount of preparation. You literally memorize your flight, so you could close your eyes and mentally go through the entire mission. You go over it with a fine tooth comb. Then you take a break, go back to your room and stare at the wall.

"It was an exciting mission," states Wolfe, now a sheriff in Oregon. "I believe it takes a lot of personal fortitude — and a lot of soul searching — to go out on a reconnaissance mission alone. There is no cover. You fly at low altitudes — too low for radio contact. If there's a problem, good-bye.

"It was a challenge to find your target and get back to intelligence with the information," continues the major. "You had to have a lot of confidence in your aircraft. An engine goes out, there are holes in the wing, but you still get back alive."

The Grumman Mohawk also proved that it was able to live with the troops at forward bases. The rugged triple-tail plane only needs a 900 ft. runway to take off over a 50 foot obstacle. It can stop in just 300 feet. But it is its high maneuverability that draws high marks from the men who fly it.

"It is a super plane to fly," says Wolfe. "At low levels, it is extremely maneuverable. In Vietnam, you would dip down through the clouds into valleys. You'd fly below the hills and follow the streams. Plenty of times, you'd find yourself flying into canyons, but you knew what the Mohawk could do. You can turn that plane around in a quarter of a mile radius.

The line starts here

"When we got two new Super C Mohawks with more powerful engines and a wider wing span, the guys used to line up to fly them," says Wolfe. "Today, there is not only a great feeling of confidence in the Mohawk community of what the OV-1 can do, but it's a challenging reward to fly that plane. It's one fantastic mission," states Wolfe.

(What does the future hold for Grummanites and their Mohawk? Read the next issue of Plane News on Friday, June 10.)

Get the picture

What is the enemy doing "over the next hill"? Ever since military balloonists took to the skies to sneak a peak at enemy activities behind the lines, battlefield commanders have valued aerial reconnaissance.

The Grumman Mohawk has served Army commanders for over two decades.

With the OV-1A, frontline commanders got a photographic view of enemy positions, territory, and activities. This early version of the Mohawk carried a single camera in its fuselage that could take pictures vertically or tilt 15 or 30 degrees to either side. When the Mohawk got back to the airbase, Army intelligence community had the film developed.

With the advent of the OV-1B, even more information could be gathered. This Mohawk's side looking airborne radar (SLAR) could look through foliage and map terrain. Captured on film, the radar image of the earth below was split — one showing fixed objects and the other detecting moving targets.

The "C" version added yet another dimension to the Mohawk's surveillance capabilities. On film, the infra-red imagery system was able to detect thermal (heat) differences among terrain objects and vehicles. The all-seeing Mohawk could pick up telltale heat traces of truck engines, campfires, and other heat-emitting objects formerly hidden by darkness, camouflage or tree cover.

The Mohawk and its continuous film strips proved invaluable to frontline commanders during the Vietnam Conflict.