

WACOM Christmas Event Scheduled



LUNCHEON PLANNED — Preparations get underway for the WACOM Christmas Boutique Luncheon to be held December 13 at the Officers' Club. From left to right are Donnie Goettig, Doris Sorge, Mary McMullen, Dee Hardy, Elaine West and Joan Bach. Christmas items, some of which are shown above, may be purchased following the luncheon. —Photo by PH1 Gary Bird

Seabees Invite Public To Ceremonies

A Pass in Review ceremony in connection with the Commandant, 11th Naval District Annual Inspection is scheduled for Saturday, December 3, at 8:30 a.m. LCdr. R. D. Malone, CEC, USNR, Commanding Officer, Construction Battalion Division 11-2, announced that the public is invited to attend the ceremonies which will be held in the parking lot east of the Enlisted Men's Club on Blandy Avenue. Capt. H. J. Hartman, CEC, USN, Public Works Officer, will conduct the personnel inspection.

Library Display Featuring Autos

Models of current cars dramatize the Station Library's new display at the Station Theatre. The library has many books on cars including auto repair manuals for domestic and foreign cars, how to customize cars, sports cars, and safe driving as well as the personal experiences of such famous drivers as Stirling Moss. Three of the newest books on the subject of cars to be added to the library are: Shell book of Epic Motor Races, by Roberts; Unsafe at Any Speed, by Nader; and, Small Wonder, the amazing story of the Volkswagen, by Nelson. The library also has available two periodicals on the general subject of motoring, which are quite popular. They are Hot Rod and Motor Trend. For those interested in motorcycling there is The Book of Motorcycles, Trail Bikes and Scooters, by Artcander and A Treasury of Motorcycles of the World by Clymer. Also the periodical, Cycle World.

CROSSWORD PUZZLE

Crossword puzzle grid with clues for Across and Down. Includes a list of clues and a grid with some letters filled in.

Archery Tourney For Local Youth Set on Dec. 10-11

Young China Lake bowmen are invited to gather for the 15th Annual Junior Archers' Tournament set for Saturday and Sunday, Dec. 10 and 11, at Joe Stone's archery range, 57-B Rowe St. Contestants will be China Lake marksmen in the age groups 9 to 11 and 12 to 15, who have participated in the elementary school archer program or in Stone's year-around archery program during the year. They will let fly for first, second and third - place trophies for each age group, donated by the China Lake Bridge Unit of the American Contract Bridge League. Further information is available from Joe Stone at ext. 73082.



GARY K. FISHER

Fisher Awarded Masters Degree Through UCLA

Gary K. Fisher, Code 3072, has become the 41st Station employee to be granted the M.S. in Engineering by UCLA through the Off-Campus Program at China Lake. His degree was awarded on the basis of his thesis which is titled, "Experimental Investigation of the Shock Response of a Uniform Beam Carrying a Spring Mass System." Fisher, a mechanical engineer, came to NOTS in January of 1963 from the Bethlehem Steel Company, Seattle, Washington. A native of Long Beach, California, he went to Oregon State College after serving a seven year hitch in the U.S. Navy. He was awarded the B.S. in Mechanical Engineering at Oregon State in 1959. The Fishers, including wife Susan and three children, live at 58-B Rowe Street.

SHOWBOAT

Friday, November 25: Assault on a Queen (106 Min.), Frank Sinatra, Verna Lisa. Saturday, November 26: Call Me Swanna (103 Min.), Bob Hope. Sunday, November 27: This Property is Condemned (110 Min.), Natalie Wood, Robert Redford. Tuesday, November 29: Concert: Rosalyn Turek - 8:15 p.m. Wednesday, November 30: In Harm's Way (159 Min.), John Wayne, Kirk Douglas. Thursday-Friday, December 1-2: The Ten Commandments (220 Min.), Charlton Heston, Yul Brynner, Debra Paget.

Nurses To Hear Talk at Meeting

Dr. David Jahnsman of the Drummond Medical Clinic is scheduled to speak to members of the Indian Wells Valley Nurses Club at their meeting in the Clinic at 7:30 p.m. Monday, Nov. 28. Dr. Jahnsman is to discuss various types of arthritis at the meeting. All nurses in the Valley are invited to attend.

Bake Sale Is Set

The Rosary Altar Sodality of the NOTS Catholic Parish will hold a Bake Sale Friday December 2, from 9 a.m. until 6 p.m. in front of Von's Market. Women from the entire congregation are cooperating in this extended effort to raise funds for the Blessed Sacrament Chapel Station's of the Cross.

Aetna Insurance Man Will Visit Station

Howard Keenan, a representative from Aetna Insurance is scheduled to be aboard the Station on Monday and Tuesday of next week, November 28 and 29. He will be available for consultation at the Community Center from 9 a.m. to 4:30 p.m., according to J. T. Haycock, Acting Head, Employee Management Relations.

GEBA Assessment 121 Due for Death Of Frank G. Campbell

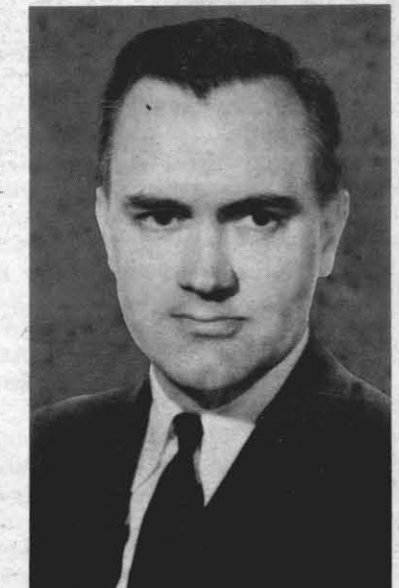
Members of GEBA-CLMAS are informed that assessments number 121 and 49 are now due as a result of the death of Frank G. Campbell, a retired employee of the Rehab. Dept. who died in the Ridgecrest Hospital November 16. Payments of \$1.20 may be mailed to Joseph M. Becker, Secretary - Treasurer, at 77-B Renshaw, China Lake.

GEBA Assessment 120 Waived for Death Of Adrian M. Davy

No assessments will be levied due to the death of GEBA-CLMAS member Adrian M. Davy, retired employee of Roads and Grounds Dept. Secretary - Treasurer Joseph M. Becker announced that Davy died Saturday, November 5, at San Bernardino.

Dr. Goddard To Be Speaker At AOA Banquet

Annual Banquet Set for Nov. 30 At Officers Club



DR. FRANK E. GODDARD JR.

Dr. Frank E. Goddard, Jr., will be the subject speaker — "Space Exploration and the JPL Role" — at the Annual Banquet and Installation of Officers of the China Lake Chapter, American Ordnance Association on Wednesday, November 30 at the Commissioned Officers' Club.

Dr. Goddard received his B.S. degree in Aeronautics in 1937 from MIT and his Ph.D. in Aeronautics from the California Institute of Technology.

Following graduation he became associated with the Consolidated Aircraft Corp. in San Diego as an aerodynamicist. Later he joined the Glenn L. Martin Co. of Baltimore as head of the Aerodynamics Research Group. After seven years with Martin, he accepted the post of staff engineer in the Naval Supersonic Laboratory at MIT.

Dr. Goddard joined the staff of the Jet Propulsion Laboratory in 1949 as Chief of the High-Speed Wind Tunnel Section. In this position, he was responsible for the JPL program in aerodynamic research and high-speed wind tunnel operation. At the present time he is the Assistant Director for Research and Advanced Development.

A social hour will be held at 6:30 p.m., and a Prime Rib dinner will follow at 7:30 p.m. Tickets at \$3.75 per person will be on sale at the door, however prior reservations should be made by calling Code 002, extension 71635.



Vol. XXI, No. 47 Naval Ordnance Test Station, China Lake, California Friday, Nov. 25, 1966

Rock Site Studies See Man Installed Under Sea Floor

The rich, vast and relatively unexplored "inner spaces" of the earth's oceans are rapidly gathering public interest as an exciting new frontier for exploration and exploitation, and as new wealth and new uses of the oceans are searched out, a challenging concept for providing working outposts is coming under study. This latest of several concepts for achieving undersea installations, called "Rock Site," calls for constructing spacious, self-supporting facilities under the bottom of the sea. The Rock Site concept is now being studied at NOTS under the leadership of Dr. Carl Austin, of the Research Department.

Working Undersea Dr. Austin explains that a Rock Site installation would consist of a room or series of rooms excavated within the bedrock beneath the sea floor, and points out that such installations have already existed for decades, established by the mining industry to reach offshore mineral deposits. He offers, to show the practicality of the Rock Site concept, the example of a long-established iron mining operation off the eastern coast of Canada with seven and a half square miles of permanent floor space beneath the sea floor. Connected by a main access tunnel to the land, it includes a complete machine shop among its facilities.

Camera To Canvas Subject of Meet

The Desert Art League will present Frederick L. Richards, editor of the Rocketeer, at its Monday meeting, November 28, at 8 p.m., Community Center, after a short business meeting conducted by Maxine Booty, club president. Richards' talk, "From Camera to Canvas," is designed to explain how color slides aid artists and illustrators in composing paintings. Before coming to China Lake, Richards was associated with the advertising profession in the Los Angeles area for many years as an art director and consultant in the graphic arts field. His work was exhibited in the Museum of Modern Art, New York, and at the Art Directors Club, Los Angeles.

Plane Capt. of Month Recognized at NAF

A new honor has recently been created at NAF to honor, each month, the best of a class of Very Important People who keep the Navy in the air — the plane captains. Last month — October — was the first month for this new program called "Plane Captain of the Month." A different man each month will be selected at NAF, based on the estimates of the pilots, the Line Branch Chief Petty Officer, the Hotline Leading Petty Officer and the Line Branch Officer.



ADJ3 JERRY R. HOWARD ADJ3 CHARLES M. FAUBION

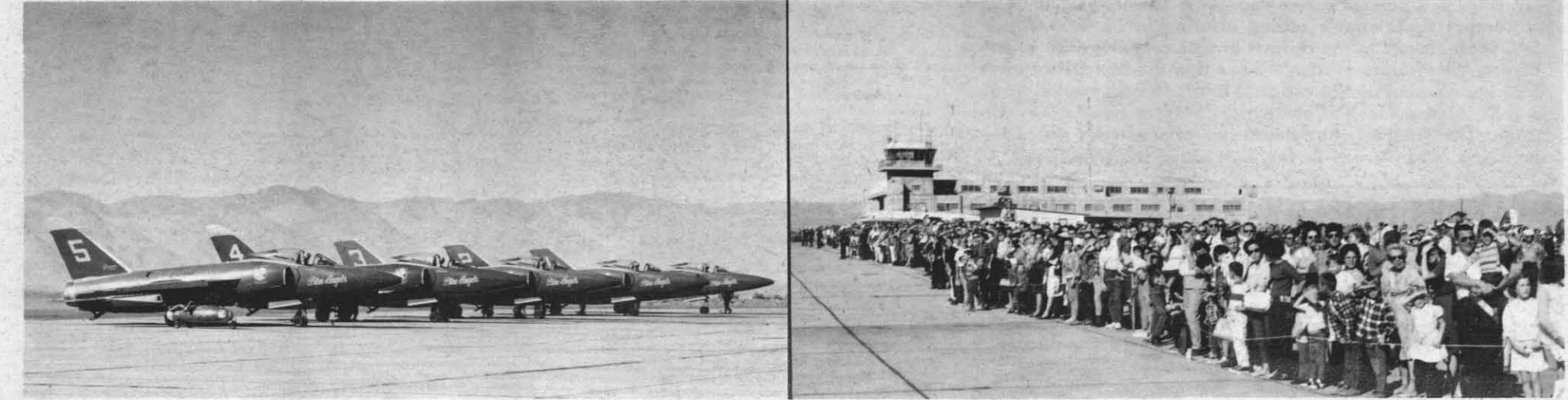
Plane Captain for October ADJ3 Jerry R. Howard has served at NAF since January this year and is plane captain of a TF-10-B "Skyknight." He came to NOTS from ADJ "A" School at Memphis, and brought his wife Gwendolyn and son Jerry, Jr., 2. Howard, a native of Sharon, Tennessee, is an active sports enthusiast at China Lake and plays football with the NAF Chargers, who traveled to Long Beach last Saturday for 11th Naval District tournament playoffs. He is also a boxer and fight enthusiast. Plane Captain for November ADJ3 Charles M. Faubion, an

F-8 plane captain, received the new NAF honor for November. He has been at NOTS since May of last year, upon completing recruit training at San Diego. Faubion is a native of Pampa, Texas, and calls Breckenridge, where he attended high school, his home. He is a hunter and fisherman on free weekends here, in which he takes full advantage of his bachelor status. He keeps his eye on continuing his formal education, and plans one day to attend the Abilene Commercial Business College. His brother, Billy Don, expects to receive his Ph.D. in chemistry from Texas A&M in January, 1967.

Unlighted Bikes Are Night Hazard

The number of reports of youngsters riding unlighted bicycles after dark is increasing. With Christmas coming on, and the certainty that many bicycles will be given as gifts, parents should make the young riders aware of the dangers of riding at dusk. They should not be allowed to ride after dark unless the bicycles are equipped for nighttime riding. Each bicycle must be equipped with an approved headlight and rear reflector or tail light. Liberal application of reflective tape on the rear fender and on the sides of the

frame will give additional protection. Bicycle riders are governed by the same rules as automobile drivers. The following is a list of the "rules-of-the-road" that the parent should review with the rider. 1. Always ride on the right side of the roadway in the same direction as other traffic, in single file. While in this lane, watch carefully for cars about to pull from the curb. If someone is behind the wheel of a parked car, be especially careful. 2. Be familiar with standard



See Page Three Story On Blue Angels Appearance At NAF

Form for placing a stamp: From _____ TO _____ PLACE STAMP HERE

'Rock Site' Forsees Manned Stations Under Ocean Floor

Dr. Carl Austin Gives Description of Idea

(Continued from Page 1) calls for the use of bottom-sitting structures, either fully pre-fabricated or assembled on the bottom.

"An installation with several square miles of useful floor beneath 1,100 feet of rock," says Dr. Austin, pointing to the example of the Canadian mine, "could be a major community with full family and recreational living facilities as comfortable as those in any city building.

"Located along the mid-Atlantic ridge or on selected seamounts (undersea plateaus) elsewhere, the potential for research from this type of site becomes large, since the site, though immobile, is also independent of surface weather conditions," he adds.

Potential of Rock Site

Dr. Austin lists many advantages of the Rock Site concept over others, and recognizes some of the critical responses likely to be encountered by the challenging idea.

"As soon as someone proposes to do something differently," he notes, "a flurry of argument breaks forth as to 'why,' and 'what good is it,' and 'obviously, it is impossible or it would have been done already.' These discussions are healthy for all concerned as they take some of the shine off of new ideas and they get other persons besides the original idea-formers involved in contributing thoughts, problems, and solutions in support of the original concept."

Aside from possible use as military stations or bases for exploration, Dr. Austin points out that a Rock Site installation could have great value for commerce and industry.

The industrial implications of a successful Rock Site installation, he says, would be far reaching and of great national importance by providing permanent petroleum drilling sites not only on the deep continental shelf but in areas beneath both intermittent and permanent ice cover. These same types of drilling sites could serve for the production of geothermal steam and brine, enabling in the near future the exploitation of deposits such as those now suspected in the floor of the Red Sea.

For hard minerals productions, Rock Site installations would enable undersea mining to be conducted beneath a considerable depth of water and great distances offshore. By the use of observation towers plus scrapers and dewatering locks, Rock Site mining installations would enable the mining of sea-floor nodules and offshore placer deposits without the constant hazards of wind and wave damage in surface-ship-type operations.

"Seaports" and Power

Rock Site, he proposes, could convert any coastline to a deep water port facility capable of handling petroleum products and mineral slurries to and from surface ships by means of hoses, with present technology, and if submersible cargo vessels eventually result, other less easily transportable

cargoes could be handled as well.

Rock Site installations according to Dr. Austin, would make ideal offshore nuclear-power-plant sites using convective sea water cooling, and could provide the working space and power needed for undersea booster pumping plants for pipeline systems paralleling a coastline.

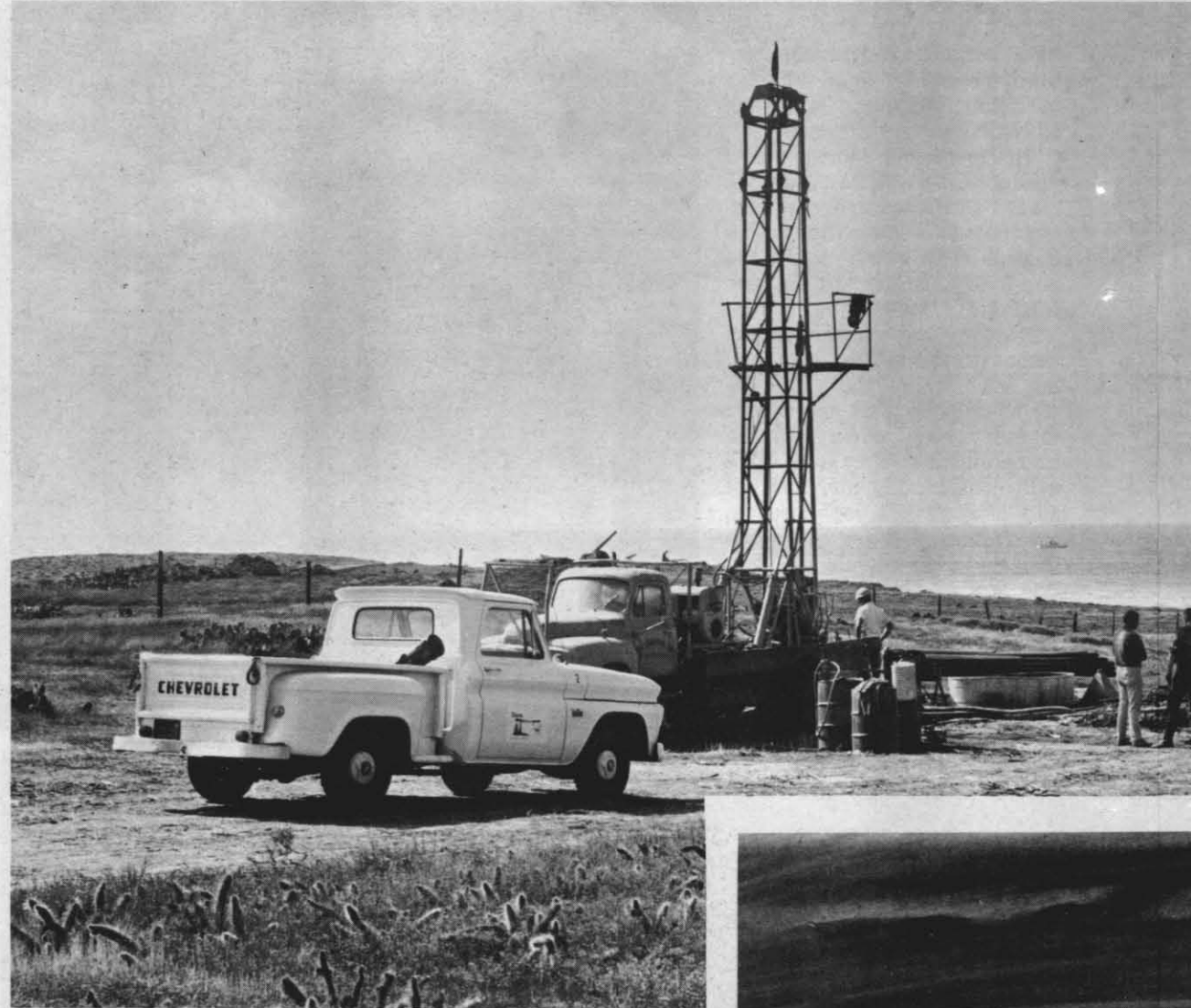
Dr. Austin emphasizes that such undersea mining can be done using tools and techniques already in wide use by industry, including tunnel boring machines.

Rock Site Compared

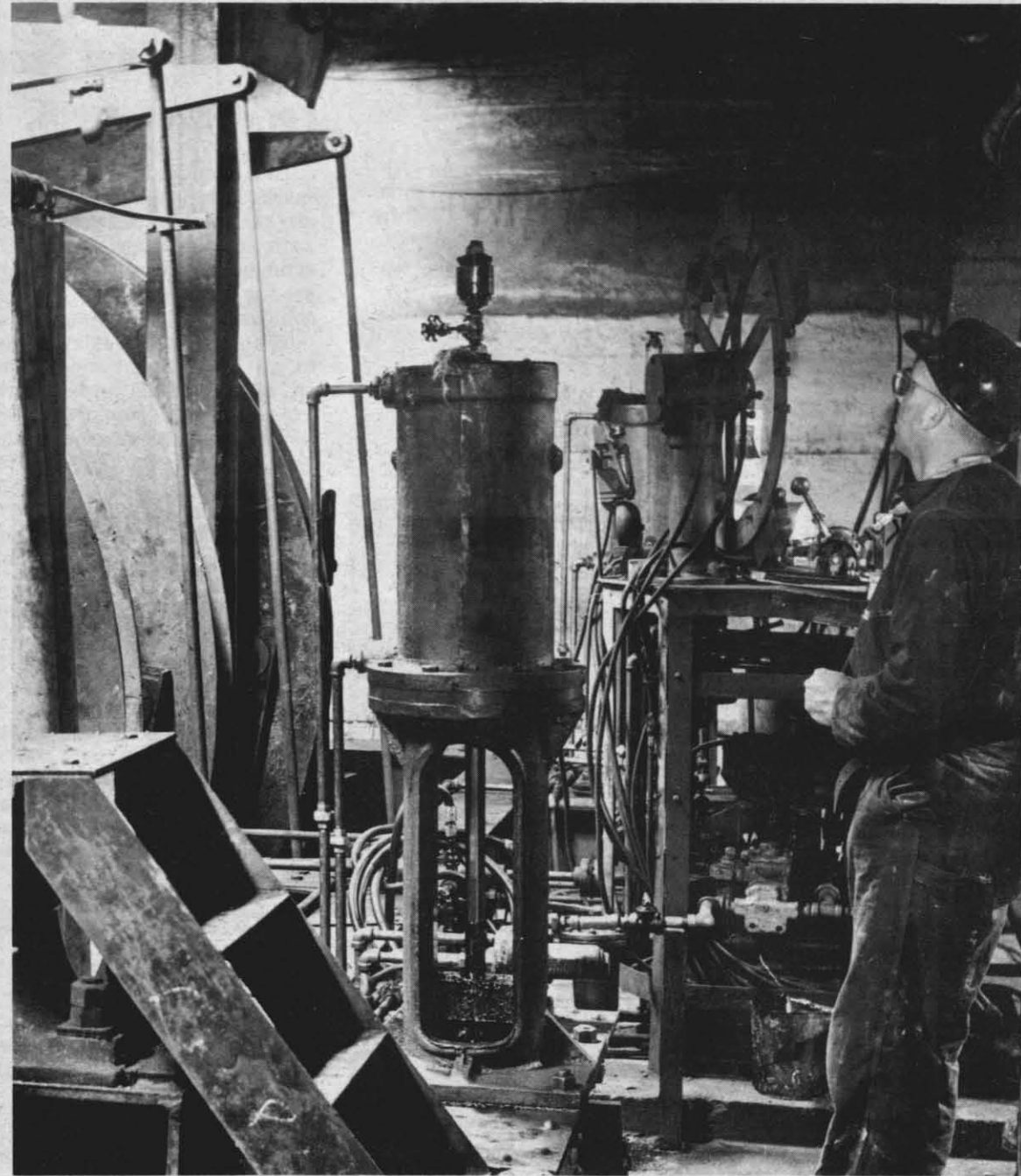
"As a government project, compared for example with many missile and space programs, the Rock Site concept of establishing permanent undersea installations does not appear to be highly expensive," he says. "Some of the advantages of the Rock Site method of sea-floor occupation over other types of sea-floor access and utilization are worth a specific mention."

Comparisons with other sea-base methods bring out many advantages of the Rock Site concept, in Dr. Austin's reckoning. Comparing Rock Site with surface-base methods such as the use of barges and platforms, he says that:

1. Weather and waves are not a hazard.
2. All equipment is acces-

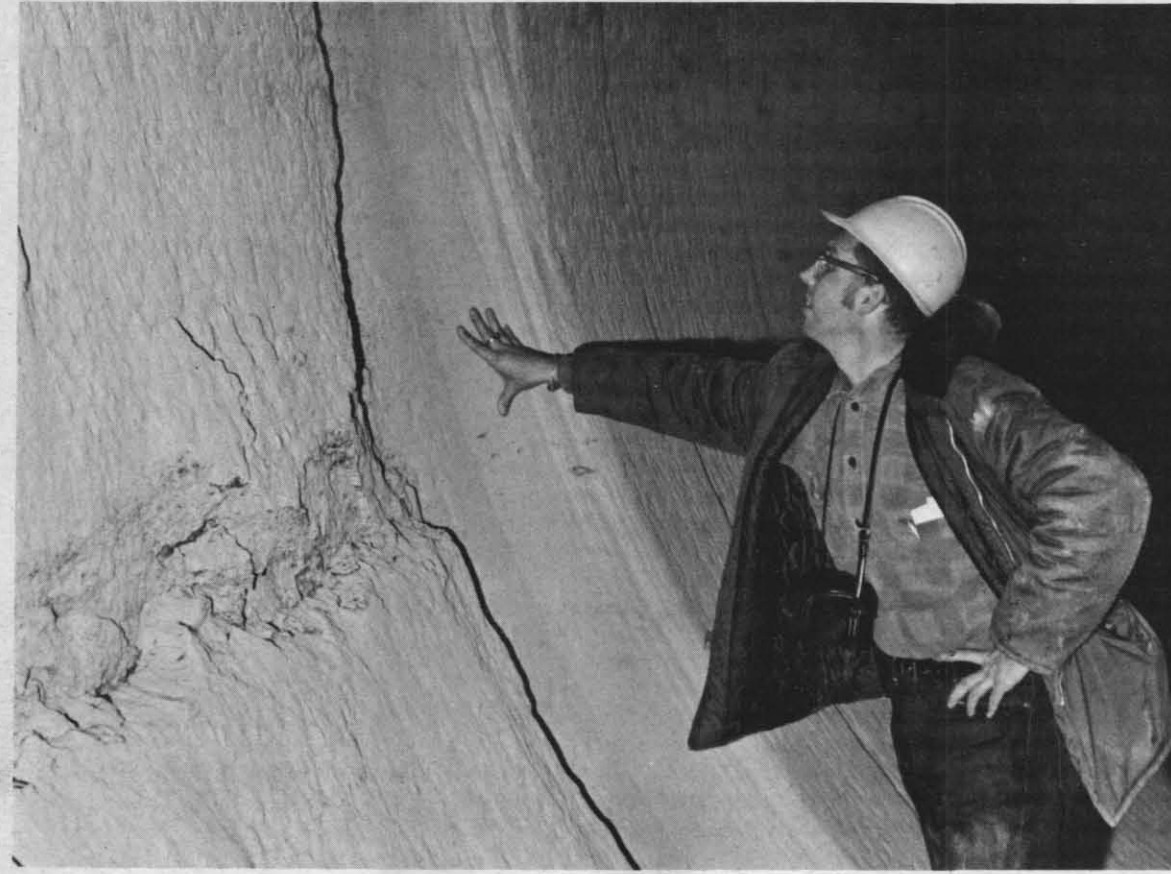


PROBING DEEP INTO SAN CLEMENTE — Core samples down to 1,000 feet are being taken here, at a shore location on San Clemente Island, to measure the feasibility of a Rock Site-type installation. Just offshore, other cores will be taken, not far from the place where the Greek freighter ran aground recently.

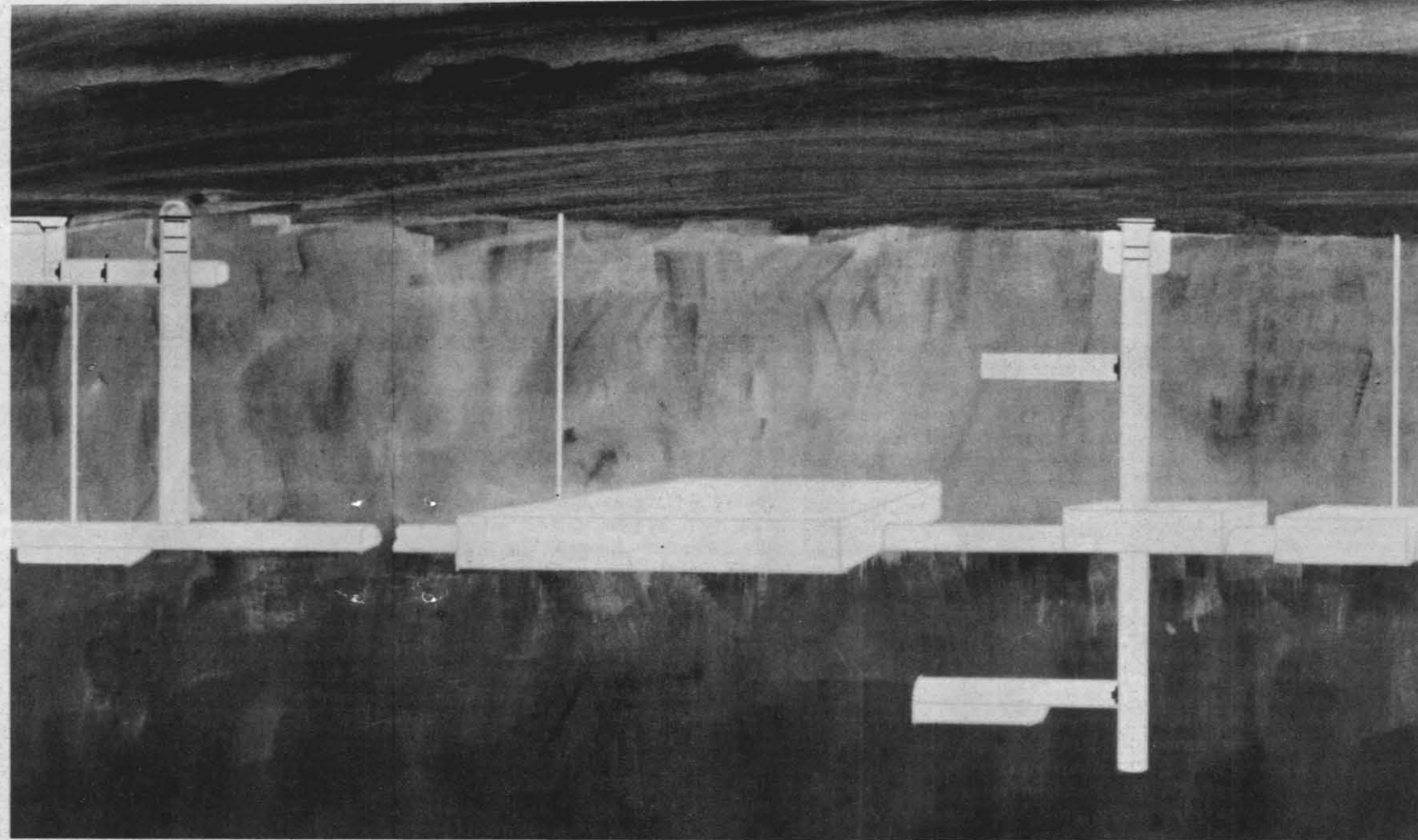


MACHINE SHOP IN THE SEA — Dr. Carl Austin watches operations in a hoist room, 300 feet below the sea floor, in a mine off

the coast of eastern Canada. The mine covers about 75 square miles of sea floor, and has thousands of miles of tunnels.



MODERN TUNNELLING — Dr. Carl Austin examines the side of a tunnel dug with a large diameter boring machine, without the use of air-contaminating explosives. The machine here passed from harder to softer rock.



ROCK SITE INSTALLATION — This isolated ocean-bottom site, in artist's conception, shows access lock (upper right), sumps, glass sphere observation dome and transportation lock for small vehicle operations (upper left) and watertight doors. Such a site could be equipped with a nuclear reactor, cooled by sea water, for power and life-support.



INDUSTRY UNDER THE SEA — Today, heavy machinery operates daily in many hundreds of square miles of undersea rooms and tunnels in mines around the world—

in dry, spacious safety. As it happens, the worst examples of mine flooding have occurred under dry land. Interest in manned installations bottom-side is gaining rapidly.

sible to ordinary technicians and laborers.

3. The working volume or space can be expanded cheaply to meet future operational needs, once the original installation is made.

4. The Rock Site installations can be placed at great depth beneath the sea floor; their openings can be numerous and scattered; and access to the installation is absolutely controlled by the base occupants. If desired, reactor waste heat can be internally stored or dissipated into the earth by means of fluid injection into deep, permeable zones in order to prevent an undesirable heating of the surrounding water. With near the sea-floor installations, some heat will be needed to maintain a comfortable installation, since rocks near the sea floor will probably be at or near the deep ocean temperature of only a degree or two centigrade.

5. Surface hazards such as accidental ship-caused damage and floating hazards are avoided.

With respect to bottom-squatting structures, he says, Rock Site installations show the following advantages:

1. Water mass "weather" is not a problem for Rock Site installations but people working on the sea floor will have to contend with currents, shear on structures, and numerous other water "weather" problems.

2. The working volume is "thick-skinned," and can be quite large, avoiding the tendency for "thin-skinned" struc-

tures to suffer catastrophic flooding and high leakage rates given even minor structural damage. A leak developing through several hundred feet of rock can be grouted from within (injected with a cementing material) by means of drill holes, a leak developing through an inch or two of steel is apt to be hard to control, especially from inside.

3. Damage from accidental ship activities is far less.

4. All facilities and equipment except the outside of the lock-tube door are accessible at all times to ordinary technicians and laborers.

5. Damage from drift ice and ice-flow groundings is avoided.

6. Structures within the sea floor can easily be made large and comfortable enough to permit the quartering of crews and their families for extended periods of time, and can be made large enough to serve as supply and repair depots for large submersibles.

How to Install

According to Dr. Austin's Rock Site studies, the undersea installations could be started from shore sites, as with present day mining operations, or from ship-mounted drilling rigs. The ships could be either surface vessels or submersibles, he forsees.

Varying with the weather conditions or depths or other conditions found at a Rock Site location, entrance to installations isolated from the land could be accomplished in two ways, he proposes.

The site could be connected to a surface entrance hatch by an "air umbilical" tube, or locks mounted on the sea floor could be provided for submersibles, or both could be used. The air umbilical access tube could also be hinged at the sea floor, to swing downward, out of the way of storms and ice.

Dr. Austin points out that at present, the best examples of mine floodings and of mine operations within zones of high water pressures are to be found on land, with one of the most noteworthy under the desert in central Nevada.

Research Proceeds

NOTS is now progressing with drilling and geophysical operations to determine the nature of the sea floor geology in a promising type of offshore location off San Clemente Island. This project will be reported later in the Rocketeer.

Dr. Austin observes that interest and efforts are building up rapidly toward the day when the oceans and the riches beneath them will be opened to man's use.

"Permanent manned installations at the bottom of the sea is a goal that is being actively pursued by many nations, by many governmental agencies within our own nation, and by various industrial concerns," he observes.

"Furthermore, the Rock Site concept competes with no existing Navy projects," he adds, "rather it complements many. In particular, Rock Site-type installations can provide the working spaces from which saturated diving and submersible technology can be exploited to their fullest, freed at last from the problems of surface support and rough weather."

NOTS Pasadena

VIRGINIA E. LIBBY — EXT. 638



PRINCESS BARBARA, posing with her parents, Jo and Jim Beckley, holds the official bouquet of roses received when she was selected as a 1967 Tournament of Roses Princess. —Photo by PH2 R. W. Spencer

Beauties Abound At Pasadena

Rose Princesses, past and present, are part of the NOTS Pasadena family. Barbara Beckley, daughter of Jim Beckley (Planner and Estimator in P80941) and his wife, Jo, was recently selected as one of the six Rose Princesses who will reign with Queen Barbara Hewitt during the 78th Tournament of Roses festivities. Barbara celebrated her 20th birthday last week on November 17th.

Dianne La Lone, 19, Secretary for the Fire Control Branch, P8054, headed by Ed Perry, was a princess in last year's Royal Court.

Barbara, an "A" student in her sophomore year at Pasadena City College, is majoring in Business Administration and plans to finish her education at San Diego State.

A true Californian, she was born in Alhambra, attended the same grade school her mother attended and graduated from Alhambra High School as did her mother and father.

During her high school years, Barbara was active in La Estrellita, a Tri High Y Club; she was a delegate to Model Legislator in Sacramento in 1963 and 1964 (a YMCA Youth in Government Program); and as a graduation gift from her parents she qualified and participated in a 35-day tour of the United States as part of the YMCA American Heritage Tour.

At PCC Barbara was a Frosh Princess in 1965. Very active in the Association of Women Students, she served as Vice President during 1965-66 term and presently works with Publicity for that organization.

Dianne Merrill (before her marriage in June) is the daughter of Mr. and Mrs. John Merrill of Altadena. Also a native Californian Dianne was born in Pasadena. She attended John Muir High School and completed two years at Pasadena City College.

Combining studies with ex-



LOVELY DIANNE LA LONE—1966 Rose Princess, accomplishes her daily secretarial duties for the Fire Control Branch, P8054.

tra-curricular activities in high school, Dianne found time to be a Song Girl, she worked on the school Year Book and was a member of the "Z" Club, (a service organization). With Honors at Entrance, she held a scholarship to PCC.

In June of this year, she married Joel La Lone, culminating a four-year courtship. Dianne and Joel are presently continuing their education at Los Angeles State College. Both major in English in their Junior year.

For many years, NOTS has enjoyed a well deserved reputation of high caliber personnel and excellence in research and development of highly sophisticated antisubmarine weapons and underwater detection systems. With the two lovely young ladies as part of the NOTS family, we must now be convinced NOTS has beauty as well as brains.

George Washington was the only president who never lived in the White House. But he did choose the site and approved the design, the National Geographic says.

Milt's Marauders Hold Narrow Lead

BY RAY HANSON

Milt's Marauders, with 28 wins and 12 losses, hold a narrow three-game lead in the NOTS Wednesday night bowling league. The second-place Quiet Five are within a easy striking distance, however, with a record of 25-15. The third-place Low Bowls own a 23.5 - 16.5 mark, while the What-NOTS are fourth with 23-17. This league obviously will go right down to the last week, as usual, and any one of these teams could win it all. In fact, with 19 weeks to go, nobody's out of it yet!

High scores for the 10th week are as follows: team series, Cy's Cynics, 2912; team game, Channel Kats, 1052; men's series, Wayne Taggart, 628; women's series, Norma Sayre, 628; men's game, Ron Preston, 250; women's game, Lyn Herwig, 240.

O'Connell Retires From A 30-Year Naval Career



A PLAQUE stating his tour of duty with NOTS and a farewell handshake is received by CWO-4 William E. O'Connell (r) from Captain G. H. Lowe, Officer in Charge, Pasadena.

Retiring from a 30-year naval career on December 1, Chief Warrant Officer William E. O'Connell was feted at a farewell luncheon last Friday. O'Connell reported to NOTS in August 1965 from duty as B&M Division Machinist aboard the Guided Missile Cruiser, USS Providence (CLG-6). Previous to that he was with the U. S. Naval Shipyard, Long Beach, as a Ship Superintendent.

He entered the navy in September 1935 as an apprentice seaman and received his commission in 1944.

During his tour with NOTS, he performed as Waterfront Officer with duty at San Clemente Island.

Although born in Philadelphia, Pennsylvania, O'Connell considers San Pedro, California his home town. He received an AA degree from Compton Junior College.

O'Connell and his wife, Josephine, have a son, Michael, who teaches at Alexander Hamilton High School in Los Angeles and a daughter, Mary, who is a sophomore majoring in history at Harbor Junior College. Mary also plans to teach.

Military decorations awarded him for service to his country include Good Conduct, China Service, American Defense, American Theatre, Asiatic Pacific, World War II Victory, Navy Occupation, National Defense, Korean Service, United Nations, Korean Presidential Citation, and Philippine Liberation.

Following his retirement from the Navy, O'Connell will launch a new career with Westinghouse Electric Co. in Long Beach. The family will continue to reside in San Pedro.



BRITISH VISITOR — Francis S. Burt, Deputy Chief Scientific Officer at the Admiralty Research Laboratory, Teddington, England, (center), discusses programs of mutual interest on a recent visit to NOTS Pasadena with (l) Dr. J. W. Hoyt, Head Propulsion Division, and (r) William F. Madison of P8076.

Director of the Center for Computer Sciences and Technology, National Bureau of Standards, has been appointed Special Assistant to Secretary of the Navy.

Norman J. Ream fills position held by Howard W. Mer-

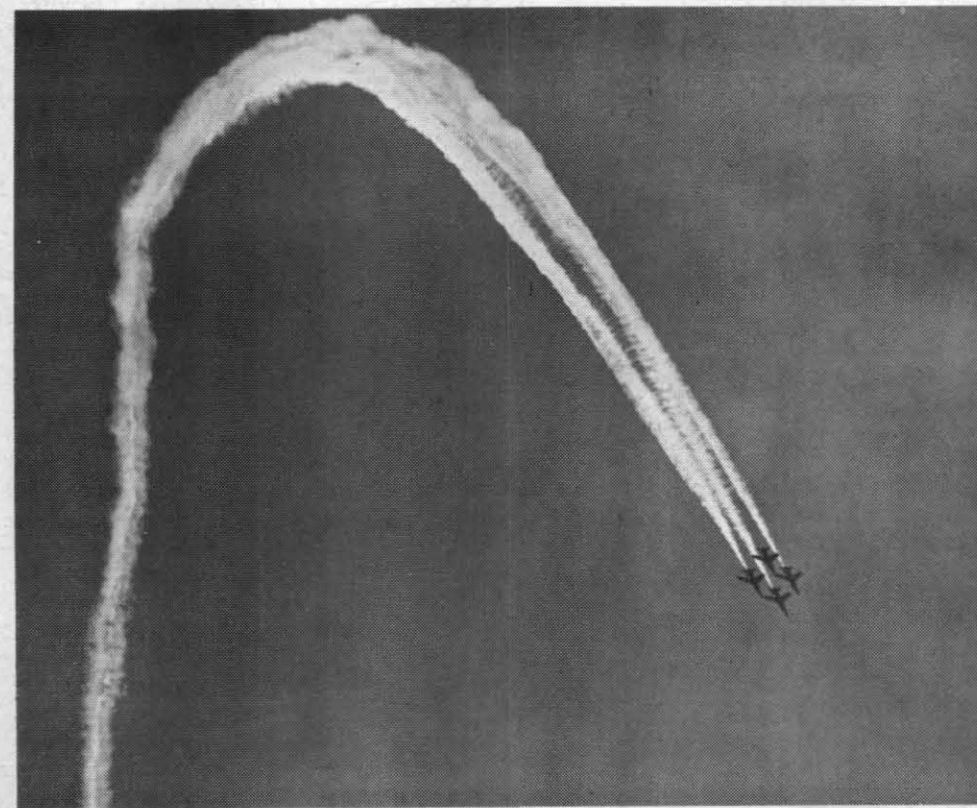
rill, who resigned in June. Mr. Ream will assist Navy Secretary on matters of planning and policy related to major Navy program areas in management systems, management services and automatic data processing.

Blue Angels Show Draws Large Crowd

In the 20 years since their organization, the Blue Angels have earned a worldwide reputation second to none for their precision flying, and last week at NAF was no different.

The Pensacola, Florida based group, headed by Cdr. Bob Aumack, thrilled hundreds during their 45 minute flight demonstration which made the non-flyer desirous and the professional envious.

Most of the 13 maneuvers demonstrated by the team during a show are the same basic maneuvers that are taught to every Navy pilot, with the exception that they are done with considerably more skill and of course, a lot closer to the ground. The team stresses that these maneuvers are routine and in no way constitute the term "stunt." There have been 87 Blue Angels since their start in 1946 with seven of them coming back for a second tour.



UP AND OVER—This appears to be the famous Diamond Roll. In this graceful roll, each Tiger is separated by only two to three feet. This maneuver became the Blue Angels' trademark early in their career.



REAL CROWD PLEASER — This is the final stage of the left Echelon Roll. This is a maneuver which the book says cannot be done. It has really established the Blue Angels as pilots' pilots. Note the vapor streaming from their wings in both pictures.



ANXIOUS VIEWERS — Wherever you find the Blue Angels putting on a show, you'll find hundreds and even thousands of very interested spectators. Such was the case at NAF last week, even though the famed

group could only spare 45 minutes. Although many had seen them before, it was always a pleasure to see them again. Eighty million have been thrilled since they started. —Photo by M. R. Reida, SA



THE TOP OF THE LINE — These are the seven men responsible for one of the most outstanding flight demonstration teams in the history of aviation. Listed from left to right with their plane number are: LCdr. Jack Cougar, USN, No. 8; Lt. Norm Gandia,

USN, No. 6; Capt. Fred Craig, USMC, No. 2; Cdr. Bob Aumack, USN, No. 1; Lt. Clarence "Red" Hubbard, USN, No. 3; Lt. Frank Mezzadri, USN, No. 4 and Lt. Dave Rottgering, USN, No. 7.

—Photo by M. R. Reida, SA

New Air Taxi Service Now Available For Government, Contract Employees

Last Monday, November 21, marked the beginning of a new air taxi service between Inyokern and Los Angeles for Government and contract employees as Cable Flying Service commenced their operation.

The new air taxi is available to all Government employees on official travel orders and to contractor employees on Government business. Passengers will also be allowed to board a flight without travel orders if the traveler can provide a travel order number and/or the name of the contract company.

Reservations and necessary preparations will be made for passengers leaving Inyokern by the NOTS Travel and Transportation Branch. For those leaving Los Angeles, Cable has authority to utilize gate number 70 at United Airline's Satellite. Cable will not have a ticket or information counter at either airport, but will have

a pilot available at both locations to assist embarking travelers.

Persons arriving at gate 70 without reservations, should place a telephone call to Cable Flying Service utilizing the phone adjacent to the gate. A sign there will provide all necessary information.

Cable has \$1,000,000 liability insurance coverage and an additional \$100,000 coverage per seat. At this time, there is no additional insurance available for travelers to purchase.

At the present, two daily flights are scheduled. The north-bound flights will leave at 10 a.m. and 9 p.m. and the south-bound flights leave at 11:15 a.m. and 10 p.m. All flights will take approximately 50 minutes.

Further information and reservations may be obtained by calling Travel and Transportation at extension 71321.

To Feature Talk On Public Lands

The Indian Wells Gem and Mineral Society has scheduled their next regular meeting for Monday, November 28, in the Rowe Street Hut at 7:30 p.m.

The speaker will be Herman Sharp of Sacramento. His talk will be "Saving Public Lands for the Public."

At this time the Bureau of Land Management is planning extensive sales of public lands throughout the west. Many of

these lands enclose favorite areas of hobbyists as well as sportsmen.

Sharp is a member of the California Federation of Mineralogical Societies committee which is cooperating in studies of the problem with the bureau in an effort to retain this land.

Persons interested in keeping public lands for the public are invited to attend. Free refreshments will be served.

