

Schoenfeld Ensemble to Close NOTS Civic Concert Season



ALICE AND ELEONORE SCHOENFELD

The Schoenfeld Ensemble will bring the 1963-64 NOTS Civic Concert Association season to a close Wednesday evening when they present a program of chamber music at the Station Theater.

Alice Schoenfeld, violin virtuoso, will appear as the soloist and lead the ensemble in a program of music by Mozart, Bach, Beethoven, and Karl Stamitz.

Beginning her career at a very early age with the State Symphony Orchestra in Berlin, she played three concerts in one evening in her debut. For the past several years she has made her home in Southern California.

"Virtuoso of the most brilliant and accomplished variety," said the music critic of the San Francisco Chronicle.

Members of the chamber ensemble include: Miss Schoenfeld, violin; Eleonore Schoenfeld, violincello; Jascha Veissi, viola; Harold Brown, contrabass; Kalman Bloch, clarinet; Walter Ritchie, bassoon; Ralph Pyle, horn, and Robert Prichard, harpsichord.

The major work to be presented in the China Lake concert will be the Septet in E Flat Major, Opus 20, by Ludwig van Beethoven. Though one of the great composer's earliest works (written in 1800), it is a masterpiece of chamber music in its blending of strings and wind instruments. The Septet is beautifully scored and achieved a fabulous success in Beethoven's lifetime and has maintained its popularity through generations of music lovers.

All tickets to the concert have been sold to season ticket holders but some may be turned back to the association for resale by members who are unable to attend the concert. Carroll Evans, treasurer of the Association will have ticket information at NOTS extension 71543. Or those interested in obtaining tickets may call Mrs. Roger C. Wickenden at NOTS extension 74161.

Curtain time is 8:15 and there will be a reception for the artists immediately following the concert in the East Wing of the All Faith Chapel.



NEW DIRECTOR of the China Lake Nursery School, on Halsey at Bard and King Sts., is Mrs. Marguerite (Peg) Knoblauch (right). Other officers are Mary Moore, president (left), and Gwen Roby, secretary. LCdr. Richard Schulte is vice president. Mrs. Knoblauch succeeds Mrs. Lorraine Scheidt who is now Curriculum Consultant for the Nursery School, and also is in charge of teacher training.

CROSSWORD PUZZLE

Answer to Previous Puzzle

ACROSS

- 1-Tip
- 2-Residue
- 3-Arabian
- 4-Pintail duck
- 5-By way of
- 6-Swiss
- 7-Switzerland
- 8-Simian
- 9-Warms
- 10-Large bird
- 11-Note of scale
- 12-Brewer's
- 13-A continent (abbr.)
- 14-Symbol for silver
- 15-Sheep
- 16-Through
- 17-Misgiving
- 18-Place in line
- 19-Chore
- 20-Away
- 21-Communists
- 22-Olese
- 23-Girl's name
- 24-Dutch town
- 25-Farm animal
- 26-Healed
- 27-Part in play
- 28-Exist
- 29-Lean-to
- 30-Pronoun
- 31-Number
- 32-Chief artery
- 33-Preposition
- 34-Announcement
- 35-Antlered animal
- 36-Mature
- 37-Barracuda

DOWN

- 1-Former Russian ruler
- 2-Urged on
- 3-Confederate general
- 4-Symbol for tellurium
- 5-Declares
- 6-Country of Asia
- 7-Chapeau
- 8-Hebrew month
- 9-Insect
- 10-Movable part of motor
- 11-Cozy
- 12-Edible fish
- 13-Supercilious
- 14-City in person
- 15-Probabls
- 16-Symbol for gold
- 17-River duck
- 18-Speck
- 19-Slab of wood
- 20-Exist
- 21-Part of face
- 22-Young boy
- 23-Enemy
- 24-Petitions
- 25-Tidy
- 26-Bamboozle
- 27-River in Siberia
- 28-Bristles
- 29-Highway
- 30-Girl's name
- 31-Spruce
- 32-Sharpen
- 33-Formerly
- 34-Compass point
- 35-South American wood sorrel
- 36-Tude
- 37-Chaldean city
- 38-Exists

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WACOM Schedules Meeting March 10

A meeting of the WACOM is scheduled for Tuesday, Mar. 10, at the Executive Dining Room at 8:00 p.m., featuring as guest speaker, Fred Wayne.

Wayne, a veteran of some 200 television shows, will address the group on "The Lack of Joy."

WACOM officials said the evening's program was planned to provide equal interest for husbands and urged their attendance.

VX-5 Wives Name Officers, Chairmen Of Committees

Sara Standefer was named secretary. Cecile Abbott was appointed treasurer and several committee chairmen were selected at the February luncheon meeting of the Air Development Squadron Five Wives.

The luncheon was hosted by Julia Manherz, wife of VX-5's new commanding officer, Cdr. Jack M. Manherz.

Committee chairmen are Ann Myer, telephone tree; Virginia Schulte, party; assisted by Ruby Williams, Marie Hathaway and Barbara Warner; Jean Kauber, baby shower; Donna O'Brien, hospitality, with Stecy Montague as co-chairman; Marie Hathaway, suggestions, and Coleen Russell, publicity.

Last Tuesday the VX-5 Wives welcomed aboard Elizabeth Martin, bride of Lt. Joseph Martin, at a coffee at the Manherz residence.

SHOWBOAT

FRIDAY "LAFAYETTE" (83 Min.)
Jack Hawkins, Orson Welles, Edmund Purdom
7 p.m.
(Adventure in Color) Brilliant, action-filled account of General George Washington's attempts to reinforce with French troops as the colonies battle the British. Huge battle scenes and vital American history are tensely interesting for all ages. (Family).

SATURDAY --- MATINEE ---
"WAR OF SATELLITES" (66 Min.)
Dick Miller
1 p.m.
--- EVENING ---
"BIRD MAN OF ALCATRAZ" (143 Min.)
Burt Lancaster, Karl Malden
7 p.m.
(Drama) True story of recently deceased Robert Stroud, a prisoner since 1909 who started as a sullen escapee-determined tough and ended as a model prisoner. A classic. (Adults and Mature Youth).

SUNDAY-MONDAY MARCH 8-9
"TAKE HER SHE'S MINE" (92 Min.)
James Stewart, Sandra Dee, Audrey Meadows
7 p.m.
(Comedy in Color) When a protective father starts checking up on his away-at-college daughter he inadvertently gets mixed up in her "projects" and makes headlines. It's a Howl! (Adults and Young People).

TUESDAY MARCH 10
"COMEDY OF TERRORS" (88 Min.)
Vincent Price, Peter Lorre, Boris Karloff
7 p.m.
(Comedy in Color) Boris's undertaking business falls off so son Vince, with Peter's help, drum up a little business until one corpse refuses to stay a corpse! Mirthful Mayhem. (Adults and Youth).

WEDNESDAY MARCH 11
NOTS CONCERT ASSN.
Presents
VIOLINIST ALICE SCHOENFELD
8:15 p.m.

THURSDAY-FRIDAY MARCH 12-13
"THE SWORD IN THE STONE" (79 Min.)
Disney Feature Cartoon
7 p.m. Thursday
6 and 8:15 p.m. Friday
(Adventure Cartoon in Color) The boyhood of King Arthur comes to colorful life as Merlin, the Magician, shows him the secrets of sorcery to help him gain the throne. Superb fantasy. (Family).

Naval Research Advisory Committee To Meet Monday

Assistant SecNav Wakelin to Head Military Group

The 60th meeting of the Naval Research Advisory Committee convenes here Monday for a two-day session, bringing to China Lake some of the nation's key research and development leaders in addition to the Navy's Assistant Secretary of the Navy J. H. Wakelin.

A diverse program of activity is scheduled for the visiting dignitaries commencing with the presentation of "Highlights of NOTS Technical Programs" early Monday morning.

The Committee will be welcomed here by Captain Charles Blenman, Jr., Station Commander, and Dr. Wm. B. McLean, Technical Director.

Briefed on Projects

Dr. Pierre St. Amand, head, Earth and Planetary Sciences Division, Research Department, will present his program related to weather modification Monday morning.

Dr. B. Langenecker, head, Metal Physics branch, Dr. E. C. Bauer, head, Crystal Physics branch, Dr. H. E. Bennett, head, Physical Optics branch and Dr. B. O. Seraphin, head, Semiconductor Physics branch, will give presentations in the afternoon.

Dr. W. H. Brattain, a member of the Advisory Committee and holder of the Nobel Prize in Physics (1956), is scheduled to address a joint meeting of the American Society for Public Administration and Research Society of America during the noon hour at the Executive Dining Room.

Dr. Brattain is associated with the technical staff of Bell Telephone laboratories.

Executive Conference

Tuesday morning sessions include an executive conference and continuation of programs in the early afternoon.

N. L. Rump, head, Explosives and Pyrotechnics division, T. G. (Continued on Page 6)

ROCKETEER
FROM UNDER THE SEA TO THE STARS
Vol. XIX, No. 9 Naval Ordnance Test Station, China Lake, California Fri., Mar. 6, 1964

Ex-Marine Here
Teaches Science
of Guerrilla
Warfare - Page 3

French Diving Saucer Probes Waters Off SCI



FRENCH DEEP-SEA RESEARCH VEHICLE 'DENISE' SET FOR DESCENT
Diver Armond Davos Rides Atop Saucer Until It Is Buoyant, Then Removes Crane Hook, Freeing Vehicle For Deep Dive Maneuvers

Eleven NOTS Officials Ride Unique Craft

An experimental deep-sea research vehicle, developed in France and flown to the west coast, was demonstrated last week to Naval Ordnance Test Station officials in a series of dives and maneuvers at the San Clemente Island Sea Ranges.

Arrangements to bring the two-man diving saucer or "Souscoupe" to the United States from Marseille were made by the NOTS Earth and Planetary Sciences Division of the Research Department.

Operations in this country are through a joint venture of the Westinghouse Electric Corporation and the Office Francais de Recherches Sous-Marines (OFRS), an independent, non-profit organization at Marseille. OFRS is devoted to research in oceanographic fields.

Called 'Denise'

Built by Captain Jacques-Yves Cousteau, prominent French pioneer in underwater engineering, the vehicle, named "Denise," is accompanied by five engineers who supervise and control the diving operations. The group consists of Dr. Andre Labon, Technical Director; Albert Falco, Chief Pilot; Armond Davos, Gaston Roux and Christian Bonnici.

Over-all dimensions of the diving saucer are 9.5 feet in diameter by 5.5 feet high, with a weight of about 7,000 pounds in air. It operates in the water at neutral buoyancy, and is propelled by two variable-speed and directional hydraulic jets, and with a speed of one knot for a period of four hours.

The vehicle has a 3/4 inch steel, oblate spheroid pressure hull surrounded by a free-flooding, Fiberglass fairing that houses batteries and other electronic components outside the hull.

Claws Grasp Objects

The saucer is capable of operating to depths of 1,000 feet with its two-man crew of a pilot and observer. Occupants of the submarine-like vehicle can make visual observations directly through two circular viewing ports, and can grasp objects or specimens with the aid of the craft's external arm and claw.

Powerful lights on the saucer provide illumination for the observer to make still or motion pictures as the pilot "flies" the vehicle through the ocean's depths.

Riding the craft in a prone position, the pilot and observer experience no discomfort, require no special clothing and, being in a normal atmospheric pressure at all times, require no decompression. After a crew has entered the craft it can be

To Recommend McBride Park Commission

Recommendations for McBride Park commission candidates will highlight the meeting of the park steering committee Monday night.

The meeting is to be held at the home of Douglas and Judith Lind, 206-B Forrestal, beginning at 7:30 p.m.

Anyone interested in serving on the commission, but is unable to attend the meeting, is urged to notify either Marilyn Yukelson, Ext. 77341, or Judith Lind, 77214.

In a letter last week to Mrs. Yukelson, chairman of the steering committee, Capt. Charles Blenman Jr., ComNOTS, outlined the principal responsibilities of the commission. Some of these are:

"Formulate rules and procedures for use of the park by individuals and groups, and assume responsibility for their enforcement.

"For those improvements beyond the capabilities of community groups, make recommendations for improvements which might be undertaken by the Station."

Upon establishment of the (Continued on Page 2)

Another NOTS 'First'

Digital Fire Control Viewed For Fleet Use

The first formal training course of its kind ever conducted by the Navy — Basic Fire Control Digital Techniques — is drawing to a close here at China Lake.

Its successful conclusion, according to officials, could lead the way in years to come for the introduction of digitalized fire control systems throughout the Navy.

Presently, NOTS scientists are developing a digitalized fire control facility at the Station's Guidance Radar branch of the Test Department.

Mass Application Viewed

It is this facility which the class currently undergoing training will operate. And, on the basis of success it attains, is hinged the fleet-wide application of digitalized fire control.

This initial class of trainees includes nineteen military personnel, ranging from seaman striker through chief petty officer, a civilian employee, Claude Hyten, who provides engineering services to the unit,

and two officers, Lieutenants (jg) John Milliken and Phil A. Miller.

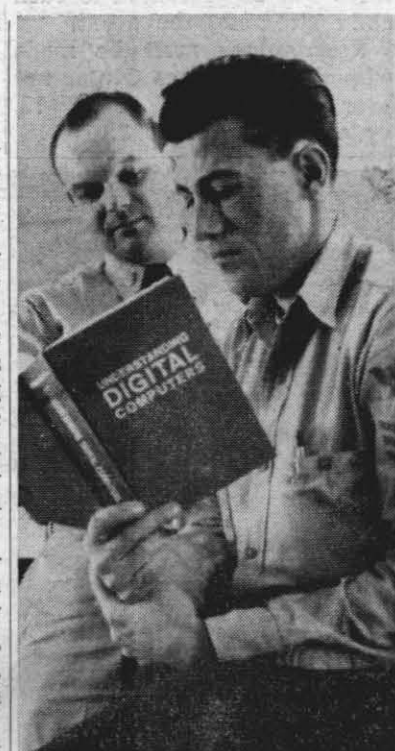
Two Instructors Assigned

The 220-hour instructional course they are undergoing was prepared by the Navy Typhon Training Unit, Baltimore, Md., which also detailed two instructors to China Lake to teach the course.

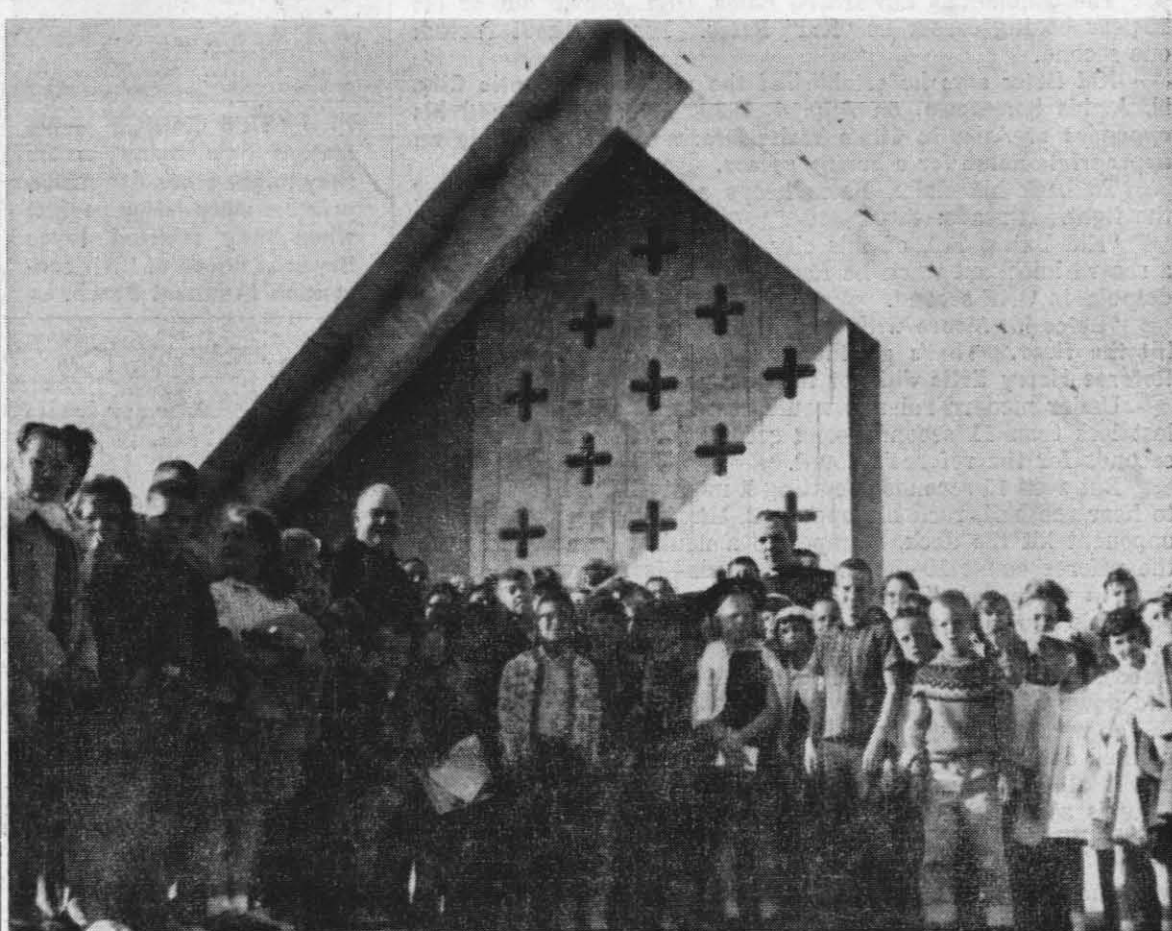
Divided into seven specific areas, the curriculum covers Transistor Theory, Numbering Systems, Boolean Algebra, Basic Digital Circuits, Basic Digital Computer, Fundamentals of Programming and Peripheral Equipment.

Significantly, those undergoing instruction have never been formally exposed to digitally implemented equipment. Yet, according to their instructors, they have "bridged the gap" in a most successful manner.

This testimonial implies that similar training programs could be conducted throughout the Navy without the need for primary instruction at trade school. (Continued on Page 6)



CHIEF HALLEN gives trainee Robert Cvetko, FTM1, pointers on "digital thinking" via textbook.



SHEPHERDING THE FLOCK of youngsters attending Mission Services at the All Faith Chapel this week, are Fr. Gilbert Zlater,

O.F.M., and Fr. Lambert Meder, O.F.M. Mission Services are being held daily for Catholic congregation through Mar. 14.

From _____

TO _____

PLACE
STAMP
HERE

CHAPLAIN'S MESSAGE

Don't Sell
The Ranch!

By CHAPLAIN ROBERT FENNING



According to a story we read the other day, a man living on a ranch near Sacramento heard that gold was being found in Southern California. That was back in 1847. He decided he deserved his share of that gold, so he sold his ranch and went south.

Meanwhile, a Colonel Sutter, the man who bought the ranch, quite by accident learned that there was gold on it. His little daughter had brought into the house some wet sand from the brook. The leaping, bright flames of the fire were reflected in tiny flakes of gold shining in the sand.

As the story goes, millions of dollars of gold were eventually taken from the ranch. Can you imagine how the man felt who sold the ranch in order to find gold?

That story isn't as unusual as one might think. There is a little of the restless wanderer in all of us. It is so easy to imagine that the place we occupy in the sun is worthless and that our future lies elsewhere.

The truth is that we so often have not taken the trouble to appreciate what God has given us in the place and among the people where we are. The pot of gold is not always to be found at the end of some distant rainbow.

It would not be a bad idea if each day were begun with a simple prayer asking God to help us discover the wealth of a satisfied heart in our own back yard.

Easter Seal Drive
Opens In Kern

"Door-to-door," telephone solicitations and other "personal pressure" type techniques have been ruled out of the Easter Seal campaign this year for raising funds for the Kern County Society for Crippled Children.

Officials of the Society said this week that 64,625 letters containing Easter seals have been

mailed to Kern County residents, directing the annual fund raising effort to a "personal appeal." Campaign Chairman H. W. Pat Kelly stated that the Society's services to the handicapped has always been financed "entirely through the voluntary contributions of Kern County residents without recourse to pressures of any kind.

"Every aspect of Easter Seal activity is based on voluntary citizen action," the Chairman stated.

Mission Services
Continue Here
Through Mar. 14

(See Picture on Page 8)

The first of a two-week Catholic Mission draws to a close this week at China Lake for members of the Catholic congregation here.

Special evening services have been held this week for women members while male Catholics are invited to attend services next week.

A three-day children's Mission was held this week as a part of the two-week program.

Fr. Gilbert Zlater, O.F.M., and Fr. Lambert Meder, O.F.M., assigned here to conduct the Mission services, have served for many years with the Franciscan Mission Band.

McBride Park . . .

(Continued from Page 1)

commission and agreement to undertake the specified responsibilities, the Station will proceed with the following:

1. Install grass, sprinklers and sidewalks.
2. Repair head facilities.
3. Maintain buildings and equipment.
4. Provide janitorial service (Monday through Friday) to the restrooms.
5. Daily trash removal from containers.
6. Grass care, including watering and mowing.
7. Include McBride Park in the Security Police patrol schedule.

PROMOTIONAL
OPPORTUNITIES

Present Station employees are encouraged to apply for the positions listed below: Applications should be accompanied by an up-to-date Form 58. The fact that positions are advertised here does not preclude the use of other means to fill these vacancies.

Supervisory Physicist, GS-12 or 13, \$9,980, \$11,725 p/a, PD 43066, Code 3063—Head, Evaluation and Analysis Section, Optical Instrumentation Branch. The Section evaluates and analyzes optical instruments and systems of instruments used in range testing of ordnance items, modifies or develops optical range instrumentation and investigates feasibility and potential of new or modified instruments.

File applications for above with Betty Fowler, Bldg. 34, Room 34, Phone 71514.

Office Services Supervisor, GS-7, PD 425002, Code 2505—As Head, Administrative Div., Supply Dept., is responsible for the supervision of office services such as mail and file, typing and stenographic services, plant accounting, etc. Provides secretarial services to the Director and Assoc. Director of Supply; provides secretarial training and policy and procedural guidance to the clerical personnel within the Department.

Applicants must have had three years administrative, investigative, technical or other types of experience plus one year of experience in direct line with duties described above (at level comparable to next lower grade).

File applications with Pat Dettling, Room 34, Bldg. 34, Phone Ext. 72575.

Deadline for filing is March 13.

APPRENTICE EXAMS

Apprentice (First Year) \$220 p/h. For apprenticeship training in the following listed trades: Electrician, Electronics Mechanic, Machinist, Pipefitter, Plumber, and Sheetmetal Worker. File Card Form 500-AB with the Civil Service Representative, Naval Ordnance Test Station, China Lake, Calif. Applications must be received or must be postmarked on or before the closing date of March 24, 1964.

COMPETITIVE EXAMS

Roads and Grounds Maintenance General Foreman, F-12, \$10,108 p/a, Lompoc, Calif., and vicinity.

Office Appliance Quality Control Inspector Repairer, W-12, 3.44 p/hr., Lompoc, Calif., and vicinity.

File Standard Form 57 and Card Form 5001-BC with Executive Secretary, Board of Examiners, U. S. Air Force, Army and Navy, Room 207, Post Office Bldg., Santa Maria, Calif., no later than close of business on March 23.

NAVY OVERSEAS VACANCIES

Quartermaster, Transportation, Equipment Maintenance, Philippines; Classification Specialist, GS-11, Guam; Safety Inspector, GS-9, Guam; Librarian, GS-11 (Administration), Guam; and Central Office Repairman, Guam.

File applications on or before March 20 with Navy Overseas Employment Office (Pacific), Federal Office Bldg., San Francisco, Calif., 94102.

'DESERT PHILOSOPHER'

Museum Fetes
Area Pioneers

By "POP" LOFINCK



The party for the old timers of our Indian Wells Valley and honoring the "Friends of the Maturango Museum" last Sunday was a huge success, president Alice Hirsch tells me.

A previous commitment made it impossible for me to attend—much to my regret . . . because there's nothing like hearing first hand the stories of these old timers who came to the Valley as early as 1908.

Only we don't call them old timers, now. They all came so "spruced up" that the Board of Trustees felt that it would be better to call them pioneers. I agree. "Old Timer" has a connotation that doesn't set well with a young feller like me!

President Hirsch tells me that the "pioneers" came from as far as Bishop, Lone Pine, Little Lake, Trona, Randsburg, and Weldon. This was the first time so many pioneers had been together in quite a while. Many had not seen each other for a decade or more.

Among those in attendance were the following: Mr. and Mrs. Vernon Carr, the oldest living homesteaders in the Valley. They came in 1909. Their original homestead was on the base area. Also, their son, John, who was born here in 1913, and has remained in the area.

Ann E. Pherson (niece of the Carr's) of Little Lake was happy to see again Odessa Stelle of Ridgecrest.

Mr. and Mrs. Clarence Ives, formerly of Inyokern, now of Bishop, who homesteaded here in the early days.

Ethel Mary (Tiny) Standard and her sister Ruth Powers. Remember, I wrote about "Tiny" in one of my columns.

George Thompson, of Inyokern, who donated a book to the Museum showing the early homesteaders of the area.

Others in attendance were Mr. and Mrs. George Pipkin of Trona, Judge Jim Nasser of Randsburg, "Chet" and Eugene Smith, and the Jessie Sterling family.

Conspicuously absent were Ed Teagle (93) of Stockwell Mine near Trona; Jim McGinn (95) of Argus, and Stewart Fraser of Randsburg and Yellow Aster farm.

Dr. Carl Austin will head a field trip to Coso Hot Springs, Sunday, March 15, leaving the Maturango Museum at 9:00 a.m. sharp.



OLDEST HOMESTEADERS—Engineering Department's John Carr poses with his parents Mr. and Mrs. Vernon Carr who homesteaded in the area in 1909. The Carrs initiated the first Desert Wild Flower Show in the area.

Exchange Nursery
Slates Easter Party

An Easter party is scheduled for children of the Navy Exchange Child Care Center between 2 and 5 p.m. on March 26, according to director Eliane Darnell.

An Easter egg hunt and pinata breaking will highlight the event. In addition Easter baskets as well as Polaroid pictures will be presented to each child attending the event.

Reservations must be made with the Child Care Center not later than Friday, March 13, by calling Ext. 723723.



OLD TIMERS—Early residents of the area are greeted by Capt. Blenman. Area pioneers (l-r, seated) are Helen Smith (1929), Odessa Steele (1939), Anabel Carr (1909), Gladys Ives (1919), "Tiny" Standard (1920), Ruth Powers (1921), Ann Pipkin (1924), and Effie Smith

(1915). Back row are Jesse Stirling (1910), Lois Carr (1933), John Carr (1913), Vernon Carr (1910), Ann Pherson (1930), Judge Jim Nasser (1916), Clarence Ives (1919), Virginia Thompson (1926), Bob Thompson (1910), George Pipkin (1924), and Chet Smith (1915).

RIM
SHOTS

By BILL VALENTEEN



When the New York Football Giants move into Yankee Stadium each fall, the gladiators' helmets are placed, one by one, on the topmost shelves of their owners' dressing room cubicles. This rite is perhaps most familiar to Frank Gifford, who was honored last season by United Press International as the 1962 Comeback-of-the-year in the National Football League.

Every team must have one man who leads, a man who inspires, one who can lift his teammates to winning heights. With the New York Giants, this man is Frank Gifford. Gifford's contributions over the years have been numerous. His value was fully realized during the 1962 season when New York won the NFL's eastern division title.

Gifford returned to football because he wanted to play. "I made a lot of money in the year I stayed out," he said. "I didn't stay out because of the head injury. I had personal reasons I don't want to go into. I missed pro football. I don't know any kind of business you can go into where you can get as much excitement once a week as you can playing pro ball."

Gifford's versatility began as a high school star in Bakersfield. There he starred as an end, a quarterback and at halfback. Later, he was a triple threat tailback, leading Bakersfield Junior College to the Junior Rose Bowl. Transferring to the University of Southern California, he was named All-American as an offensive-defensive back.

In 1951, his senior year at USC, Gifford rushed for 841 yards at a 4.3 clip, completed 32 to 61 passes for 303 yards, caught 11 passes for 178 yards, scored seven touchdowns, intercepted eight passes and kicked 26 extra points and two field goals. He beat powerful California with a 68-yard touchdown run and 155 yards rushing. He played 60 minutes against Notre Dame, and he was co-captain and an iron-man performer in both the East-West and North-South games.

Engaged in a sport more renowned for robustness than for cerebral excellence, Gifford has used football as a springboard into a network of enterprises. He is besieged with offers to speak all over the country. And, in partnership with two other men, he owns a real estate investment company in Bakersfield. He is reducing his activities in some area outside Bakersfield in order to spend more time with his family.

Recently, Gifford was named sports director for CBS-TV in New York. He does a regular sportscast, and stars in a 15-minute taped show preceding the telecasts of the Giants' games. His endorsement has been given to shaving lather, hair tonic, swimming trunks, sweaters, slacks, shirts and belts. In the process of selling cigarettes on TV, he has performed such heroics as shooting rapids on a raft, driving a hot rod over sand dunes and riding a bucking bronco. He was also seen in a December episode of "Hazel" named "Hazel and the Half-back."

It seems television likes Gifford in that position, and so do the fans.

Keep smilin', Sport! See you next week!

Scene and Heard

(AFPS Weekly Feature)

The record for the fastest knockout in boxing history doesn't belong to Sonny Liston, Joe Louis or Jack Dempsey. It's claimed by a sailor at Great Lakes Naval Training Center, Ill.

The claimant is Edward N. Bates, DK1, known during his 15-year boxing career as "Kid" Bates. His knockout record: one second.

Kid Bates says he established the record in Atlantic City, N. J., his hometown, on Aug. 4, 1930, when he dropped his opponent at Atlantic City's Waltz Dream Arena, certainly an appropriate name for a boxing palace.

To back his claim, Bates keeps a newspaper account of the fight. It reads:

"Kid Bates, 116, of this city, scored what is undoubtedly a record knockout when he flattened Artie Moore, 118, Philadelphia, in ONE second.

"Bates hit Moore with a right hand to the jaw and Moore hit the floor. That's all there was, there wasn't any more. Referee Harry Erle did not find it necessary to count."

Under modern rules it would seem that a fight could not last less than 11 seconds—one second for the punch and 10 seconds for the referee's count.

But even 11 seconds is cutting it mighty thin. For a fighter to hear the bell, rush his opponent, throw a punch, watch his opponent hit the deck, scamper to a neutral corner and have the referee count 10—all in 11 seconds—is fast work indeed.

"In those days," Bates explains, "a fighter didn't have to go to his neutral corner when the referee finished giving fight instructions. After Referee Erle had completed his say, I stood fast and when the bell sounded I threw a right at Moore and down he went."

A wicked right it must have been for, as the newspaper pointed out, the referee did not find it necessary to count. To top it all, Bates was a last-minute substitute for the fight. Moore's scheduled opponent suddenly became ill.

EXTRA POINTS—Former All-Army fullback Ernie Wheelwright from Ft. Campbell, Ky., has signed a contract to play with the New York Giants of the National Football League . . . The 1st National Karate Championships will be held Mar. 28 at Ft. Myer, Va. . . Distance runner Bob Schul credits his improvement to his hitch in the Air Force. An average college runner at Miami University of Ohio, Schul's times in the two and three-mile events began to improve as he worked on his form and technique for Air Force competition.

Four Nights Slated
For Little League
Candidate Sign-Up

Boys interested in playing Little League ball this season are reminded that Little League registration nights are set for 7:30 p.m. Monday and Tuesday, March 9-10 and March 16-17, at the Grove Street School Auditorium.

Parents should accompany Little League candidates when they go to register. Parents are reminded that an administrative fee of \$5.50 is due when the candidates register.

Application blanks were distributed to all elementary schools this week.

Little League officials announced the addition of three officials who will assist in conducting this year's program.

Robert Nelligan has volunteered for the post of executive vice president. Ben Wensinger will serve as superintendent of equipment, assisted by Bill Oaks.

This rounds out the roster of officers for the 1964 season.



PRINTER'S CHOICE—No matter how many errors they might otherwise make, printers were letter perfect when they selected Joyce Bryan as queen of their convention in Miami Beach.

Junior Skiers Go
To June Mountain
Weekend of 14-15th

Plans were announced this week by officials of the Indian Wells Valley Junior Ski Club for a two-day outing at June Mt. on the weekend of March 14-15.

Reservations from those wishing to participate in this trip must be received no later than today by Mr. and Mrs. Paul Driver, Ext. 725082, adult leaders of the Junior Ski Club, in order that the necessary advance reservations can be made.

Mr. Driver also announced that the junior skiers will be represented by at least three entrants in the Brotzman Memorial Races, sponsored by the Bakersfield Ski Club this Saturday at Shirley Meadows on Greenhorn Mt.

China Lake Bowmen
Score Big at Tulare

The China Lake Bowmen came home with quivers full of trophies after competing in the Tulare Limberlimb Animal Shoot last week.

More than 250 archers participated in the two-day tournament.

Madge Bryant's 1358 was the Women's overall high score.

Shiela Stedman won first place in the Women's 225 class with a score of 1218.

Marge Lyon shot 976 to take top honors in the 175 class.

Randy Stedman brought home a second place trophy with 796 in the Cub division.

Then, Bob and Shiela Stedman won first place in the husband-and-wife competition with a combined score of 2698. Ken and Madge Bryant were second in the same division with 2626.

A flashlight novelty shoot was won by Bob Stedman on Saturday, and then he went on to take second place in a special money shoot on Sunday.

Planning Sessions
Scheduled For
Local Tennis Club

A meeting has been scheduled by the China Lake Tennis Club for Saturday morning, 14 Mar., at 9:30 a.m., preliminary to the organization of an active tennis program for the area.

The meeting is to be held on the tennis courts. Commander Stan Able, president of the local organization, said a children's tennis clinic will be discussed with parents who are present for this meeting.

Additionally, plans for the forthcoming tournament, scheduled tentatively for the last two weeks in April, will be firmed up, he said.

Everyone interested in tennis is invited to attend this meeting.

Athletes Undergo More
Stress Than Astronauts

Houston, Texas (AFPS)—Studies conducted at the National Aeronautics and Space Administration here seem to bear out that sky divers, hockey players, skiers, polo players and track athletes experience more physical stress than spacemen.

However, the key here is physical activity. An astronaut, in top physical shape and well conditioned to the rigors of high-performance flight, is physically restricted in his spacecraft. But an athlete's heart rate increases with his muscular activity, and with the heat of intense competition.

Surveys show that bowlers were found to range between 82 and 132 heartbeats per minute during competition, with a mean heart rate of 99.

By the same token, Astronaut L. Gordon Cooper, during his 34-hour orbital flight, ranged from 55 to 180 beats per minute, with a mean heart rate of only 89 beats per minute.

Just for the sake of perspective, a perfectly normal, healthy person—neither athlete nor astronaut—sometimes experiences heart rates of 180 beats a minute and higher while getting his teeth drilled in the dentist's office.

To get this comparative information members of the Space

Special Services
Activities Hours

Auto Hobby Shop
Monday through Friday . . . 5-9 p.m.
Saturday . . . 9 a.m.-5 p.m.
Sunday . . . Noon-5 p.m.

Bowling Alley No. 1
Monday through Friday . . . 6-11 p.m.

Bowling Alley No. 2
Monday through Friday . . . 3-11 p.m.
Saturday . . . 10 a.m.-11 p.m.
Sunday . . . Noon-11 p.m.

Ceramics Hobby Shop
Mon., Wed., Thurs. . . 5-10 p.m.
Tuesday, Friday . . . Noon-5 p.m.

Community Center
Monday through Friday . . . 8 a.m.-5 p.m.
Saturday . . . 6:30-10:30 p.m.

Electronics Hobby Shop
Tues., Wed., Thurs. . . 6-10 p.m.
Saturday . . . 9 a.m.-5 p.m.
Sunday . . . Noon-5 p.m.

Equipment Issue Room
Monday, Tuesday . . . 8 a.m.-11 p.m.
Thursday, Friday . . . 11 a.m.-1 p.m.

Golf Course
Daily to Sunset
Gymnasium . . . 1-6 p.m.

Woodworking Shop
Wed., Thurs., Fri. . . 5-10 p.m.
Saturday . . . 9 a.m.-5 p.m.
Sunday . . . Noon-5 p.m.

Station Library
Monday through Friday . . . 1-9 p.m.
Saturday, Sunday . . . 2-9 p.m.

Station Theatre
See Rocketeer for Show Times

Station Swim Pool
Friday . . . 6-8:30 p.m.
Saturday and Sunday . . . 1-6 p.m.

Tennis Courts
Daily . . . 8 a.m.-10 p.m.

Weightlifting Room
Monday through Friday . . . 4:30-10 p.m.
Saturday . . . 9 a.m.-6 p.m.
Sunday . . . 1-6 p.m.

DIVINE
SERVICES

Christian Science (Chapel Annex)

Morning Service—11 a.m.
Sunday School—11 a.m.

Protestants (All Faith Chapel)

Morning Worship—8:30 and 11 a.m.
Sunday School—9:30 a.m., Groves and Richmond elementary schools.

Roman Catholic (All Faith Chapel)

Holy Mass—7, 9:30 a.m., and 5:30 p.m. Sunday.

6 a.m. Monday through Friday, 8:30 a.m. Saturday.

Confessions—8 to 8:25 a.m., 6 to 8:30 p.m. Saturday, Thursday before First Friday—4 to 5:30 p.m.

NOTES Hebrew Services (East Wing All Faith Chapel)

(Feb.) First and fourth Friday, 8:15 p.m.
(March) Second and fourth Friday, 8:15 p.m.
Sabbath School every Saturday morning.

Unitarian Fellowship (Parish Hall)

Fellowship Meeting—Sundays, 7:30 p.m.
Sunday School—9:30 a.m.

The Rocketeer

Official Weekly Publication

of the

U. S. Naval Ordnance Test Station

China Lake, California

Captain Charles Blenman, Jr., USN

Station Commander

"J.L." Bibby

Public Information Officer

Jack G. Broward

Editorial Advisor

Richard Gruenberg

Editor

Budd Gon

Associate Editor

Frederick L. Richards

Special Assignments

DEADLINES

News Stories . . . Tues., 4:30 p.m.

Photographs . . . Tues., 11:30 a.m.

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71655, 72082

'DIGITAL THINKING'

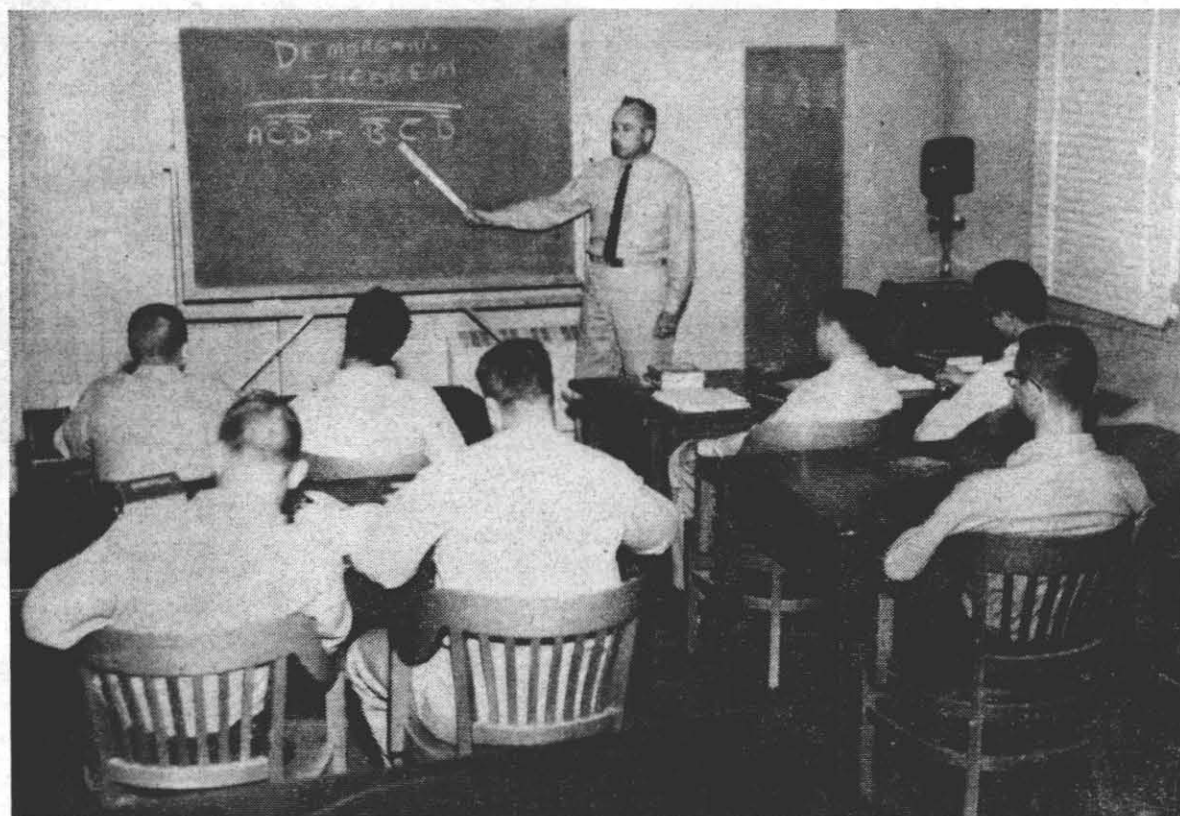
NOTS Trail-Blazes New Fire Control System



CLASSROOM EXERCISE on Univac computer gets supervision of instructor Earl V. Hallen, FTC. Trainees Lawrence L. Hagadorn, FTM1, (seated), William E. Secor, FTMSN (stand-

ing behind Hagadorn) and Galen H. Best, FTCS, are members of local Guidance Radar branch.

—Photos by Bob Hancock, PH3



CONVERSION PROCESS started in early January classroom for 20 members of Station's Guidance Radar branch. A. P. Taylor,

FTC, was one of two instructors assigned here from Navy Typhon Training unit, Baltimore, Md., which also provided curriculum.



PERSONALIZED INSTRUCTION by Chief Hallen "groves-in" basic digital computer nomenclature for (from left) Lt. (jg) Phil A.

Miller, Lt. (jg) John A. Milliken, Robert Cvetko, FTM1, Galen H. Best, FTCS, and Richard H. Benbow, FTC.

(Continued from Page 1)

Valve Exceed Goal

Lt. Milliken, head of the Guidance Radar branch, theorizes that successful application of the skills and knowledge gained by this class may have a value well beyond the immediate goal.

"It could point the way for at least partial elimination of the lengthy instructional periods that personnel currently spend in service schools.

"If we can absorb the required skills and knowledge under on-the-job circumstances, it is possible that others can do the same."

A "Typical" Unit

Milliken regards his group as representative of all rating levels in the fire control technician branch and feels that, as a "typical" unit, others could follow similar procedures.

One of the two instructors assigned here, Earl V. Hallen, FTC, discussing the course objectives, called it a "concept."

"Our purpose was to introduce the men here to the basic techniques of digital devices and their practical applications."

He boils this down to a two-word definition: "Digital Thinking."

Objective Achieved

"I think we've achieved this objective. The final test, however, will come in the months ahead, once the class starts operating the equipment."

Hallen's fellow instructor, A. P. Taylor, FTC, was responsible for the early phases of training and has now returned to his parent command to start a second course.

A major area of concern as the class got underway, "according to Taylor, concerned the motivation of personnel.

He soon found, however, that China Lake's scientific environment had served as a natural motivational force.

Wants to Learn

"Most of those in the class,

Conversion Plant To Be Constructed At Guantanamo

Washington (AFPS) — A cost efficiency study has been completed on the best of two methods of supplying water to Guantanamo Naval Base.

The study shows that delivery of fresh water to Guantanamo by tanker from distant locations would cost approximately \$6,360,000 annually.

Other results reveal that a shore plant capable of producing 2.2 million gallons of water daily will cost approximately \$715,000 annually to operate.

The Navy plans to build a salt water conversion plant in three units, each producing at least 750,000 gallons daily.

Sprint Missile System Reaches New Heights

Washington (AFPS) — Work is continuing on the Sprint missile which Defense Secretary McNamara says will be a part of the Nike-X anti-missile system.

A major feature of the Sprint design is the emphasis being placed on extreme acceleration characteristics, enabling the Sprint to reach intercept altitude in less time than the current Zeus missile.

because of exposure to the scientific element here, had long been excited to learn more about the technological aspects related to digitalized systems," he noted.

This environment, plus the addition to classroom instruction of a Univac Digital Trainer, a small scale, general purpose computer, provided both instructor and trainee with highly valuable elements, Taylor commented.

Graduation Nears

Scheduled to graduate Mar. 20, the training sessions are now picking up speed and emphasis on the future values it represents.

"Not only to those in the class. But, the Navy's future as well," remarked Hallen.

"The practical application of this knowledge and skill can't help but aid a man's professional advancement.

But, even more important, this class will serve the Navy as a 'trail-blazer' for those to follow!"

Advisory Group Convenes 2-Day Conference Here

(Continued from Page 1)

Leng, head, Hydrodynamics group and Dr. T. E. Phipps, head, Research department, are scheduled to present reports on projects conducted by their respective units in the afternoon Tuesday.

The conference is scheduled to adjourn later that day.

The Advisory Committee includes Dr. Brattain; Dr. W. A. Fowler, Kellogg Radiation laboratory; Dr. C. C. Furnas, Chancellor, State University of New York; E. H. Heinemann, Vice President, General Dynamics Corp.

Dr. R. A. Kern, Temple University hospital; Dr. A. B. Kinzel, Vice President, Union Carbide Corp.; G. Norton, (Vice Chairman, NRAC) Institute for Defense Analysis;

Dr. E. R. Piore, Vice President, International Business Machines Corp.; Dr. R. Revelle, University Dean of Research, University of California and Director, Scripps Institute of Oceanography;

Dr. F. E. Terman, Provost, Stanford University; Dr. E. A. Walker, (Chairman NRAC) President, Pennsylvania University; Dr. J. N. Adkins, Executive Director, NRAC; Mrs. Marianne Jennison, Administrative Assistant, NRAC; and Dr. Shirleigh Silverman, Director of Research, Office of Naval Research.

Secretary Wakelin's party is scheduled to include Captain W. J. Moran and Major W. H. Fitch, Navy and Marine Corps aides; Commander T. C. Lonnesquest, Dr. H. J. White, M. Shaw, special assistants; Rear Admiral L. D. Coates, Chief of Naval Research;

Brig. General W. B. Kyle, Deputy Chief of Staff, U. S. Marine Corps; Rear Admiral C. T. Booth, Deputy Chief of Naval Operations (Development); Rear Admiral H. P. Weatherwax, Assistant Chief of Naval Operations;

Rear Admiral W. T. Hines, Deputy Chief, Bureau of Weapons; Captain C. H. Morrison, Bureau of Weapons; Dr. E. M. Lamar, Chief Scientists, BuWeps and Dr. John Loefer, ONR, Pasadena.

Seabees Here Celebrate 22nd Anniversary

Members of the local U. S. Naval Reserve Construction Battalion Division 11-2 and their ladies will celebrate the 22nd birthday of the "Fighting Seabees" with a gala Anniversary Ball tomorrow night at the Acey Deucey Club.

A dinner beginning at 7 p.m. will start the evening's festivities. Following the traditional cake cutting ceremonies, the evening will be devoted to dancing.

Guest of honor for the occasion will be Station Commander Capt. Charles Blenman Jr.

The "Seabees," with their "Can Do" spirit bolstering their construction skills, became a legend during World War II.

Organized for immediate overseas duty on March 5, 1942, the outfits carved out more than 400 advanced bases, winning praise from the Navy, Army, and Air Force.

Landing with the first combat waves, the "Seabees" performed their tasks under fire, working and fighting simultaneously.

In the rivalry which developed between the "Seabees" (whose average age was 33) and the Marines, the latter coined the slogan: "Never slug a Seabee; he might be some Marine's father."

The local "Seabee" unit was formed here as a non-pay group in October of 1954 and attained pay group status in October of 1956.

The unit has an enviable record of community service. It has assisted in the construction of the golf course, McBride Park, Little League parks, quarter midget race track, obstacle courses, rifle ranges, and the CPO swim pool.

In addition it has garnered many 11ND "E" Awards.

The 52-member unit is skippered by LCdr Paul O. Erickson.

President Johnson Calls For Efficiency, Economy

I call upon all Government employees to observe three paramount principles of public service:

First, complete fairness in the administration of governmental powers and services;

Second, scrupulous avoidance of conflicts of interest; and Third, a passion for efficiency and economy in every aspect of Government operations.

For its part, the Federal Government must be a good employer. It must offer challenging opportunities to its employees. It must be prompt to recognize and reward initiative. It must pay well to attract and keep its share of dedicated and resourceful workers. It must welcome fresh ideas, new approaches, and responsible criticism.

For 33 years I have been in Government service. I have known its challenge, its rewards, and its opportunities. But all these will multiply in the years to come. The time is at hand to develop the Federal service into the finest instrument of public good that our will and ingenuity can forge.

Although both our population and our economy are growing and placing greater demands upon the Government for services of every kind, I believe the time has come to get our work done by improving the efficiency and productivity of our Federal work force, rather than by adding to its numbers.

Although this budget is deliberately restrictive, I have concluded that government economy will be best served by an upward adjustment in salaries. In the last year and a half the Federal Government has taken far-reaching steps to improve its pay practices.

The Federal Salary Reform Act of 1962 and the Uniformed Services Pay Act of 1963 established the principle of keeping military and civilian pay generally in line with pay in the private economy.

This is a sound principle, and it is reinforced by the sound procedure of annual review. This principle is fair to the taxpayer, to Government employees, and to the Government as an employer.

Ex-Marine, Osanka Now Teaches Others Science of Guerrilla Warfare



EX-MARINE Frank M. Osanka served with Vietnam special forces paratroopers at Fort Bragg, N. C. Today, he works at NOTS and

is currently teaching a special guerrilla warfare course for University of California Extension Program. —Photo by U. S. Army

A NOTS employee who ranks today as one of the world's foremost authorities on guerrilla warfare is conducting a special University of California extension course on the subject for China Lake students.

Frank M. Osanka, special warfare consultant with Weapons Planning Group, holds classes each Wednesday in Conference Room "A," Michelson Laboratory from 6:30 to 9:30 p.m.

The classes will continue through June 3.

A former Marine, Osanka joined the Station in Oct. 1963 following faculty duties with George Washington University.

Political Science Course

Osanka is conducting the study session as a political science course offering three credit hours for its completion.

The course investigates in a comprehensive and systematic manner the subject of revolutionary guerrilla warfare as a violent means of influencing political and social change.

Considerable emphasis is placed on the study of historical and contemporary theorists and practitioners.

An equal amount of time is being devoted to the investigation of this form of internal political warfare as it has occurred since the end of World War II in China, French Indo-China, Malaya, The Philippines, Cuba, Laos and Vietnam.

World Crisis Studied

The conflicts in Kenya, Cyprus and Greece are also being examined as part of the course.

Author of the book, "Modern Guerrilla Warfare," which is considered to be the international standard text and reference work on the subject, Osanka has authored several papers on the political science aspects of guerrilla warfare.

He is a graduate of the Army's "Airborne and Jump Master," "Special Forces Officers" courses, the Navy's SCUBA school, the Marine Corps' "Communist Guerrilla Warfare" and "Amphibious Reconnaissance" courses and the U. S. Information Agency's "Counter-Insurgency" orientation and the Air Force's "Counter-Insurgency" courses.

Osanka served with special "Force Recon" companies in the Marine Corps.

This is the first time that this course has ever been taught on a formal, college level.

'Why a 21-Gun Salute?' Puzzled Americans Ask

New York (AFPS) — Since the death of President Kennedy, the nation's libraries and museums report a flurry of questions concerning the military customs Americans saw exercised in the President's funeral.

One of the questions most often asked: "Why the 21-gun salute?"

Like many other American military customs, officials of the United States Military Academy library explain, we borrowed this one from the British.

But why the number 21? Originally, British war ships fired salutes of seven guns.

The "sacred number" seven was selected by Queen Victoria because of its mystical and symbolic significance in the Bible. Ships fired seven guns, but shore batteries answered three guns to the ship's one. The difference was because gun powder was difficult to preserve aboard ship. On land there were no storage problems, so three times as many guns were authorized.

When better powder was invented, the number of guns for the naval international salute was raised to the same number used by land forces.

Now the highest gun salute—the one to honor a chief of state, such as the one fired by the Armed Forces for President Kennedy—is 21 guns for all nations.



GIRL SCOUT annual cookie sale gets underway here as first purchases are made from Senior Scout Beverly Shull and Cadet Scout Catherine Anderson by Capt. Blenman, COMNOTS, and Dr. Wm. B. McLean, Technical Director. The county-wide scout project, continuing all next week, coincides with the Girl Scouts' 62nd birthday anniversary.

NOTS Pasadena News

VIRGINIA E. LIBBY — Ext. 638



CAPTAIN G. H. LOWE, Officer in Charge, NOTS Pasadena, offers congratulations (l-r) to Albert J. Daney EMC, John H. Willoughby

BMC(DV), and Melvni W. Lynch BM2, on completion of 20 years active naval service.

Pasadena Trio Ends Careers With Navy

Official inspection and retirement ceremonies were held last week at NOTS Pasadena Long Beach Facility for three military personnel completing 20 years active naval service and entering Fleet Reserve.

Albert J. Daney, Chief Electricians Mate, was lauded for the high standard of operating efficiency which he maintained aboard all NOTS craft and for outstanding leadership. Chief Daney served as the Leading Chief of the Engineering Division in Long Beach from April 19, 1961 through the present time.

John H. Willoughby, Chief Boatswain's Mate (DV) was commended for the initiative, industry and high degree of professional performance displayed during his tour. Chief Willough-

by reported aboard from the USS Munsee (STF 197) on July 5, 1963.

Since reporting he has served as a first class diver in the diving division at Long Beach.

Melvni W. Lynch, Boatswain's Mate, second class, served as the Deck Petty Officer aboard LCU 1446. He was commended for his superior performance and leadership during periods when available personnel were short and operation schedules long from August 29, 1962 to late December.

The retirees were presented with United States flags in honor of their long and honorable service.

San Diego

Ships To Host General Visiting

The following ships will host general visiting in the San Diego Area during the month of March from 1-4 p.m.:

March 7-8 — Cruiser, Guided Missile Heavy USS CANBERRA (CAG 2); Tender, Seaplane USS PINE ISLAND (AV 12).

March 14-15 — Destroyer USS WILTSIE (DD 716); Transport, Attack USS NOBLE (APA 218).

March 21-22 — Submarine USS MENHADEN (SS 377); Escort Ship USS BRONSTEIN (DE 1037).

March 28-29 — Cargo Ship, Attack USS TULARE (AKA 112); Submarine USS CHARR (SS 328).

Revenge?

If you want to get even with your wife for using your razor blades to sharpen pencils, use her powder puff to shine your shoes.

PROMOTIONAL OPPORTUNITIES

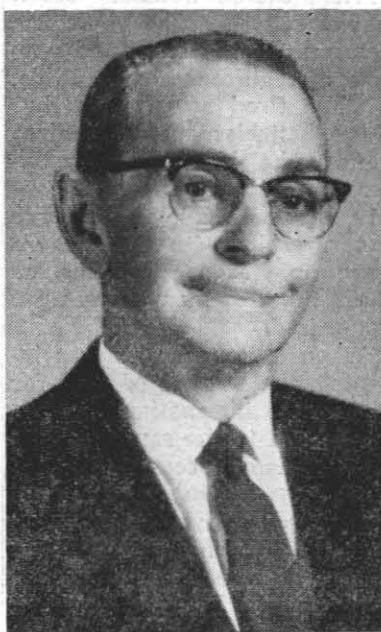
To apply for vacancies, contact Nancy Reardon, Pasadena Personnel Division, Extension 492. A current SF-58 must be submitted when applying.

Automotive Equipment Serviceman; Hourly Salary Range: \$2.56 to \$2.78; Code P7152; Duty Station: Long Beach (San Clemente Island). Services automotive equipment with gasoline, checks oil levels, adds oil, checks radiators, cleans windshields, checks tire pressures, and checks batteries. Lubricates automotive equipment and changes and patches tires and tubes.

Red Cross Fund Drive In Full Swing At Annex

The 1964 Red Cross Drive, now in full swing at NOTS Pasadena, will continue through March 14. Chairman of the drive is Clinton V. Weaver with Polly Richards serving as treasurer.

We are all aware of the many services performed by the Red Cross. Besides aiding victims of



CLINTON V. WEAVER

Saucer at SCI

(Continued from Page 1) launched into the water in about five minutes.

Planning and scheduling the diving saucer operations at San Clemente were under the direction of a group headed by Dr. Pierre St. Amand, Earth and Planetary Sciences Division Head, and included Dr. David W. Scholl, Oceanographer, and Howard R. Talkington, Advance Systems Branch Head, Underwater Ordnance Department, Pasadena Annex.

Participating in the familiarization dives from NOTS China Lake were Captain Charles Blenman, Jr., COMNOTS, Dr. Wm. B. McLean, Technical Director; Captain F. F. Reck, Plans and Operations Officer; Cdr. L. H. Lippincott; Lt. Cdr. R. W. Montross and Willis R. Forman.

Those making dives in the interest of marine geology and oceanography were Dr. David W. Scholl, Dr. Roland von Huene, Frank H. Haymaker, and Wallace E. Hicks, Associate Head, Underwater Ordnance Department.

Dives Highly Rewarding
Dr. Scholl reported that the exploratory dives with Dr. McLean and Dr. von Huene were highly rewarding in scientific data and recovery techniques.

Dr. McLean was shown how the craft could search out and recover a small object, such as a NEL 37 KC sound-emitting device, dropped in 100 fathoms near the Wilson Cove area prior to the dive.

For one hour and 20 minutes, Dr. von Huene explored a vast submarine slope in depths ranging from 260 to 656 feet in an area one mile off shore.

The slope, one of the largest and steepest off the coast of California, was verified by Dr. von Huene to be at an angle of about 60 percent, with no indi-

cation of recent currents or slump.

Dr. von Huene described the ocean's bottom as being strewn with various kinds of sea-shell debris along with fantastic arrays of purple-spined sea urchin, fuchsia-colored rocks, branching clusters of white coral, and fiery orange starfish in a field of white sand.

Finds Paleozoic Specimen

Maneuvering the deep-diving craft into a section of volcanic rocks at the 656 foot depth, Dr. von Huene made an interesting discovery. Engaging the craft's powerful arm and claw, he reached among the rocks and secured a live Brachiopod, placed it in the craft's metal retrieving basket, and brought it safely to the surface.

The Brachiopod, a sea animal that flourished during the upper Paleozoic Era of geological time, or from about 250 to 400 million years ago, has a clam-like shell of smooth, ribbed or spiny texture, with a fleshy stock at the bottom for anchoring to rocks.

The pure white, almost transparent bilateral shell of the animal can be opened and closed with well-developed muscles. Inside the shell are rows of ciliated tentacles of the animal's digestive system, a nervous system, kidneys and reproductive organs.

This uncommon sea animal, probably one of the first to be taken alive from the San Clemente Island waters, is now living under scientific scrutiny in a tank at the Earth Sciences Division, California Institute of Technology, Pasadena.

Some of the many advantages in using deep-diving vehicles for oceanographic exploration and research, according to Dr. Scholl, include the feasibility to make various physical measurements on the floor of the ocean; the ability to observe deeper marine geological and biological phenomena in their natural environment, instead of disturbed samples retrieved by "blind" sampling devices; and means to determine the stability of steep submarine slopes.

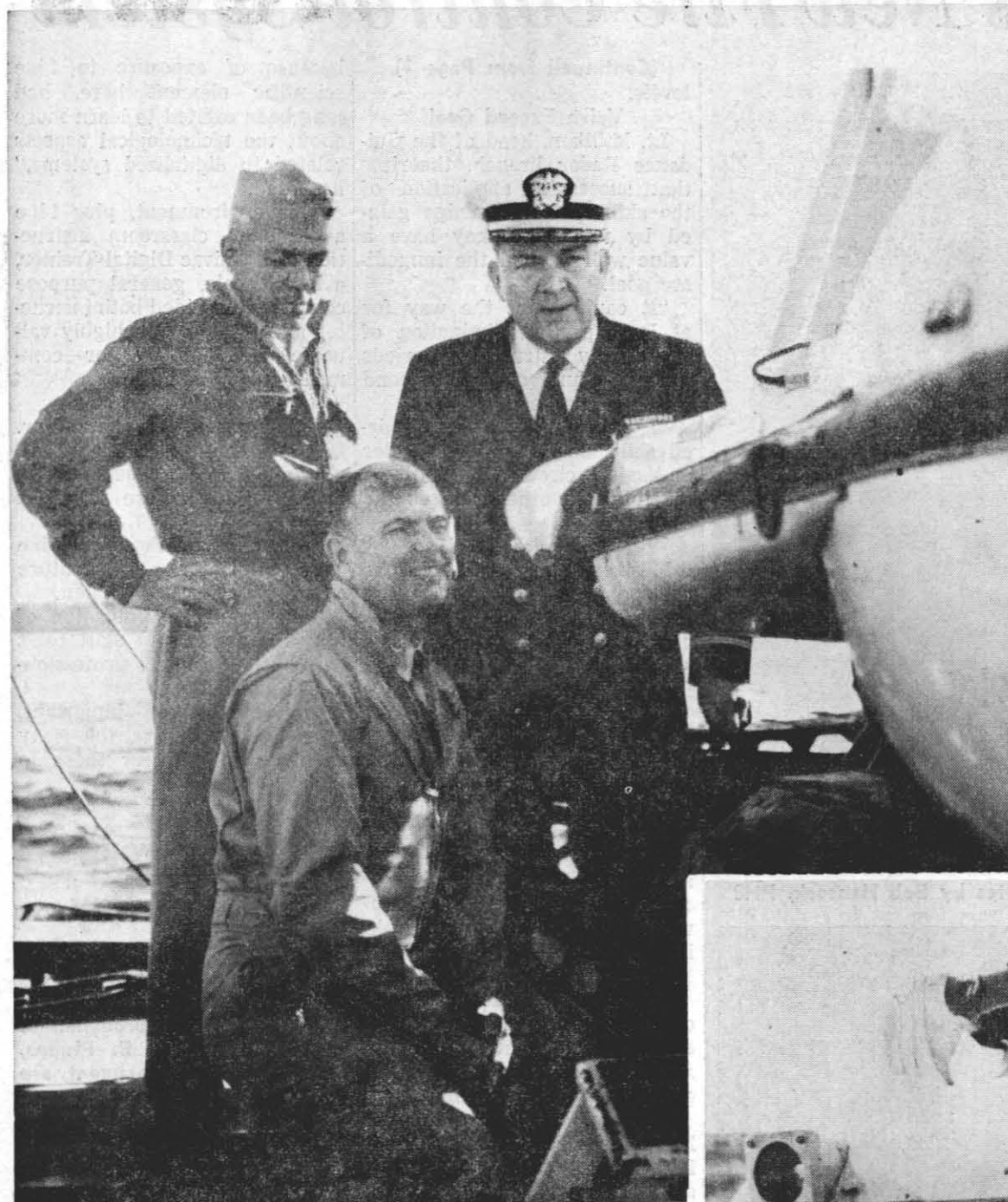
Amazing Progress Seen

In commenting on the great need for the type of submersible demonstrated, Dr. St. Amand said the future progress of oceanography, marine biology and geology made with small, manned submersibles will probably exceed, in a few years, the entire progress made in past centuries.

Also observing the demonstrations of the diving saucer at San Clemente were Captain Grady Lowe, Officer-in-Charge, NOTS Pasadena; Douglas J. Wilcox, Head, Underwater Ordnance Department; and Lt. Col. R. S. Clark, U. S. Army Liaison Officer, China Lake.

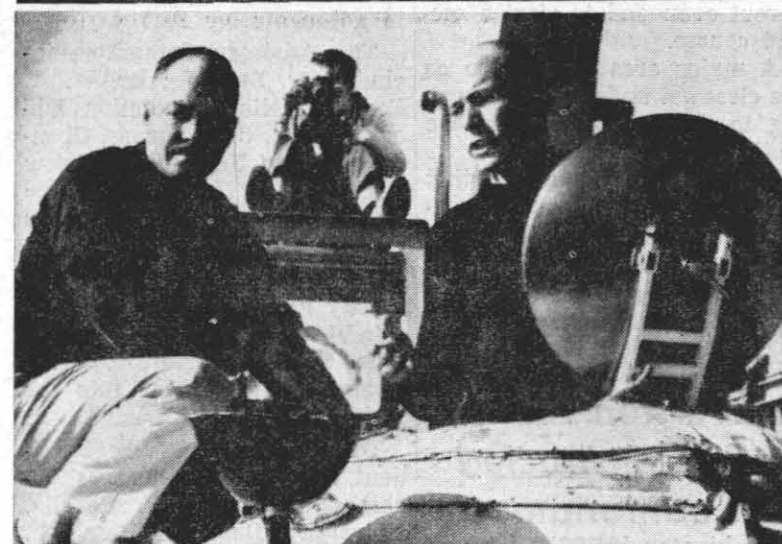
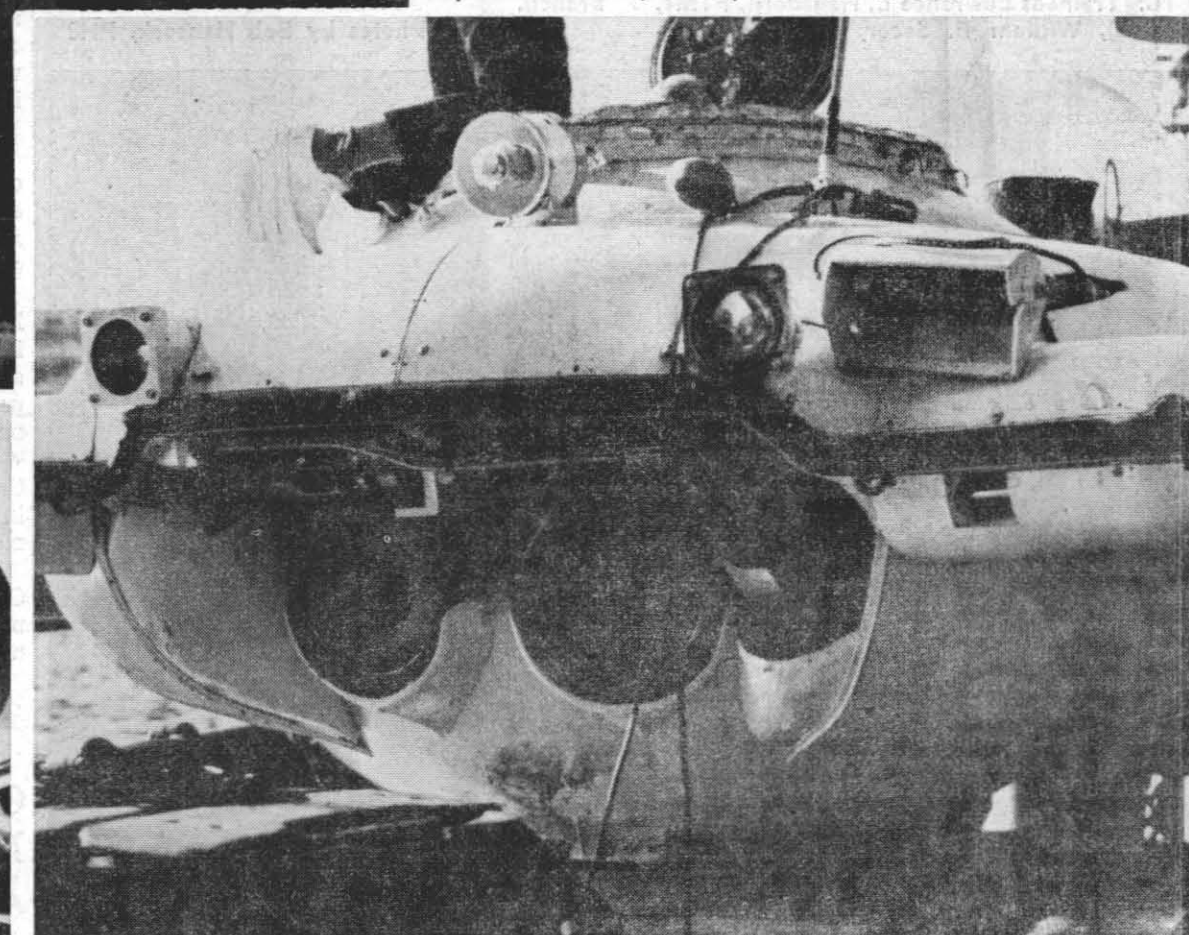
In addition to NOTS personnel at the scene of diving activities were Dr. Pat M. Wennekens, a former Station employee now representing the Office of Naval Research; Charles E. Jenkins, director of the Westinghouse effort in the diving program, and also a former NOTS employee; Glen Minard, supervisor of the handling crew for Westinghouse; and Robert Dill, well-known scientist and diver from the Naval Electronics Laboratory, San Diego.

'Denise' Shows Scientists Wonders of Sea



NOTS TECHNICAL DIRECTOR Dr. Wm. B. McLean, climbs into observer compartment in preparation for dive. Charles Jenkins (back to camera), project manager for Westinghouse, is former NOTS employee.

CAPT. CHARLES BLENMAN, Jr., ComNOTS, suited in coveralls, inspects saucer before his observation dive. With him are LCDR. J. E. Schaeffer, Jr., O-in-C, San Clemente Island, and Capt. G. H. Lowe, O-in-C, Pasadena Annex.

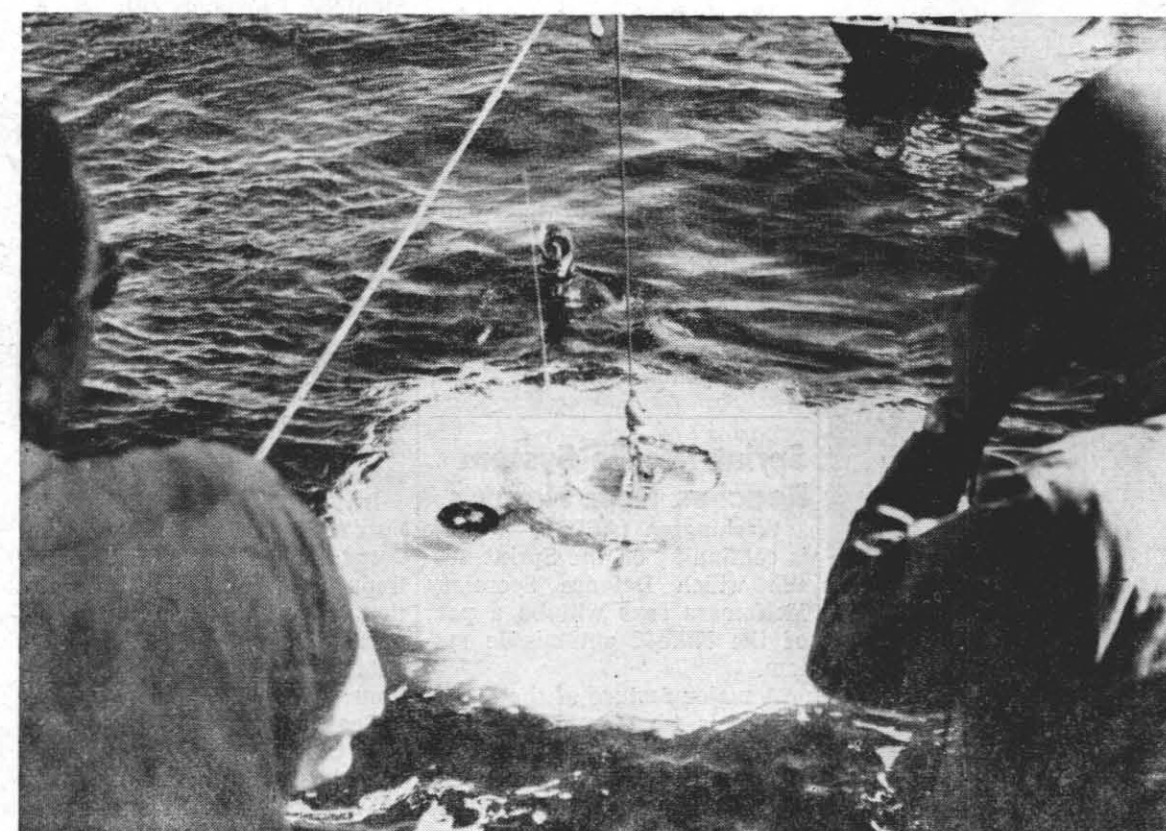


DIVING CHARACTERISTICS are explained by Dr. Andre LaBon, Director of the French Underwater Research Organization, to Cdr. L. H. Lippincott (left), one of NOTS officials who made observation dives in vehicle.

"DENISE" the deep-diving saucer, measures nine feet in diameter and weighs approximately 7000 pounds. Ports in lower section enable pilot and observer to view submarine

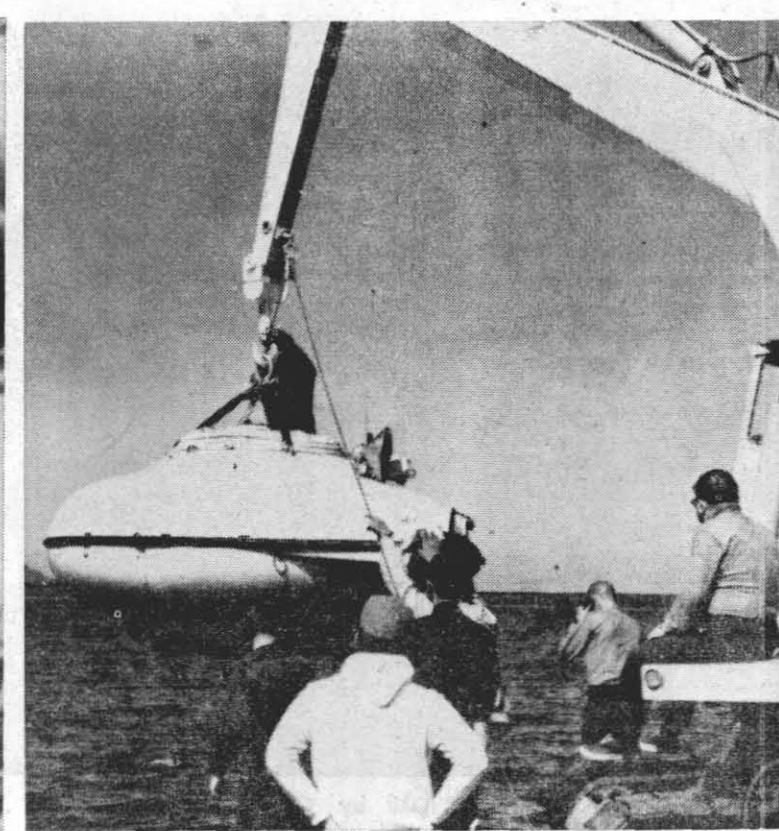
life. Device was demonstrated at San Clemente Island by arrangements of NOTS Earth and Planetary Sciences Division.

—Photos by Ralph Roney, PH2, and Lee Mascarello, PH2



TWO-WAY UNDERWATER communications are maintained by man (right foreground) and

pilot in vehicle, shown here as it is lowered into water by crane from tender.



HYDRAULIC CRANE lifts saucer gently out of water and onto deck cradle aboard tender off San Clemente Island.