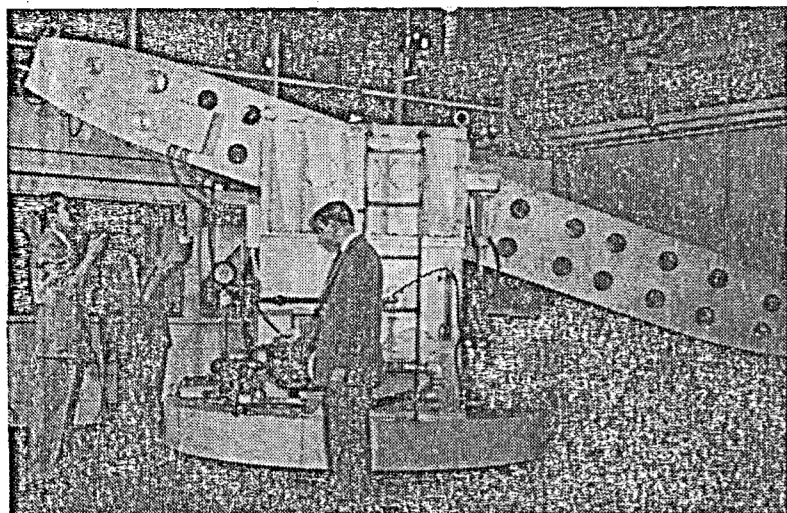
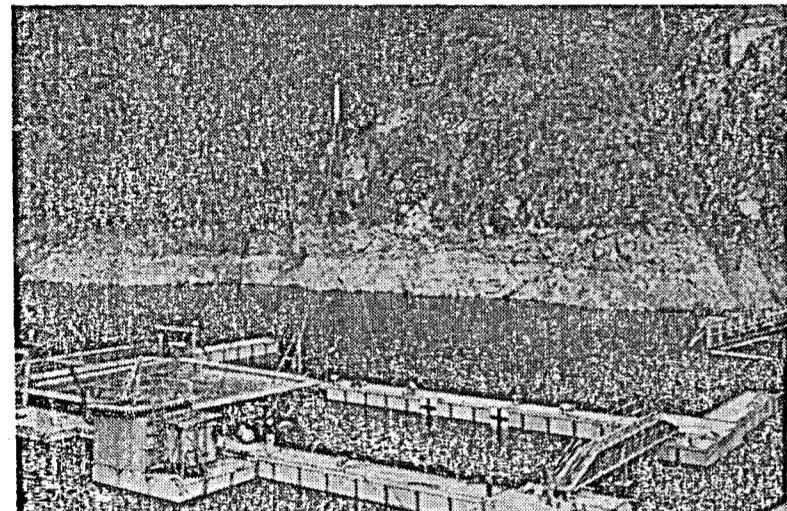


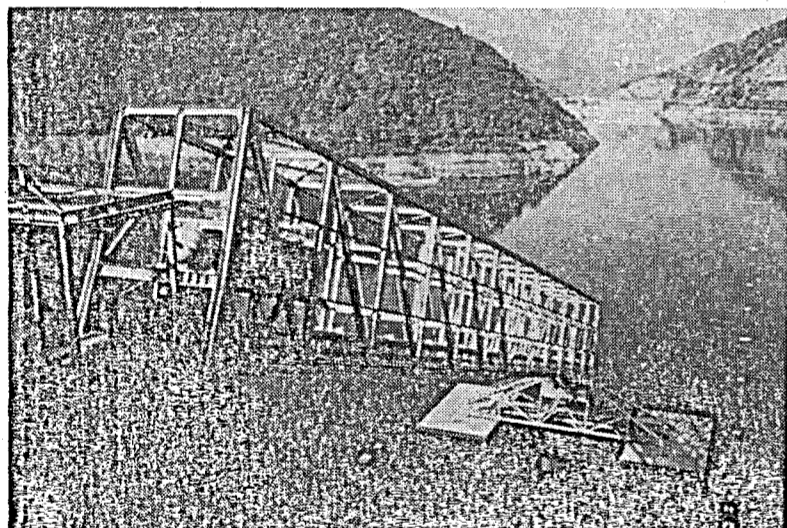
PASADENA ANNEX



HYDRODYNAMIC SIMULATOR—A unique NOTS creation, the Hydrodynamic Simulator is a device designed to duplicate, in a dry run, a torpedo's behavior exactly as it would occur during detection and pursuit of a target in the ocean. The Simulator and attached computer provide an exact record of each movement of the torpedo in terms of deviation, pitch, depth, and roll.

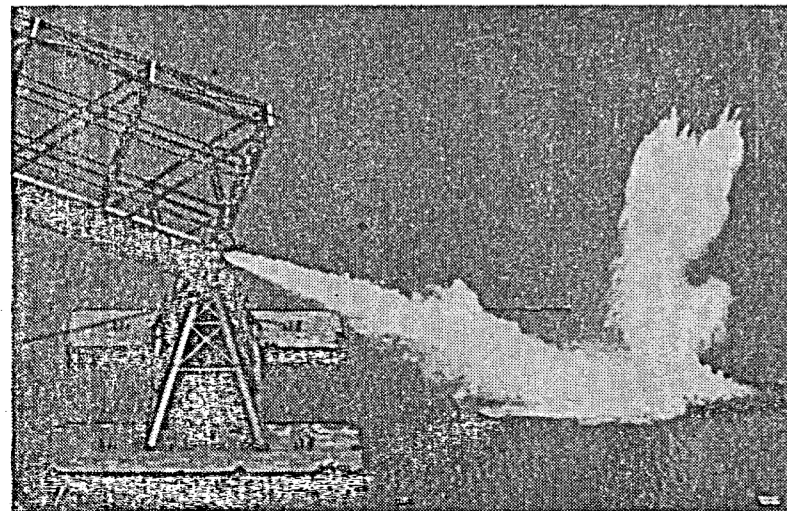


SLINGSHOT LAUNCHER—With this facility, large projectiles can be raised on a cable up to 160 feet and slung into the water below. Photographic coverage of these drops gives weapons designers information of critical importance on the water-entry forces.



VARIABLE-ANGLE LAUNCHER—The VAL, called the largest air gun in the world, has two 300-foot launching tubes—one 22.5 inches and another 32 inches in diameter—through which torpedoes or other projectiles can be blown into the water by compressed air. The bridge containing the launching tubes is supported on one end by floating barges that can be moved to change the water-entry angle of the projectile to any vertical angle up to 40 degrees. Thus, this facility makes it possible to simulate the release of a projectile from an aircraft at controlled velocity and angle of attack. A battery of high-speed motion picture cameras record performance of the projectile as it enters the water. The underwater trajectory is determined by an array of underwater ears called hydrophones.

Following the launchings, Navy divers recover the torpedoes.



Visitors on Armed Forces Day will see hourly firings on the VAL.

WHAT IS NOTS?

The Naval Ordnance Test Station (NOTS) is the Navy's largest ordnance research center. The work here provides the Navy and other fighting forces of this country with superior weapons.

Our Mission

The principal objective of the Pasadena Annex of the Naval Ordnance Test Station is to provide underwater weapons systems for the Fleet through a program of research, development, and testing.

NOTS is able to carry ordnance developments through from inception of an idea to the completion of weapons ready for mass production. It has all the specialized facilities and technical personnel for conducting research, production, engineering, and pilot production. Some of the weapons that NOTS deals with are rockets, guided missiles, torpedoes, and aircraft fire-control systems.

Military-Civilian Teamwork

Smooth, coordinated teamwork is maintained between scientist, engineer, and military at NOTS. To develop modern weapons, such teamwork must be utilized.

It is the military man's job to advise and coordinate weapon development so as to guarantee that these weapons can be used by the Fleet with the greatest possible ease, efficiency, and effectiveness. It is the engineer's job to develop the weapon and supervise it through production. It is the scientist's job to supply basic data on which to develop the weapons.

When one of the team comes up with a new idea for a weapon, between them they can be sure that the idea is well-grounded scientifically, is developed on sound engineering principles, and will give the Fleet what it needs. Such a three-man team pays off not only in efficiency but in mutual stimulation among all concerned.

Locations

The Naval Ordnance Test Station is located in a number of different physical locations. The main facility, covering over 1,000 square miles, is 155 miles northeast of Los Angeles in the northwestern part of the Mojave Desert.

In the vicinity of Pasadena, there are several NOTS facilities known collectively as the Pasadena Annex. The Pasadena Annex is the operational center for NOTS in underwater ordnance work.

Located at the Morris Dam Test Range, near Azusa, are such facilities as the Variable-Angle Launcher, shops, test pits, and laboratories for the underwater propulsion applied research groups.

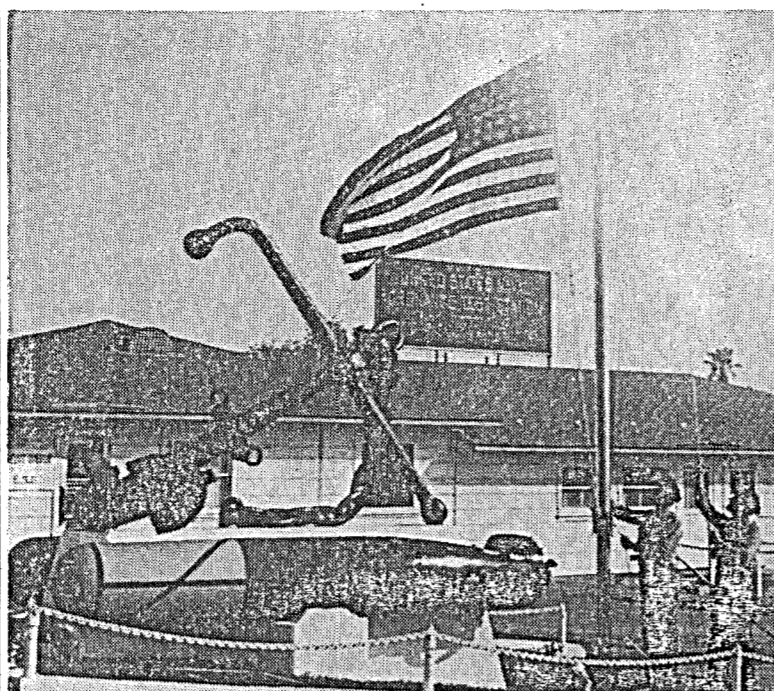
Here, test stands for model performance studies provide facilities for final engineering and design work on new weapon systems and components.

Foothill Headquarters

At 3202 E. Foothill Boulevard in Pasadena are the headquarters of Pasadena Annex. Here also are located the Hydroballistics Laboratory, the Structures Laboratory, the Hydrodynamic Simulator, the Headquarters of the Underwater Ordnance Department, and divisions of the Engineering, Public Works, Supply, and Personnel Departments, as well as the Command Administration Division for Pasadena Annex.

Sea Ranges

Underwater and air-to-air-rocket tests are tested in extensive deep-water facilities at San Clemente Island, sixty miles off the California coast, and on a sea range operated from a base located at the U.S. Naval Station, Long Beach.



PASADENA ANNEX—There are several NOTS facilities known collectively as the Pasadena Annex. Major parts of the Pasadena Annex include the Foothill Plant in Pasadena (shown above), which is the headquarters and chief work area for the Annex; the Morris Dam Test Range, which is used for torpedo water-entry and underwater-trajectory studies; and specialized facilities at Long Beach and San Clemente Island for sea-range tests.

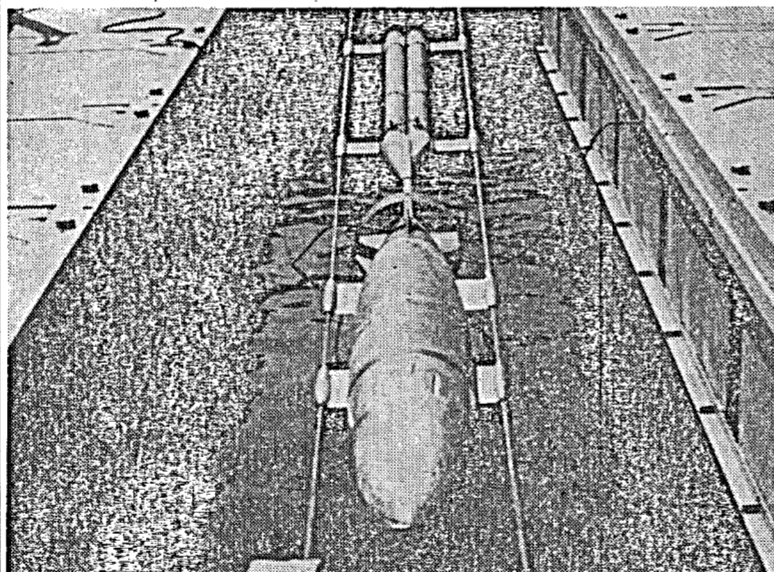
WELCOME ABOARD

We of the Naval Ordnance Test Station welcome each of you to the Morris Dam Test Range. You are seeing part of the Navy team dedicated to research and development of inexpensive but hard-hitting weapons for your Fleet. Through the continuous efforts of Navy personnel and civilian scientists here and at a handful of similar stations, your Navy is kept abreast of the nuclear age.

Once a year, we have the opportunity to welcome you aboard. There is much that cannot be shown; in fact, all the details of the latest and most dramatic underwater weapons must be kept under a security cloak. However, you can see many of the research tools used and meet some of the men who use them. We hope you enjoy your visit.

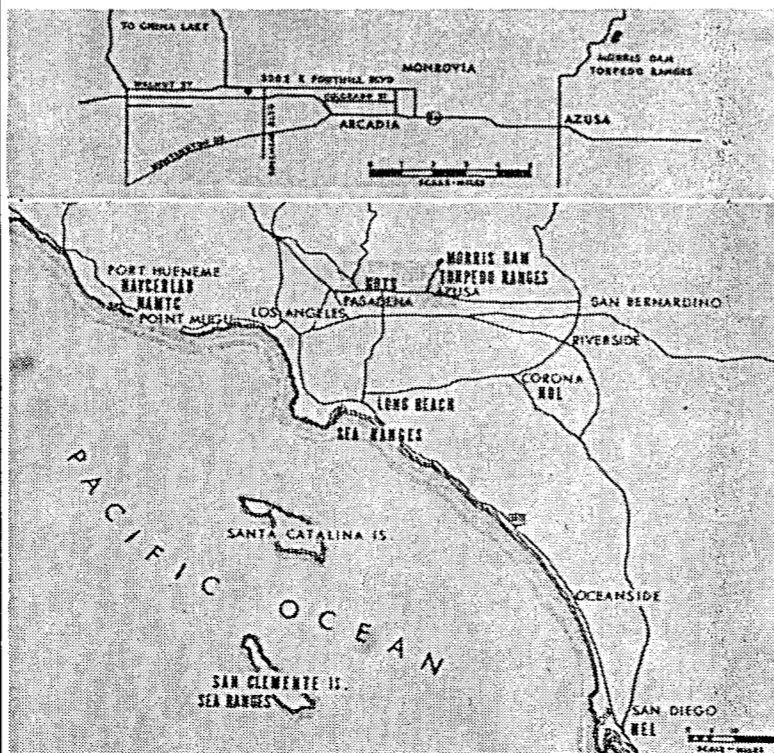
J. J. O'BRIEN
Commander, USN
Officer in Charge
Pasadena Annex

D. J. WILCOX
Head, Underwater Ordnance
Department



UNDERWATER CABLEWAY—This is a device used for underwater testing of captive torpedoes. This cableway is about one-half mile long, and it operates at a depth of about 60 feet.

Pasadena Annex and other Naval Activities



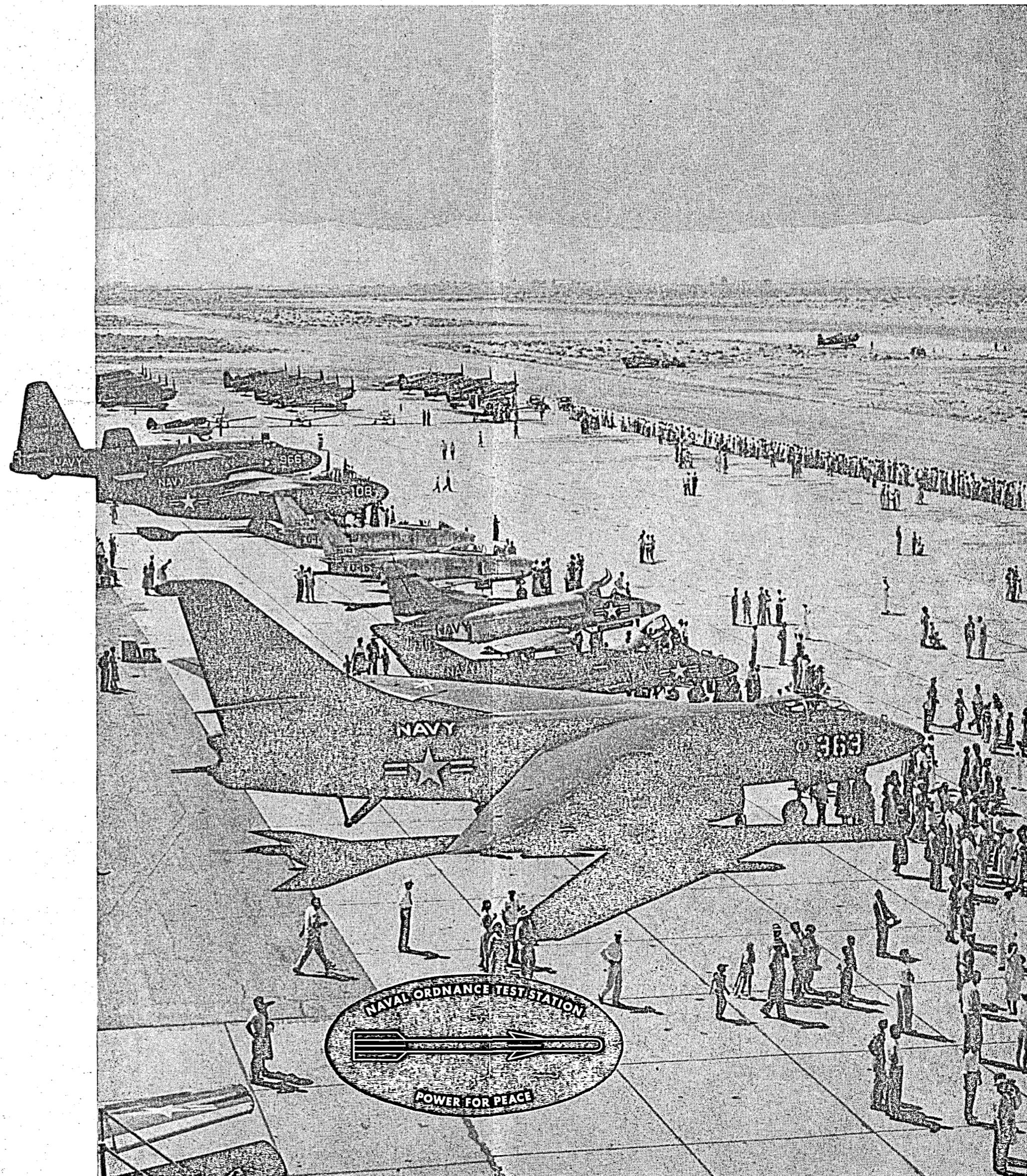
ROCKETEER

SOUVENIR EDITION

ARMED FORCES DAY

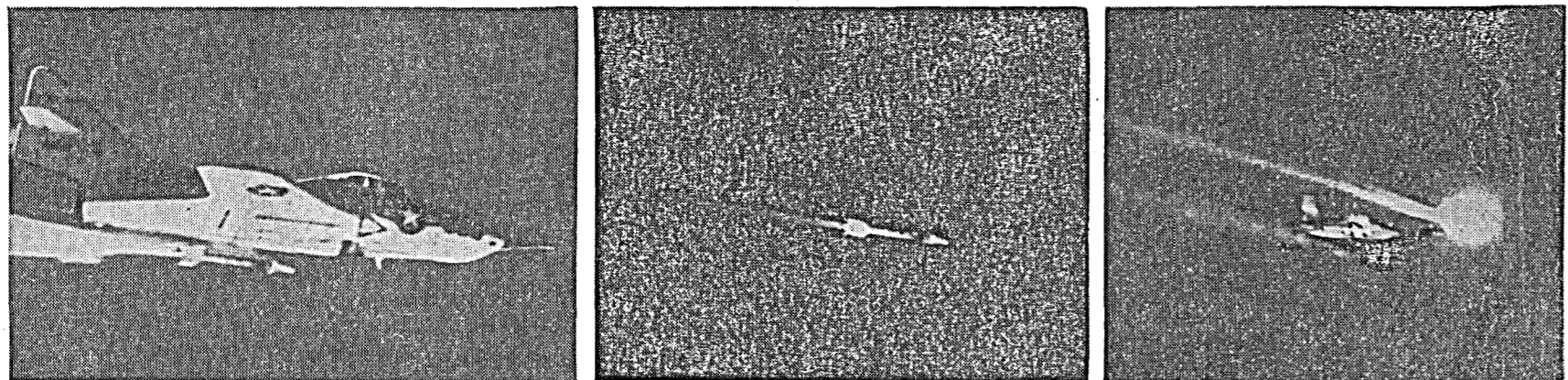
MAY 18, 1957

CHINA LAKE, CALIFORNIA

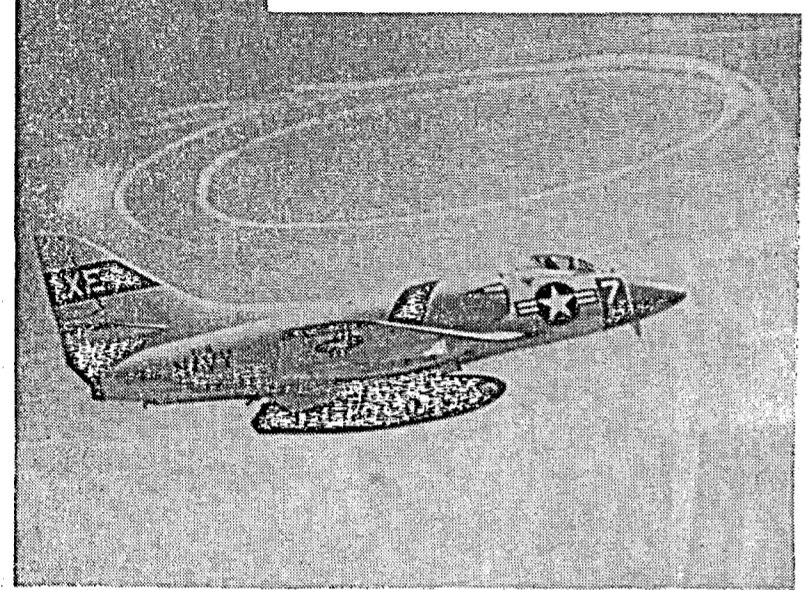


Navy's Air Power for Peace...

Missile
Away

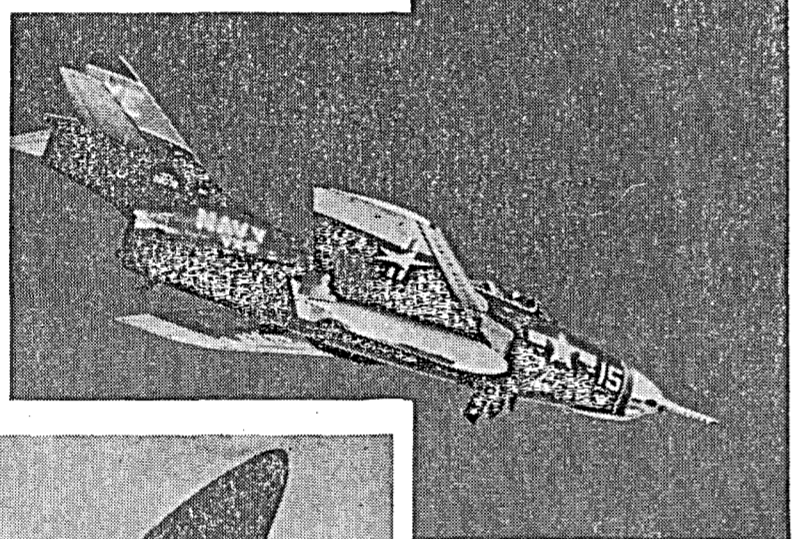


ANOTHER HIT—The deadly Sidewinder air-to-air guided missile streaks away from the wing of an F9F-8 "Cougar" jet fighter, follows its prey, and explodes on the wing of an F6F "Drone" target plane.

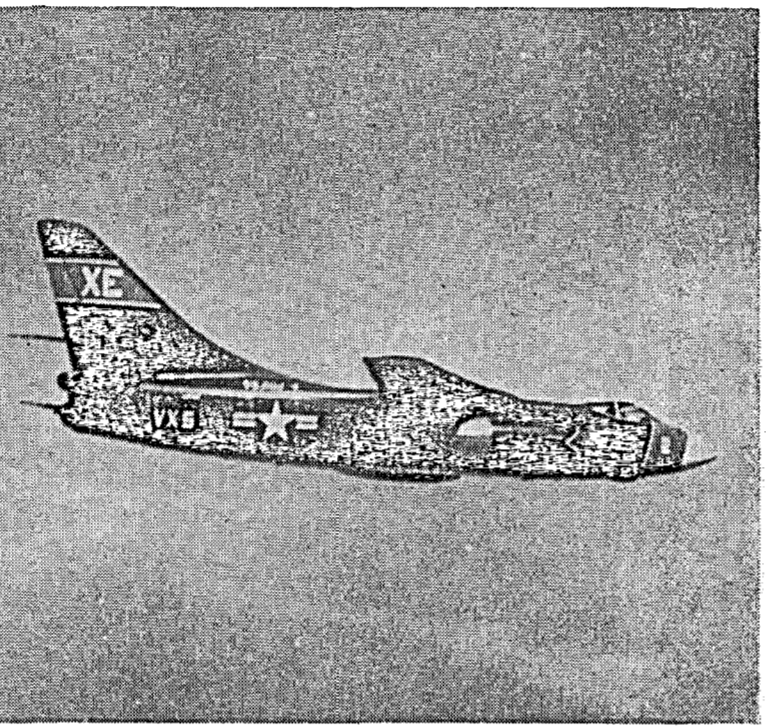


A4D Skyhawk

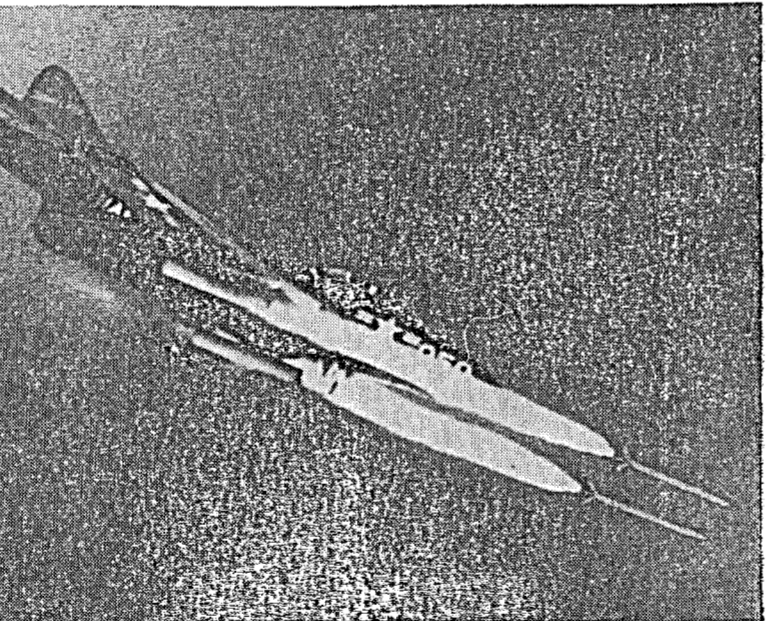
Loft
Bombing
At
NOTS



A3D Skywarrior, Navy's carrier-based bomber.

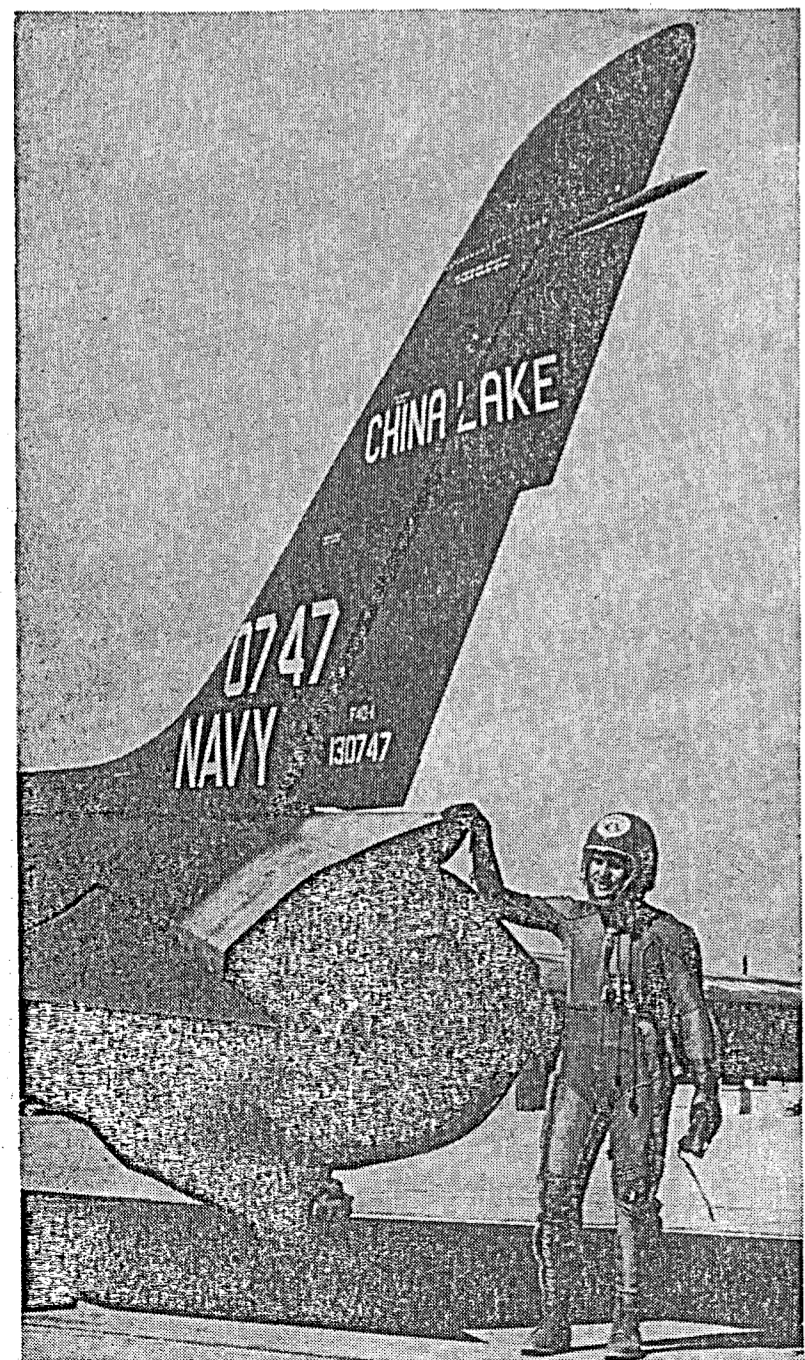


F9F Cougar on a loft bombing mission.



F9F Cougar firing Zuni, an air-to-ground rocket.

ZUNI
Rocket
Firing

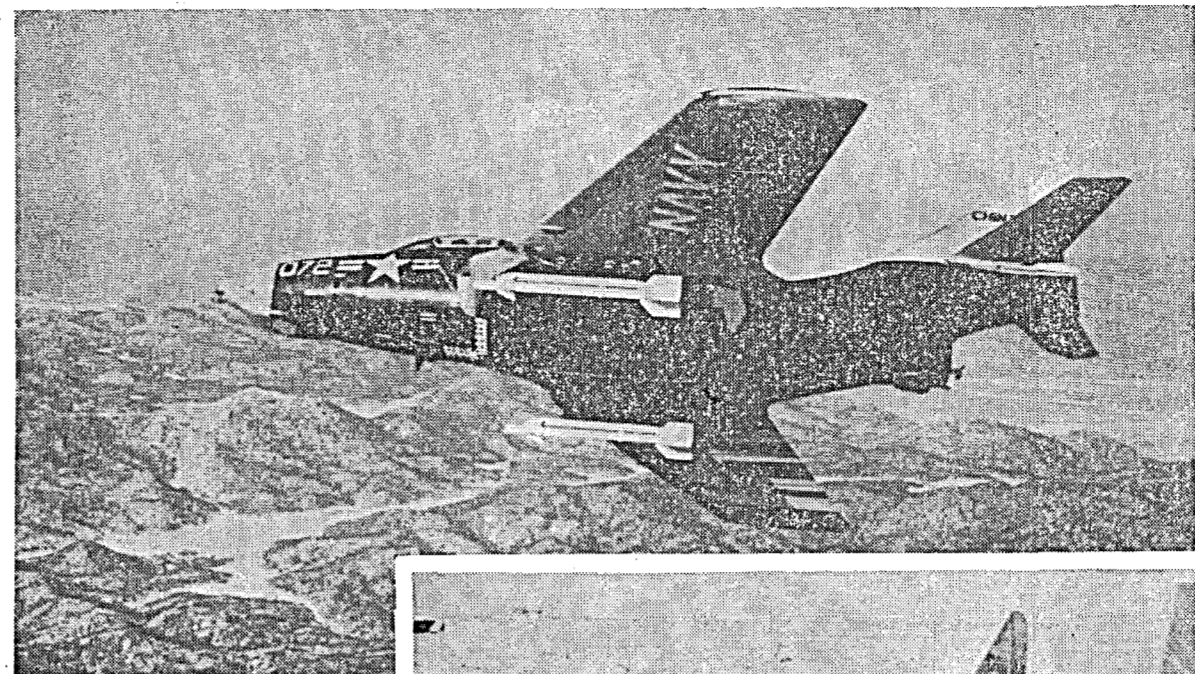


SPACE MAN—Lt. Cdr. G. A. Tierney in a high altitude space suit shown near the afterburner of an F4D "Sky-ray" jet fighter plane.



NATO VISITORS—Recent visitors to China Lake were the senior military officers of the 14 member-nations of NATO. Shown here are the Portuguese representatives with Major B. A. Rushlow of the Guided Missile Test Unit.

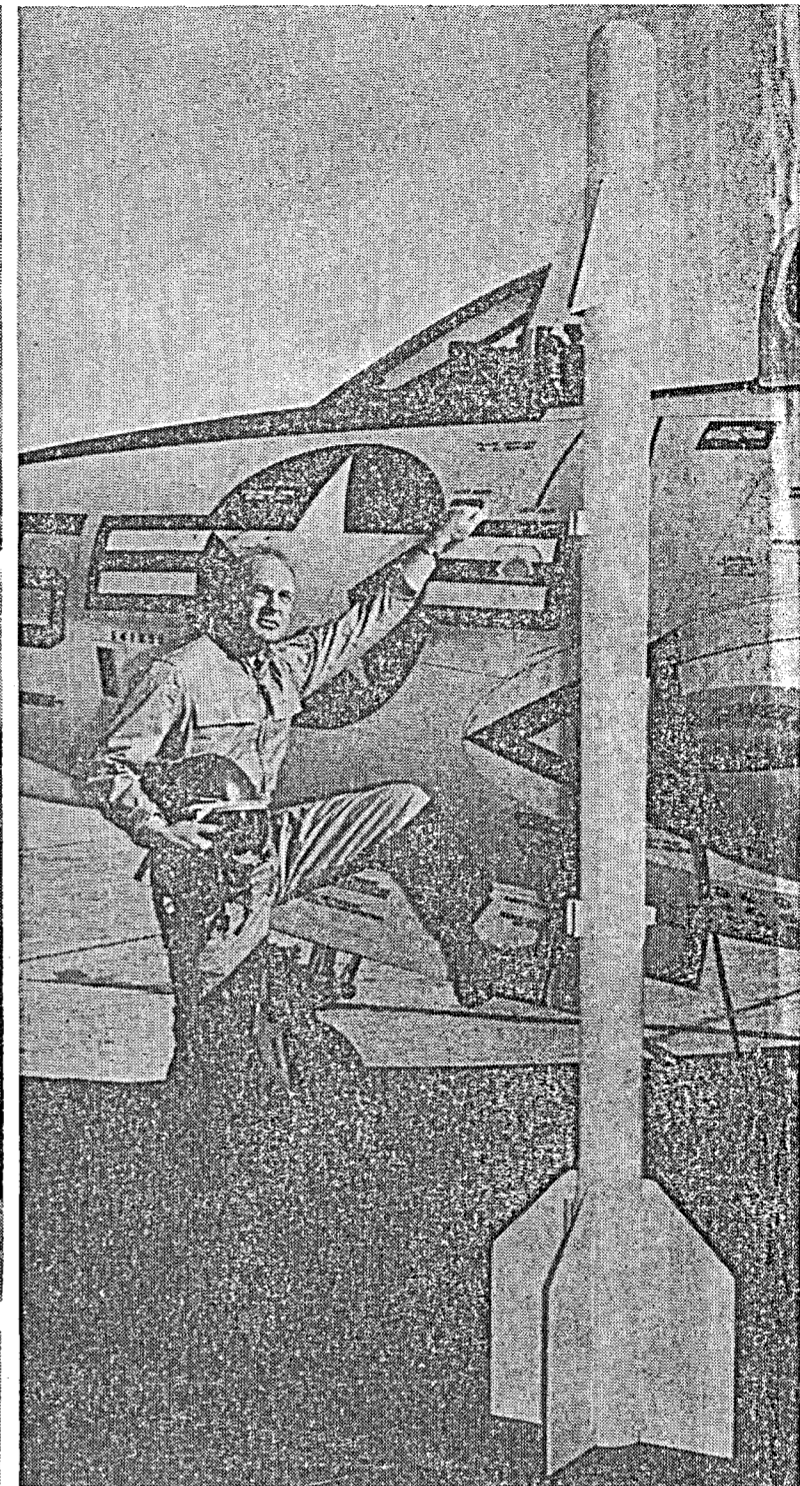
NOTS Shows Work Done for Defense



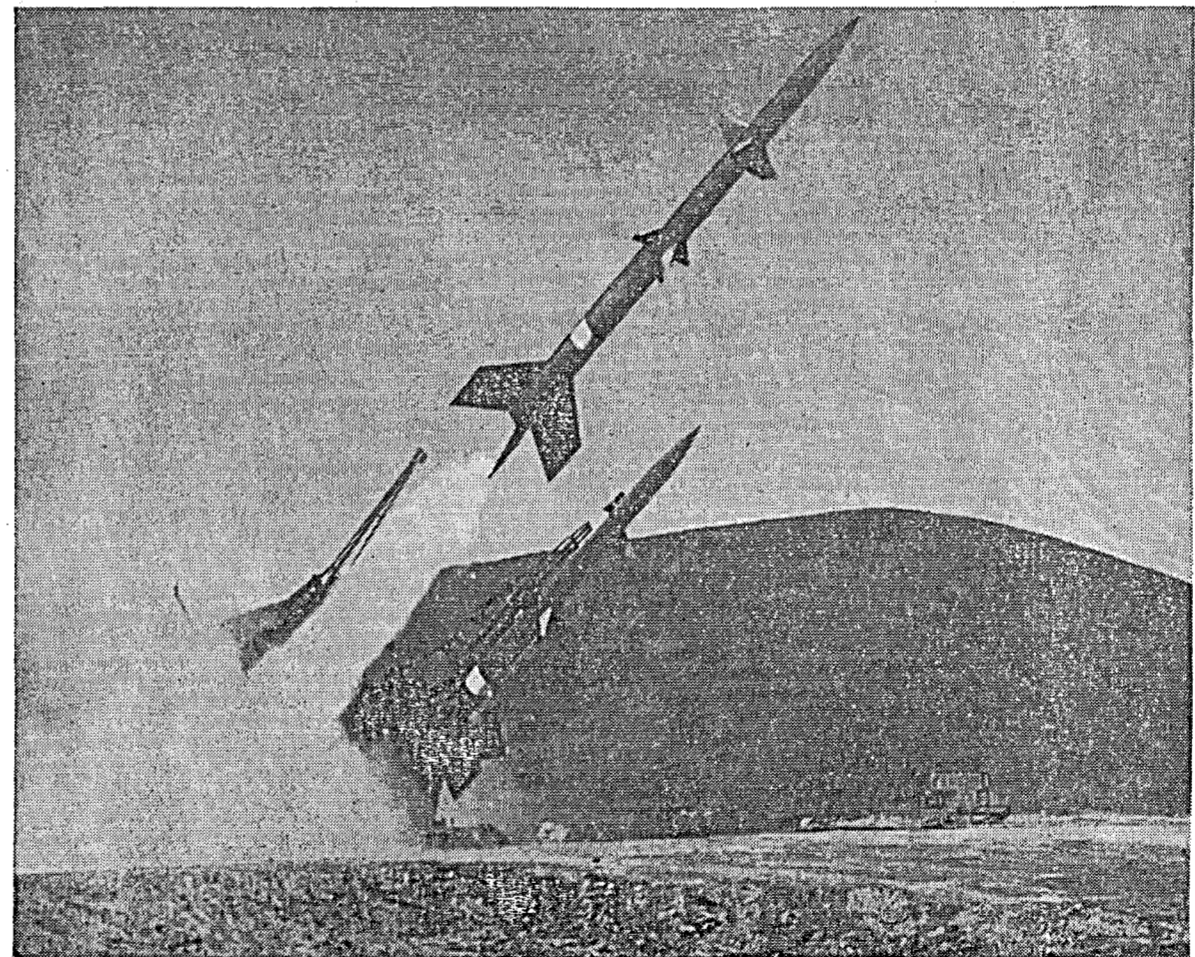
NOTS

Developed

Sidewinder



COMMANDER of the Naval Ordnance Test Station, Capt. F. L. Ashworth, is shown with the Station's famed development, the Sidewinder air-to-air guided missile which is now operational in the Fleet.



TERRIER missile tested here at NOTS by Guided Missile Unit No. 25 and the Marine Corps Guided Missile Test Unit.



WHIRLY-BIRD RESCUE demonstration will be featured today in the Armed Forces Day Air Show at the Naval Air Facility.

SNORT—The Station's supersonic naval ordnance research track is shown testing a seat ejection system with the world's biggest track sled a 16,000-pound B58 bomber replica.

