Page Eight

WHO WILL BE THE RODEO QUEEN? - One of the six girls pictured at right will be crowned 1974 Rodeo Queen tomorrow at 1 p.m. during the rodeo at the DEF Fairgrounds. She will be selected on the basis of her poise, personality, horsemanship, and the sale of tickets. The six queen candidates will ride in the rodeo parade tomorrow morning accompanying the 1973 queen, Nancy Grams. The parade begins at 10 o'clock at the corner of Las Flores Ave. and Balsam St. At 2 p.m. tomorrow, the new queen and her court will ride in the grand entry of the rodeo, and they will also attend the rodeo dinner, set for 5 p.m. tomorrow at Joshua Hall. Admission to the rodeo is \$2 for general admission and \$1 for children 12 and under. The dinner will cost \$3.00 for adults and \$1.50 for those 12 years of age and under. A dance will be held at Joshua Hall following the dinner. Wayne Paisano and his group will provide the music. Admission is \$2 for all. On Sunday, the newly-crowned gueen and her court will again ride in the grand entry to signal the final day of the rodeo. A pancake breakfast, sponsored by the Ridgecrest / China Lake Optimists Club, will be held in the parking lot of the 1st Federal Savings and Loan, corner of Station St. and Balsam St., from 7 to 10 a.m. tomorrow morning.



Karen Boss Jerrie Butler



Kathy Schneide

Chris Ortega

Kris Turner

HAPPENINGS AROUND THE CENTER A second Female Awareness Seminar, led 12:30 p.m. in Warehouse 10 (on Blandy Ave., and geometrical considerations in the

by Dr. Rita McMullen, will be presented on Friday and Saturday, May 17 and 18, and again on Saturday, June 1, at the Desert Counseling Center's Ridgecrest branch, 1007 N. China Lake Blvd.

Topics to be explored include selfawareness, body image, female sexuality, emotional involvement, communication, spontaneity, and others.

Hours for the seminar will be 7 to 11 p.m. on May 17, and 9 a.m. to 6 p.m.. on May 18. The hours on June 1 are also from 9 a.m. to 6 p.m.

Fee for participation in the seminar is \$40, payable in advance. Interested women may call Dr. McMullen at 446-6514 for more information.

The final date for registration is next Thursday, May 9.

Taco Luncheon Scheduled

A taco luncheon, hosted by the Supply Department Recreation Club, will be held next Wednesday, May 8, from 11 a.m. to

near the Navy Exchange). A menu of tacos and refried beans will be holder

offered along with soft drinks and a bake sale Everyone is invited to this affair, the

proceeds from which will be used to cover a portion of the cost of future Supply Department recreation activities. Dance Set at Chaparral

Maxie Montoya and his El Batuka Band will bang the drums slowly, quickly, and every other way tonight at the Chaparral

Montoya's group will play for a dance from 9 o'clock until 2 a.m. Walt Schimke, manager, has invited all members and their guests to attend.

Astronomy Gp. To Meet The China Lake Astronomical Society will

hold its next regular monthly meeting on Monday at its clubhouse, 401-A McIntire St., beginning at 7:30 p.m.

Guest speaker for the evening is Gene Thomas, who will discuss the mechanical

construction of a mirror cell and a diagonal **USC Professors To Visit**

Students and prospective students in the USC Graduate Program in engineering are reminded that Professors Nasser Nahi and C. Roger Freberg will be at China Lake next Friday, May 10, for counseling.

In addition, a general meeting will be held at 10:30 a.m. on that day in Rm. 211 of the NWC Training Center to discuss course preferences and all aspects of the program. Employees who wish a counseling session with one of the professors should call the NWC Education Office, ext. 2641, no later than next Thursday, May 9.

Helicopter Joins Hunt

A helicopter from the Naval Air Facility, piloted by Lt. Col. Jack Pipa, USMC, joined the search for a missing Cessna 150 aircraft last Monday, with no results.

The aircraft, missing on a flight from Kernville to Sanger, was presumed down in the rugged Sierra Nevada mountain range. A call for help was initiated by the Western Rescue Center, McClellan Air Force Base, near Sacramento, and NAF responded.

Co-pilot on the flight was Lt. Col. Richard Boyd, USA, with Dr. Gary Gibbons aboard as flight surgeon. AMH1 Dan Zielke was the crew member. Two members of the China Lake Mountain Rescue Group, Dr. Carl Heller and Dennis Burge, were also along. The local team spent most of Monday morning in the search.

Hobby Displays Needed

Young people in the area are encouraged to enter a display of their hobby work in the annual Youth Hobby Festival, which is scheduled to be held on May 11 at the Community Center.

Entry forms are available at the Ridgecrest City Hall, the Community Center, or the Youth Center. Deadline for entries is next Wednesday, May 8.

Anyone desiring further information should call Carol Hape, ext. 2909.

Social Security Agent Due

A representative of the Social Security office in Lancaster will pay another in her regular series of monthly visits to China Lake next Wednesday, May 8.

Persons wishing to apply for a Social Security number or obtain information about seeking Social Security benefits can do so at the Community Center between 8:30 and 11 a.m.

May 3, 1974

The objective of the ratings is to inform parents about the suitability of movie content for viewing by their children

(G) - ALL AGES ADMITTED General Audiences (PG) - ALL AGES ADMITTED Parental Guidance Suggested (R) - RESTRICTED

Under 17 requires accompanying **Parentor Adult Guardian** CS - Cinemascope **STD** - Standard Movie Screen

Regular starting time-7:30 p.m. Matinee-1p.m.

"THE TRAIN ROBBERS" (92 Min.) John Wayne, Ann Margret

(Western) There's a half million in stolen gold stashed away in the Mexican wastes, and how's the poor widow going to smuggle it home past a horde of avaricious outlaws? If she's smart and shapely as Ann Margret, she just might share her burdens with the Magnificent Seven rolled into one, John Wayne. The Duke and his sidekicks blast their way through the baddies and bring home the bacon, more or less. (PG) SAT.

FAMILY MATINEE-"KING ELEPHANT" (93 Min.) Narrated by David Wayne

-EVENING-"YOUR THREE MINUTES ARE UP" (93 Min.)

Beau Bridges, Ron Liebman (Comedy) Beau Bridges' three minutes are consistently up as he tries to explain his actions over the phone to fiance Janet Margolin. She strongly objects to his friend, opportunist Ron Liebman. When the latter loses his unemployment insurance and his car is repossessed, he persuades Bridges to join him in a fling to be financed by credit cards now and cash never. (R)

5-6 May

"MAGNUM FORCE" (124 Min.) Clint Eastwood, Hal Holbrook

(Action Adventure) In San Francisco, known, but unconvicted mobsters and other felons, fall victim to an executioner dressed in a policeman's uniform. Working on the case for the San Francisco police force is detective Clint Eastwood. Eastwood soon narrows his suspects down to belligerent and aging detective Mitchell Ryan, and four traffic patrolmen with unusual skill at firearms. (R)

TUES. & WED.

SUN. & MON

"THE PAPER CHASE" (111 Min.) Timothy Bottoms, Lindsay Wagner

(Drama) Academic year begins at Harvard Law hool with Timothy Bottoms enrolling in Prof. whn Houseman's course in contract law. Bottoms joins Graham Beckel's study group. Bottoms begins an affair with Lindsay Wagner, before earning that she is Houseman's daughter and is divorcing law student Bill Moher. Bottoms and Beckel cram together for the final exam. Realizing how impersonal everything is, Bottoms comes to an understanding with Wagner and ignores his grades. (PG)

THURS 9 May "BLACK BELT JONES" (87 Min.)

Jim Kelly, Gloria Hendry (Black Action Drama) Mafia chief Andre Phillipe uses his winery as a front for illegal activities. Knowing that the city plans to build a civic center in downtown Los Angeles, he attempts to gain control of all the land in the area. Directly in the middle is Scatman Crothers' school of self. defense for young blacks. Phillipe wants pool hall proprietor Malik Carter to force Crothers into turning over the deed, but Crothers is accidentally killed and daughter Gloria Hendry inherits the academy. Black belt expert Jim Kelly and instructor Alan Weeks are impressed by Hendry's karate skill, particularly when she beats all of Carter's men. (R)





From . PLACE STAMP HERE O

10 May

874

GARDEN SHOW WINNERS - Wanda Hewett, Alice Hirsch, and Marianne Kistler (1.-r.) were selected as winners in the 16th annual standard spring flower show of the Oasis Garden Club last weekend. Mrs. Hewett combined iris with dried branches in a gold pan for her winning entry, "Yellow Dust." Mrs. Hirsch won two awards for "The Birds Soar," an entry in the height unlimited pedestal arrangement. Mrs. Kistler won the tri-color award for her niche arrangement of Tropicana and Ole roses. Some 254 horticulture and 88 artistic entries brightened the Commissioned Officers' Mess during the show. The horticulture sweepstakes award was won by Kathy Pratt, (not in photo) whose rich purple Wiegelia Briston Ruby also won an arboreal award. -Photo by PH3 S. K. Reed



7-8 May

3 May

4 May

question.

Grant Pinney, who has been offered, and states he will accept, the post of assistant superintendent for business of the new unified school district, indicates that even though this is far from the optimum situation, it is not a novel one because school districts eligible for federal impact aid have for years found themselves in this same condition since the inception of Public Law 874 in 1950.

Pinney, as superintendent for business of the China Lake Elementary School District, has become an expert on the subject of PL 874, and is presently the California state chairman for federal impact aid to schools.

Task Complicated This year his task of seeking

Congressional support for impact aid legislation has been complicated, the China Lake school administrator said, because it is first necessary for the House of Representatives and the Senate to agree upon a bill authorizing the extension of PL

At this date, the House of Representatives has done so by passing HR69 with only a minor change in PL 874. Now the matter rests with the U.S. Senate, where PL 874 is getting rough treatment, Pinney stated. On the plus side, however, the Senate has

proposed that PL 874 be extended for five years, instead of three years-the length of time agreed upon by the House of Representatives. The U.S. Senate is expected to work out its

nwc rocketeer

Naval Weapons Cente China Lake



CHUCK CUTSINGER, a physical science technician in the Microelectronics Branch, is shown at work with the sputter vacuum deposition system--one of the pieces of highly specialized equipment that is used in applying thin films of alloy materials to produce thin film resistors. -Photos by PHAN Joe Dunn

New School Year Almost Here, But Amount of Fed'l Aid Unknown

unified school district is an unanswered

With the date fast approaching for version of the PL 874 authorization measure commencing the first year of operation of this month, and the differences between the the Sierra Sands Unified School District on House and Senate proposals then will have July 1, 1974, just how much federal aid will to be ironed out by a conference committee be available to help support the newly composed of both Senators and

(Continued on Page 3)

Vol. XXIX, No. 17

Microelectronics Branch Aims for Smaller Circuits Able To Do Bigger Jobs

microscope.

While microelectronics is relatively new, it is a well established advance in the field of technology commonly used in the Microelectronics Branch of the Engineering Missile Center at Pt. Mugu Department's Electromechanical Division, stated.

In this work, complex electronic circuits are miniaturized on a ceramic substrate tronics Branch (Code 5525) is responsible typically 1 in. square or smaller to form for keeping abreast of the new develophybrid integrated circuits. Without such hybrid circuits done by groups similar to NWC's Microelectronics Branch, the exhave been possible.

Advantages Cited

Here, however, the Microelectronics Laboratory personnel concentrate their efforts in support of the Center's development projects, such as the AIM-9L, Condor, Shrike and Agile. The use of hybrid microcircuits has the advantage not only of reduced size and weight, but also increased reliability. Other advantages include improved electronic shielding, reduced stray reactance and improved operation under mechanical and thermal stress. These advantages are obtained at a cost very nearly equivalent to that of the more standard packaging techniques.

Right now, the branch is building



THIS IS AN ultrasonic gold wire bonding machine that is used by technicians of the Microelectronics Branch to electrically connect various components to the conductor runs. The machine uses gold wire that is .001 in. (1 millimeter, in diameter). The operator in this photo is "Sam" Shaffer, an electronics mechanic.

May 3, 1974

INSIDE. . .

Mother-Daughter Banquet Set2 Early Retirement Option Open4 Wildflower Festival Staged

Smaller and smaller while getting better preamplifiers for the AIM-9L and Agile and better results-that's the aim of NWC missiles, a 102-channel signal conditioner employees who are involved in creating and unit for the Condor telemetry package, and building tiny microelectronic circuits that the electronics for an active optical fuze, are so small they must be fabricated using a plus doing circuitry for the Micrad signal processing system. In addition, Code 5525 personnel also have fabricated driver circuits for gallium arsenide injection laser electronics and a radical departure from the arrays for the active optical fuze program. During the past year, a variety of hybrid fabrication of discrete component circuits, circuits have been fabricated for telemetry Dr. W. P. (Bill) Webster, head of the systems being developed by the Naval

Responsibilities of Branch

As the Naval Weapons Center's primary microelectronics group, the Microelecments in this field-especially components. materials and fabrication techniques.

Employees in Code 5525 also provide ploration of space, the Apollo spacecraft, design assistance to any NWC group using Skylab and the planetary probes could not these devices in their circuits and most importantly, provide the Center with a prototype design and fabrication facility for microelectronic circuits and components.

The Microelectronics Branch (15 personnel in all) includes a half dozen technicians, an assembler, a junior professional, and seven professionals. The latter are a chemist, three electronics engineers and three physicists.

There are four separate, but closely related, sections in the branch which have overlapping technologies and techniques. (Continued on Page 3)

Congress Asked To Appropriate Funds For Back Pay Due

The Navy Times reports in its May 1 issue that President Nixon has asked Congress to appropriate money to start paying the courtordered back pay due military and federal workers for a pay increase that was delayed three months in 1972

The lawmakers are expected to act on the measure without delay, so payments should begin soon, Randall Shoemaker, the writer of the Navy Times article reported.

While not even a tentative starting date has been mentioned, high government sources have said all departments and agencies would begin their payments at the same time, the Navy Times story continues.

The cost has been officially estimated at approximately \$530 million, but most experienced observers expect the final total to go far higher in order to cover the back pay increase that was withheld for the period from Oct. 1, 1972, to Jan. 1, 1973.

Military personnel eligible for this retroactive pay boost are those who were on active duty at that time, those who were receiving drill pay for reserve duty, and those who retired both during and since the three month period in which the increase in their pay was withheld.

Federal Civil Service employees who were on the payroll between Oct. 1, 1972, and Jan. 1, 1973, or who retired during or since that time, also will be entitled to this retroactive increase in pay.

and enforcement. Minimum Qualification Requirement

As defined in CSC Handbook X-118. Job Relevant Criteria:

Incumbent must have the ability to work in stress

situations. Must be able to exercise good judgment. Must

Clerk-Typist, GS-322-2/ 3, PD No. 7495000, Code 95 -

This position is located in the Office of Patent Counsel

Duties include typing material of a legal and technical

nature, processing invention disclosures and reviewing for

proper signatures and completeness of related at

files and serves as timekeeper for code. Minimum

Qualifications Requirements: As outlined in CSC Hand

book X-118. Job Relevant Criteria: Must be accurate

typist; ability to effectively deal with office visitors;

File applications for above with Charlotte Sieckowsk

Mechanical Engineering Technician, GS-802-6, PD No.

7431056, Code 3113 - This position is located in the Weapon

Control Branch, Technology Development Division

Surface Missile Department. Incumbent will design

fabricate, test, evaluate, and modify mechanical and

electro-mechanical components related to systems under

the cognizance of the branch. Minimum Qualification Re

Relvant Criteria: Thorough knowledge of mechanical

ctronics; ability to express design and modification in

design, experience and/or training in electricity and

drawings and blueprints for personnel fabricating the

Am-1, Code 1763 - The incumbent will be responsible for a

wide variety of plant property duties in support of various

Center departments. As part of these duties, the incumben

will review all incoming plant property documentation for

correctness, input documentation to the Plant Accounter

Area Account. In addition, incumbent will facilitate

transfer and disposition of plant property and coordinates

a triennial inventory. Incumbent is under the general

supervision of the Head, Plant Property Accounting

Branch and will maintain contact with Center department

work independently; knowledge of general accounting

procedures; knowledge of Navy plant property system;

and knowledge/ability to work with data processing.

Minimum Qualification Requirements: As defined in CSC

File Clerk (Typing), GS-305-3, PD No. 7417019, Code 171

This position is located in the Weapon System Cost

Analysis Division of Central Staff, Incumbent will main

tain W.S.C.A. document data bank. This function entails

ordering, receipt, description, coding, and input of

documents into the W.S.C.A. data bank. Will also issue

weekly document accession list and retrieve documents

from data bank as repuired. Minimum Qualification Re-

quirements: As outlined in CSC Handbook X-118. Job

Ability to get along with others in work group. Ability to

File applications for the above with Wilma Smith, Bldg.

Engineering Technician, GS-802-7/8/9/10, PD No.

Relevant Criteria: Experience in complex mechanism

design, development and experimentation. Must be

thoroughly familiar with production processes and

machinery associated with the fabrication of develop-

skill in precision measurement techniques. Ability to

inspect electromechanical parts and assemblies desirable.

(Continued on Page 7)

engineering theory and practices.

SPRING DINNER-DANCE TAKES SHAPE - The WACOM annual Spring

Dinner-Dance, open to all Commissioned Officers' Mess members, will be held at

the COM on Saturday, May 18, from 7 p.m. to 1 a.m. Tickets are \$14 a couple and

the music will be provided by Art Depew. The dinner-dance began to take definite

shape when (I. to r.) Marilyn Felton, Sherrie Scheber and Dianna Sherman, met

recently to prepare the decorations. Mrs. Felton and Mrs. Sherman are the co-

chairwomen for the affair. Further information and / or tickets may be obtained

nowledge of basic mechanical, electrical and genera

ntal models and end-item production. Experience and

044, Code 3351 — This position is located in the Produc

maintain filing system. Advancement potential: GS-4

34, Rm. 206, Ph. 2676.

levant Criteria: Ability to work rapidly and accurately.

Handbook X-118. Advancement Potential: GS-6

sonnel at all levels. Job Relevant Criteria: Ability to

puter system, and maintain the fiscal integrity of his

Plant Accounting Technician, GS-501-5, PD No. 7317061

nents: As outlined in CSC Handbook X-118. Job

tachments. Maintains patent case files and administrative

be able to properly apply and enforce laws.

demonstrate telephone reception skills

work. Advancement Potential: GS-11

Bidg, 34, Rm, 204, Ph, 3118,



Relevant Criteria: Experience working with work break down structures, procurement, and contracting methods. Experience with computer financial plots, financial data extrapolation, and program planning Clerk (DMT) GS-316-3 or 4 or Clerk-Typist, GS-322-3 or 4, PD No. 7335086, Code 3523 - Provides clerical support for two branches, 3523 and 3524, in the Electronic Systems appointments, performs other clerical duties. Minimum dability. Ability to type efficiently and accurately. Ability Clerk-Typist, GS-322-3, PD No. 7435064, Code 3507 - This position will be filled on an intermittent basis. Position is ment. Duties include assigning control numbers to

5313 - Position is that of Head, Special Writing Projects Branch, Publications Division, TID. Develops archives of nistorical and general reference material on the Naval Weapons Center and associated R&D programs for the U.S. Navy. Directs the writing, editing and coordinating of official administrative histories, unpublished manuscript histories, articles for open literature, and monographs on Navy R&D subjects. Minimum Qualification Requirements: As outlined in X-118. Job Relevant Criteria: Experience in planning and preparing scholarly narrative or documentary histories for publication. Skills in written and visual technical communication. Working knowledge of publishing techniques. Ability to deal effectively with Clerk-Typist, GS-322-4, PD No. 745024, Code 4533 -Performs secretarial and clerical duties for the branch Receives telephone calls and visitors, schedules appointments and meetings, handles correspondence, edits and types technical material, compiles and prepares reports. Minimum Qualification Requirements: As outlined in X-118. Job Relevant Criteria: Familiar with Navy correspondence, filing, and instructions.

File applications for above with Mary Mor 657, Rm. 210, Ph. 2393. Administrative Officer, GS-341-11 or 12, PD No. 7335118, Code 3506 - This position is located in the Electronic Systems Department, HARM Program Office. The incumbent is responsible for the monitoring of an generation of financial data, generation of preliminary personnel actions, contract monitoring and interface, procurement of equipment and materials, facilities management, generation of program status reports, and program management support. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job

Department, Incumbent types from handwritten or roughdraft copy, transcribes from dictaphone, technical notes; etc. Receives telephone and office callers, compose correspondence, receives and distributes mail, makes Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Reliability and depento operate an IBM Magnetic Selectric Typewriter (MTST) located in the Production Group of the Shrike / Standard Arm Program Office of the Electronic Systems Departdrawings, specifications, and microfilm; maintaining control log; maintaining records and files; and typing production group correspondence. Assists in distribution

Dr. Carroll T. White from the Human Factors Division of the Naval Electronics Laboratory Center in San Diego.

(Continued from Page 2) Engineering Technician, GS-802-5/6, PD No. 7433033. Code 3332 - This position is located in the Fuze Project Branch II, Development Division I, Fuze Department Incumbent processes flight records and examines such records for missing data and attempts to reconstruct missing data. Prepares and uses punch cards and updates and adapts current computer programs to meet new analysis problems. Assembles electronic circuits and makes tests and measurements using common laboratory equipment. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Experience reading flight test records. Ability to prepare and use punch cards. Ability to update and adapt existing computer programs. Experience in circuit assembly Advancement Potential: To GS-7. File applications for the above with Claire Lewis, Bldg

Engineering and Fleet Support Branch, Electromechanical Division, Fuze Department. The position npasses the technician aspects of electrical and nechanical engineering as applied to the development of fuzing for explosive ordnance. He makes sketches or drawings of parts or subassemblies of electromechanica devices of suitable quality, completeness and accuracy for use in fabrication in a model shop, but of a design adaptable to production processes. Minimum Qualification Requirements: As defined in the CSC Handbook X-118. Job

Mrs. Manning and Mrs. Schafer invite all

Technical Director (Acting) DIVINE SERVICES PROTESTANT Sunday Worship Service Sunday School — All Ages Wednesday Noon Bible Study Technical Information Department Sunday School Classes are held in Chapel Annexes 1, 2, 4 (Dorms 5, 6, 8) located opposite the Center Restaurant union Service first Sunday of the month

Saturda

B	LESSED SACRAMENT CHAPEL			
	MASS			
aily except Saturday			1135	
irst Friday only		1135	1635	
	CONFESSIONS			
aturday		1545 to	1645	
unday		0800 to	0825	
	CCD CLASSES			
unday	Kindergarten thru 6th grades		1015	
ednesday	Seventh and 8th grades		1900	
	s are held in Chapel Annexes a urant.	across	from	
s announced	Ninth thru	Ninth thru 12th grades		
	"In Home" Discus	sion Gr	oups	
	Monthly Y	outh Ra	allies	
ontact Chap	lain's Office for specifics.			
	JEWISH SERVICES			
EA	ST WING - ALL FAITH CHAPE	L		
riday 1st an	d 3rd ONLY			
abbath Servi			2000	
aturday	Sabbath School		0900	
	UNITARIANS			

CHAPEL ANNEX 95

3354, 3355, 2347 Sunday Services

PROMOTIONAL OPPORTUNITIES

pplications for positions listed in this column will be accepted from current NWC employees and should be iled with the persons named in the ad. All others esiring employment with the Naval Weapons Center nay contact the Employment Division, Code 652, Extension 2069. Current applications (SF-171) o tandard Form 1972 should be submitted bringing your work history up to date if one has not been submittee ithin the last 6 months. The fact that positions are advertised in this column does not preclude the use o ther means to fill these positions. Part of the ranking process of those rated as basically qualified will be supervisory appraisal form that will be sent to the employee's present and most recent previous super visor. Selection shall be made without discrimination for any nonmerit reason.

Information Receptionist GS-304-4, PD No. 17315, Code 84112 - This position is head of the Badge / Pass Section of the Security Operations Division. Incumbent provides advice and guidance to civilian and military personne concerning security clearance; determines types of passes required, prepares necessary forms, manufactures the pass, and completes the necessary file and records. Minimum Qualification Requirements: As defined in CSC andbook X-118. Job Relevant Criteria: Must be able to type. Must have basic knowledge of NWC organization Clerk-Typist, GS-322-4, PD No. 7484003, Code 84112 -

his position is located in the Personnel Security Clearance Section of the Security Operations Division. The incumben performs a variety of functions including: interviews new employees and contractor personnel to obtain information for security clearance; types a variety of forms and let ters, takes fingerprints, manufactures passes and iden tification cards; and maintains files and records. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Must be gualified typist. Must be able to work under stress.

Firefighter, GS-081-3 / 4, PD No. 7284023, Code 842 - Two (2) vacancies. This position is located in the Fire Division of the Security Department. Incumbents respond to alarms for fires and other emergencies; participates in drills and classes covering all phases of structural and crash irefighting procedures, fire prevention and inspection, and pre-fire planning; periodically inspects Center buildings and property with regard to fire prevention and protection, elimination of fire hazards and maintenance of fire fighting equipment; and perform other duties as assigned. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Ability to work under stress. Ability to deal effectively with the public and to exercise good judgement. Must be able to ollow instructions.

Fire Protection Inspector, GS-081-7, PD No. 7484001 Code 842 - Two (2) vacancies. This position is located in the Fire Division of the Security Department. Major duties include inspections of buildings, their contents, utilities and surrounding areas and assignments involving life hazards, fire hazards and fire prevention deficiencies, ends and follows up on corrective actions for fire hazards; presents fire prevention training to other Fire Division personnel; and tests, services and installs fire equipment. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Knowledge of principles of fire prevention inspection. Knowledge of operations performed in assigned area General knowledge of physical layout of NWC, including

Supervisory Firefighter, GS-081-9, PD No. 17105, Code 842 - This position is Assistant Fire Chief of the Fire Division in the Security Department. Incumbent is responsible for all firefighting operations on his shift. He directs responses to structural and crash fires, emergency aircraft landings, and rescue calls. He is responsible for administering personnel policies and procedures. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Must have experience in directing crash and structural firefighting operations. Policeman/ Policewoman, GS-082-2/3/4, PD No.

1484002, Code 843 - This position is located in the Police Division of the Security Department. Incumbent will perform his duties as a uniformed patrolman. He will be responsible for the prevention of criminality, repression of crime, apprehension of offenders, recovery of property, regulation of non-criminal conduct including traffic control

by calling Mrs. Felton at 446-6865.

1700 fulfills Sunday obligation 0700 0830 1130

BL	ESSED SACRAMENT CHAPEL			
	MASS			
ily except S	aturday	1135		
rst Friday only		1135 1635	-	
	CONFESSIONS			
turday	rday 154			
nday		0800 to 0825		
	CCD CLASSES			
nday	Kindergarten thru 6th grades	1015	1	
ednesday	Seventh and 8th grades	1900	100	
	are held in Chapel Annexes a grant.	cross from		
announced	Ninth thru	Ninth thru 12th grades		
	"In Home" Discuss	ion Groups		
	Monthly Yo	wth Rallies		
ntact Chapi	ain's Office for specifics.			
	JEWISH SERVICES			
EAS	ST WING - ALL FAITH CHAPEL			
	d 3rd ONLY			
bbath Servic		2000	6.7	
turday	Sabbath School	0900		

1930



Tuesday, 4:30 p.m. Tuesday, 11:30 a.m The Rocketeer receives American Forces Press Service material. All are official U.S. Navy photos unless otherwise identified. Printed weekly with appropriated funds by a Sa

Annual Mother-Daughter Banquet Tuesday The affair is being co-chaired by Janet The fifth annual Protestant Women of the Chapel (PWOC) Mother-Daughter Banquet Manning and Bernice Schafer; Mary Ward will be held on Tuesday, starting at 6 p.m., is handling programming; Betty Cook, catering; Val Strommen, decorations, and The banquet will feature a menu of Jan Clay, printed programs. waldorf salad, beef stroganoff with noodles. The Chaparral Club will cater the banquet green beans, hot rolls, coffee, tea and milk

MOTHER-DAUGHTER BANQUET PLANNED - Members of the committee to

stage a Mother-Daughter Banquet by the Protestant Women of the Chapel

gathered at the home of Janet Manning recently to finalize plans. They are (I.-r.):

Jan Clay, Mary Ward, Bernice Schafer, Valorie Strommen and Mrs. Manning. The

event will take place in the East Wing of the All Faith Chapel next Tuesday,

starting at 6 p.m. Tickets are priced at \$2.75 for adults and \$2 for children. They are

Protestant Women of the Chapel Schedule

available at the NWC Chapel.

in the East Wing of the All Faith Chapel.

very own fresh strawberry sundae.

The Rocketeer

Official Weekly Publication

Naval Weapons Center

China Lake, California

RAdm. Paul E. Pugh

Leroy Riggs

C. E. Van Hagar

Head,

Don R. Yockey

Edito

Associate Editor

Nancy Jones

Editorial Assistant

PH3 Jerry Sizemore, ADJ3 Bill Brooks,

Staff Photographers

DEADLINES:

commercial firm in compliance with Nav Exos P35,

revised July 1958. Office at Nimitz and Lauritsen. In

formation published in the Rocketeer does not necessarily

reflect the official views of the Department of Defense.

PH3 Shellie K. Reed, PHAN Joe Dunn

PH2 D.W. Yeatts, PH3 D.M. Jenereaux

Jack C. Lindsey

News Stories

Pho les

Phototographs

NWC Command

lady with their daughters.

and for dessert those attending can fix their

The theme for this year will be "Reflec-

tions," Mary Ward announced. Reflections

will give mothers a chance to recall, and

share, experiences as a child and young

and the men of the Protestant congregation will serve the ladies. Tickets are \$2.75 for adults and \$2 for

children. Further information and tickets can be obtained by calling Chapel office, Ext. 3506.

residents of the area to attend this event.

May 3, 1974

ROCKETEER

Page Seven

Sigma Xi Meeting Speaker To **Describe New Eye Exam Method**

The spring dinner meeting of the China Lake Chapter of Sigma Xi (formerly RESA) will be held next Tuesday, starting at 7 p.m., at the Commissioned Officers' Mess.

Guest speaker of the evening will be Dr. Carroll T. White, a research psychologist



Dr. White will discuss a new vision testing technique that has aptly been called "the miraculous new eye exams." It functions by placing an electrode on the back of the head of the individual being tested and watching a flashing light or checkerboard pattern as the person's brain responses to the visual stimulus are translated to a computer for analysis and plotting.

At the point where the subject sees the stimulus best is where the brain signals are strongest. No longer must a person undergoing an eye examination read charts or make any verbal comments-he simply sits with his eyes open and the machine does the rest

Now, for the first time, eye examinations can be given to small children or mentally retarded persons with complete accuracy.

This technique is now in use in children's hospitals and eye doctor offices around the country, and it all started as a vision research project for the U.S. Navy.

Tickets for the Sigma Xi dinner meeting, which must be purchased no later than 4:30 p.m. today, can be obtained from Paul Amundson, Marvin Backman, John Carroz, Dr. Fred Essig, Don Moore, Dr. Gil Plain, and Andy Victor. Price for the prime rib dinner (including wine) is \$6.50 per person

Employee In The Spotlight

Who said an Okie gal couldn't make it in the big city? Mary Neufeld, secretary to the NWC Public Works Officer, Capt. W. H. Sturman, left her native Muskogee, Okla., after graduation from secretarial school to tackle Washington, D. C., in 1941.

"I went to work for the Defense Housing Administration at first, but in 1948 I joined the Executive Office of the President, Bureau of the Budget," Mary said.

Mary was working in Washington when all of the Democrats thought Thomas Dewey, governor of New York, would defeat Harry S. Truman for the Presidency in 1948. "It was really humorous," Mary recalled. "Everybody working for the administration was looking for another job. You never saw such a pall. Then ol' HST was re-elected and by a large majority. That sure brought the sunshine in," she laughed.

While an employee for the Bureau of the Budget, Mary met Milt Neufeld. He came to China Lake in 1950 to work for Central Staff, and in April of that year, Mary followed him. The couple was married upon her arrival.

Became a Housewife

Mary quit work to become a housewife and to raise their son, Bill. However, in 1956 she went to work at the Pilot Plant for Roy Sutton, as a secretary. After about six weeks, Sutton was replaced by a Cdr. William B. Robertson. "That was my first experience working for a Naval officer," Mary pointed out.

In 1960, Mary joined the staff of Bob Blaise, who was an assistant to then Associate Technical Director Hack Wilson. Blaise was replaced by Harold Metcalf.

"My next job was working for Doug Colladay in the Weapons Planning Group," Mary recalled. "I worked for him until August of 1962 when Milt was sent to Newport, R. I., for a year. The family went with him," she added.

Joined Walleye Office

After returning to China Lake in August 1963, Mary joined the staff of Dave Livingston, who headed up the Walleye office. She spent a year with Dave before going to Public Works as the Public Works Officer's secretary. "I've been with four officers over there," Mary said. "Capt. C. A. Riley, Capt. H. J. Hartman, Capt. K. C. Abplanalp and now Capt. Sturman. I've worked as a secretary for a lot of well known people on the Center over the years, but I think I've enjoyed being the PW secretary best of all. I used to change jobs every couple of years, but now I don't have to. Instead, they change officers on me, and that makes it great," she said, a twinkle in



her eve

Mary, who is labeled a "tremendous person" by Capt. Sturman, has been recognized many times by her superiors. She has received several QSIs and Outstandings.

She has kept busy since Milt died in 1968 by stepping up her activity in the China Lake Business and Professional Women's Club, and in raising Bill. He completed work for a bachelor's degree in political science at UCLA last June, and is now taking a paralegal course to prepare for law school at UCLA extension.

Mary's involvement in BPW finally paid off this year when she was selected as the president-elect of the Tri-Valley District of BPW, the first person from the Indian Wells Valley to hold that office. In her 10 years as a member of BPW, Mary has held the offices of recording secretary, 1st and 2nd vice president for the District, and nearly every office in the local club, including president in 1967-68

Her hobbies include golf, travel, knitting, playing duplicate bridge, and "people."

Easy Living Dance Band

Will Play at CPO Club

The Easy Living dance band has been scheduled to play again tonight at the Chief Petty Officers' Club. The music will begin at 9 p.m.

George Barnard, manager of the Club, has invited all members to come early for dinner and "stay around for the fun." "Bring your guests," he also suggests.



FIVE NEW CHIEFS - Five Navy enlisted men at the Naval Air Facility were recently promoted to the rank of Chief Petty Officer. They are (I.-r.): CSC Mario G. Guarnes, DTC John S. King, HMC John E. Kuttnauer, YNC Phillip L. Windle, and MRC John H. Nixon, Jr. Guarnes, a 20 year veteran, supervises the NAF Galley. King is the leading PO and Prosthetic Lab Technician at the NWC Dispensary. Kuttnauer, a 10-year Navyman, is supervisor of the Dispensary's Medical Records office. Windle is the NAF Administrative Supervisor, and Nixon supervises the 1st Lieutenant's Division at NAF.

PROMOTIONAL OPPORTUNITIES

34, Rm. 212, Ph. 2371. Supervisory Historian, GS-170-12, PD No. 7453009, Code

of drawings and specifications. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Ability to the classified documents ac curately. Ability to type efficiently and accurately. Reliability and dependability

Electronics Engineer, GS-855-12 or 13, PD No. 7435063, Code 3553 - This position is that of Head, Systems Engineering Branch, Countermeasures Division, Elec tronic Systems Department. The incumbent will be physically located at the Electronic Warfare Threat Environment Simulation (EWTES) facility in the Randsburg Wash Test Area. The incumbent will be responsible for the planning, coordination, and execution of the following areas: Technical management of all modification, i stallation, and integration of advanced electronic warfare simulation systems. Systems engineering support for electronic warfare programs. Consultant services t Center personnel and other interested agencies regarding airborne electronic warfare countermeasure equipment and systems. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria Incumbent must have a detailed knowledge of threat radar simulators and understand thoroughly the working con cepts of a simulation integration complex. He must have a solid background in advanced electronic warfare systems and have the ability to integrate these systems into a common operating facility. Ability to supervise.

File applications for the above with Sue Prasolowicz Bidg. 34, Rm. 208, Ph. 3577.

Supervisory General Engineer, GS-801-12 or 13, PD No. 455054, Code 5581 — This position is that of Head, Product Support Branch in the Product Assurance Division of the Engineering Department. Responsibilities include plan ning, implementation of system safety, system eering and integration and product cost analysis Duties include supervision of branch personnel, administrative functions, technical duties in technical and management review committees. Job Relevant Criteria: General knowledge of system safety requirements specified in MIL-STD-882. Working knowledge of contracting principles as related to both weapon system support and hardware development and production. Experience in systems engineering and program support oriented toward system hardware acquisition, costing and support services. Minimum Qualification Requirements: As defined in CSC Handbook X-118.

Electronics Engineer, GS-855-9, 11, or 12, PD No. 6955037 Code 5525 — This position is located in the Microelectronics Branch, Electromechanical Division of the Engineering Department. Incumbent is responsible for the design, analysis and fabrication of analog and digital and electronic circuits. These circuits are used in a variety of missile guidance, control, target detection, telemetry and test equipment systems developed by the Center. Job Relevant Criteria: Experience in design and analysis of a variety of digital and analog circuits for missile systems. familiarity with current Center development projects. Minimum Qualification Requirements: As defined in CSC Handbook X-118.

File applications for above with Linda Grossman, Bldg. 34, Rm. 204, Ph. 2925.

Electronics Technician, GS-856-9, PD No. 7451038, Code 5152 - Position is located in the Electro-Optical Guidance Branch of the Systems Development Department, In cumbent performs design, development, assembly and tes of electronic systems ans components in support of electro optic and infrared guidance systems. Minimum Qualification Requirements: As defined in CSC Handbook X-118. Job Relevant Criteria: Ability to design, fabricate and package electronic guidance subsystems for missiles A background in mathematics and a thorough knowledge of laboratory and field testing of electronic systems and subsystems.

File applications for the above with Pat Gaunt Bldg. 34, Rm. 212, Ph. 2514

Page Six

In

The

Catbird

Seat

May 10, at 4:30 p.m.

perhaps a small party.

available.

at the course.

pointed out.

By Jack Lindsey

All team rosters, to consist of a minimum

of four starting players and two alternates,

plus a \$12 entry fee per team, must be

turned in to me no later than next Friday,

The league must provide its own trophies

this year, hence the entry fee. All money will

be returned in the form of trophies, and

It looked like there might not be a league

during the captains' meeting held earlier

this week. Rumor was that the clubhouse

would be closed at 7 p.m. and that golf carts

and the driving range would not be

I talked to John Shoaff, head of the Special

Services Division, about the problem. He

stated that, although he would be closing the

pro shop at 6:30 p.m., with the pro shop

personnel to stay no later than 7, that he was

not looking for ways to curtail golf activities

"I am hiring some people and I'm sure

that something will be worked out so that

golfers can get to their lockers, etc.," he told

me. In fact, John stated that he is looking for

ways to increase golfers' use of the course.

"I am currently studying the feasibility of

keeping the course open on Mondays," he

Of the 14 team captains present at the

meeting, only three said they would field a

team if golfers could not use the lockers.

Also, it was pointed out that a revenue of

approximately \$30 to \$45 per evening would

be realized through the rental of golf carts.

"More than enough to pay for someone to

keep things open during the golf league,"

China Lake Men's Golf Club.

said Ed Nelson, who is treasurer of the

Other points brought out at the meeting

included the ruling that only golfers with

current Southern California Golf

Association (SCGA) handicaps will be

Tennis Club To Open

Season With Novel

Tourney on May 11

The China Lake Tennis Club has planned a

"members only" tourney to start the

summer season, but with a difference. This

will be a social tournament, aimed at fun

competition will be mixed doubles with a

Non-members are encouraged to join the

The tourney will start promptly at 9 a.m.

at the China Lake tennis courts on Saturday,

May 11. The only entry fee for members in

good standing is a can of new tennis balls.

Gary Fry, ext. 7302; Charlene Newmyer,

446-2845, or Al Riedler, ext. 3421, no later

All those planning to enter should call

club and the festivities, which will continue

change of partners after every match.

Called a "Chop Suey" tournament,

instead of trophies.

after tennis is completed.

than next Friday, May 10.

allowed to compete in the league.

First tee-off time will be 5 p.m.

ROCKETEER



Won Lost

Won Lost

Won Lost

Won Lost

16

12

13

19

21

VOLLEYBALL

STANDINGS

Following are the standings in the China

Lake Intramural Volleyball League as of

Division A

Yahoos 22

Bouncers 19

CC Streakers 11

VX-5 5

Marharlika 3

Division B-1

Team Won Lost

G. Potter 8 16

ССВ...... 5 19

Division B-2

Washam 2 22

Division C

Women's Division

Half 'n Half 6

Corsairs 5

Our Gang 6

Desert Sounds 6

Softball Registration

Volleyball Dolls 6

Open at Youth Center

Persons wishing to register for the Youth

Center's softball program must do so by

Monday, May 13. The season will begin on

Teams will be limited to 15 players and

must have an adult coach. A minimum of

four teams will constitute the league and all

games will be played at Reardon Field on

Registration fee is \$7 per person. For

further information, contact Carol Hape at

Tuesday, April 30.

Team

Snorts.

Team

NAF

May 22.

Wednesday evenings.

NWC ext. 2909 or 2259.



mined.



WINNER - John DiPol (I.), chairman of the Range Commanders' Council's Executive Committee, presents a trophy to Rear Admiral Paul E. Pugh, NWC Commander, after the Center's Skipper won the trophy in an 18-hole golf tournament sponsored by the RCC last week. The tournament was included in the list of things to do and see at NWC during a two-day visit by more than 40 members of the Range Commanders' Council. -Photo by PH3 D. M. Jenereaux

CENTER SPORTS NOTES

The China Lake Men's Golf Club will stage its 13th annual Invitational Golf Tournament on June 1 and 2 at the local course. Format for the tournament will be best. ball of partners on Saturday, and aggregate score of partners on Sunday. Entry fee is \$60 per team and only SCGA or Public Links handicaps are allowed.

Entries close May 25 and golfers are urged to apply early. Entries may be turned in to Paul Someson, at the local pro shop, or to Ray Marsh, who heads up the tournament committee. A \$2,000 prize list has been gathered and

entry into the tournament includes a cocktail party, dinner-dance and other special events, including free liquid refreshments both days of the tourney.

T-Ball Tryouts Set

The final tryouts for the China Lake Little League's T-Ball Division will be held tomorrow morning at 9 o'clock on Diamond No. 4 (across the street from the Credit Union Bldg.).

year olds will be able to sign-up and be guaranteed assignment to a team.

Twelve man teams will be standard this year, giving each youngster plenty of opportunity to play baseball.

The second of a monthly series of National **Rifle Association approved Handicap Pistol** Matches will be held at the Sierra Desert Gun Club pistol range next Thursday

Anyone interested in competing must 6680 no later than 9 p.m. on Wednesday, May

Tennis Clinic Coming Up

China Lake Tennis Club and the NWC Special Services Division, will be held on May 14 and 16, 21 and 23, at the China Lake

Lanes To Shut Down

The Hall Memorial bowling lanes will be closed all day next Thursday and Friday, May 9 and 10, to enable resurfacing work to be done.

The bowling alley will re-open again at its regular time at 11 a.m. on Saturday, May 11, Dean Ray, the manager, reported.

The clinic, which is scheduled from 7 to 9 Team person is being asked.

to register for the 1974 Girl's Softball League. Sign-ups are currently being held during regular working hours at the Ridgecrest City Hall, 139 Balsam St., or at

Major Division		
Team	Won	Lost
Yankees	2	0
Pirates	2	0
Tigers	1	1
Dodgers	1	1
Giants	0.	2
Red Sox	0.	2



INVITATIONAL CHAMPS - Nancy Webster (foreground, left) and Mary Ann Castor (r.), winners of the low gross (85) and low net (70) prizes of the annual China Lake Women's Golf Invitational Tournament, held this past week, smile while Laurie Kail (background), president of the club, tells other golfers of their accomplishments. More than 80 women, representing 13 different golf clubs, teed off in the tourney. Local merchants donated many door prizes and the Women's Golf Club also gave out quite a few prizes to visiting golfers as well as to local -Photo by PH3 D. M. Jenereaux hackerettes.

Girls' Softball Signups the China Lake Youth Center. Little League Standings

tennis courts.

This will be the last chance that 8 and 9

A parent must accompany each child and proof of birth will be needed at the time of registration.

Pistol Matches Scheduled evening, May 9.

register by calling Mervyn Hoover at 446-8, or by signing the registration sheet at the clubhous

A tennis clinic, sponsored jointly by the

May 3, 1974

School Problem... (Continued from Page 1)

Congressmen before a final vote is taken. Pinney will be traveling to Washington

next week to address U.S. Senators regarding the Senate version of the PL 874 authorization bill, with his travel expenses being shared by some 500 school districts from throughout California, whom he will be representing on this issue.

While he is in the nation's capital this next time, Pinney plans to begin talks with members of the House of Representatives' Appropriations Committee, who will be handling the next step in the process of actually getting the federal money needed for support of the Sierra Sands Unified School District, and all other school districts eligible for federal impact aid.

In the case of the pending legislation covering appropriations, it too will be going through the House and Senate and is expected ultimately to end up in a conference committee before its final adoption.

President Richard Nixon's Fiscal Year '75 budget includes a request for \$229.3 million in operating funds for Category A studentsthose whose parents both live and work on federal installations. This is an increase over last year's request of \$217.8 million.

On the other hand, the President's budget calls for a slash in funds for Category B students-those whose parents work for the federal government but who live off-base-to \$40 million for FY75, compared to last vear's level of \$307.1 million.

Pinney will be testifying before the House Committee on Appropriations and asking for as much money for Category B students as was allocated last year, since this funding will be vital to the support of the newly unified school district here.

McAllister To Take Part in Dedication **Of Michelson School**

D. T. McAllister, a consultant in the Technical Information Department whose duties include those of curator of the Michelson Museum, will participate this evening in a program being held to mark the formal dedication of the new Albert A. Michelson School in Murphys, Calif.

The town of Murphys is located in California's mother lode gold country-about 18 miles from the City of Sonora.

McAllister's part in the program will be to present a short talk and then show a film entitled "Three Glimpses of A. A. Michelson at the Peak of His Career."

The film was put together in 1966 by Dr. Jean Bennett, of the NWC Research Department; Everett Baker, a motion picture specialist in TID's Presentations Division, and McAllister.

The latter supplied the documention and a number of photos and the film was pieced together using bits of old newsreel film footage that it was possible to locate.

Shown at Hall of Fame

It is the same film that was shown last October when the bust of the Naval Academy graduate, who became America's mode while the other three provide what is first Nobel prize winner in physics, was dedicated at the Hall of Fame for Great Americans at New York University.

> This is a return to the town of Murphys for McAllister, who was there last August during the cornerstone laying ceremony for the new A. A. Michelson School and provided some of the special material about the famous Navy scientist that was sealed in a box behind the cornerstone.

The contribution from the Michelson Museum at NWC to the cornerstone box included a Michelson memorial medal the Microelectronics Laboratory is ex- commemorating the dedication of Michelson Laboratory in 1948, and a copy of the booklet "The Albert A. Michelson Nobel Prize and Lecture," published here in 1966.

The old public school at Murphys was attended by young Michelson up until the time he was a sixth grader. Prior to its recent replacement by the new A. A. Michelson School, it was the oldest public school in California still in continuous use.



RANGE COMMANDERS' COUNCIL HOLDS MEETING - Armament Development Test Center, Eglin AFB, Fla. Rear exploration at the Pacific Missile Range, Pt. Mugu, and at the trophy.

Members of the Range Commanders' Council were at China Lake Admiral Paul E. Pugh, NWC Commander, spoke on the subject of April 25-26 for their 44th meeting. More than 40 persons, the proposed upper Mojave Desert land/air space long range representing 13 different ranges gathered for the two-day confab. study, and the oil exploration discussions were led by RAdm. W. They came from as far west as the Kwajalein Missile Range in the M. Harnish, Commander of PMR, and Maj. Gen. H. B. South Pacific, and as far east as the Air Force Eastern Test Kucheman, USAF, Commander of the ADTC. Also while here, the Range, Cape Kennedy, Fla. While at China Lake the men wit- men took part in the annual 18-hole Range Commanders' Council nessed many presentations and listened to discussions ranging in golf tourney. RAdm. Pugh won the Commanders' trophy, while subject matter from Federal property matters to the status of oil Col. L. D. Horton, of Eglin AFB, was the winner of the perpetual -Photo by PHAN Joe Dunn

Work of Microelectronics Branch Described...

(Continued from Page 1) Section, headed by Dick Tolkmitt: the Thin most of the work: the Photoelectric Device Section, composed of Milton Ritchie (currently attending Stanford University on an NWC Fellowship) and Cliff Fountain; and the Electronics Design Section.

The Thin Film Section fabricates specialized multi-layer thin film optical



THIS 8 CHANNEL signal conditioner is one of several hybrid microcircuits being fabricated by the Microelectronics Branch for use in an advanced telemetry system under development by the Naval Missile Center at Point Mugu. There are 98 electronic components packaged within the 1 in. by 1 in. by 1/8 in. flat package.

bandpass filters and high reflectance coatings. Fabrication of optical reticles for infra-red missile seekers is a continuing effort, and the capability for design and fabrication of surface acoustic wave (SAW) devices for improved radar signal processing techniques is being developed. Development of improved IR detectors is the goal of the Photoelectric Device Section, while the Electronics Design Section provides an electronic design capability for the Microelectronics Laboratory and projects utilizing the laboratory.

A new microcircuit project usually begins when an engineer brings in a schematic drawing or the specifications of a circuit he needs. He confers with Microelectronics Laboratory personnel until the best approach to build the circuit has been deter-

Using the schematic drawing as a guide, microelectronics personnel design a layout of the hybrid circuit which is a 20 times enlargement of the actual hybrid circuit. Using precision cutting techniques, the

conductor and resistor patterns are cut out They are the Hybrid Microelectronics in sheets of red plastic rubylith. These patterns are then photographically reduced Film Section, where George Turner directs by a factor of 20 to obtain glass slide negatives.

From the negatives, stainless steel screen masks are made for screen printing conductor and resistor ink onto ceramic substrates. These ceramics are miniaturized, printed circuit boards which can be made multi-layered if high density circuitry is required. After screen printing, the substrate is placed in a belt furnace for 20 minutes where a temperature of approximately 1,000 degrees Centigrade burns off unwanted solvents and binders and sinters the conductive and resistive particles of the inks.

Next Step in Process

Next in the process, a technician attaches the substrate to the package and then bonds resistor, capacitor and semiconductor chips to the substrate by "gluing" them on with a silver-filled electrically conductive epoxy. The chips in high frequency and high power dissipation circuits are bonded with eutectic solder. Now the circuit is ready for another technician who interconnects the appropriate circuit elements with .001 inch diameter gold wires (a third the size of a human hair).

During these stages of fabrication, the work is performed using a microscope and fine tweezers. To insure good quality control, the work of putting into place numerous wire bonds and chips is carefully cross-



SCREEN-PRINTED resistors can be trimmed to within 1 / 10th of a per cent of a desired value using the laser resistor trimmer shown being operated by Pat Nalley, an electronics engineer in Code 5525.

checked by the individual technician handling the assignment as well as by others. The individual monolithic integrated

circuit chips in themselves consist of a multitude of transistors and resistors which have been fabricated in the surface of a single chip of silicon via diffusion processes. Betwen 2,000 and 3,000 transistors on a silicon chip that is just 2/10ths of an inch square is the present state-of-the-art component densities that can be achieved.

Further Testing Done After the wires have all been bonded, the circuit goes into the testing laboratory where it undergoes electronic, temperature, and any other required tests before sealing. At this point, any necessary corrections or modifications to the circuitry can be readily accomplished.

After these tests show the circuit is sound and working properly, a cap is soldered or welded on to hermetically seal the package and the circuit is again tested to insure the sealing process did not affect the circuit.

A clean room at the NWC Microelectronics Laboratory is required for both the hybrid integrated circuit fabrication and the thin film deposition work. Since dust particles cause pin-holes in thin films and common vapors can change their characteristics it is critical that the work be performed in a controlled atmosphere, Dr. Webster emphasized.

Clean Room Equipment

In the Class 100 clean room a laminar flow of filtered clean air travels horizontally across the room at 1 mph to exits and is then recirculated, Both temperature and humidity are controlled. Within the thin film area are six vacuum coating machines-- three of which work in an evaporative called sputtering deposition. The Microelectronics Laboratory is the only facility on the Center that offers vacuum sputtering capabilities.

Microelectronics work, which was started at China Lake in 1964 by Tolkmitt and Henry Blazek, is a rapidly expanding field. Since the move made in 1971 into the present Solid State Devices Laboratory, the Naval Weapons Center has developed one of the most modern facilities for handling this work in the Navy. An open invitation to tour tended to interested NWC personnel.

Closed for One Day

The Navy Exchange Annex will be closed next Wednesday, May 8, for the purpose of laying a new tile floor.

Lt. E. N. Smith, Exchange Officer, stated that the Annex will reopen for business on Thursday.

Page Four

Cost-of-Living Adjustment For Annuitants Now Being Considered

The Civil Service Commission has announced the possibility of a Cost-of-Living (COL) adjustment of annuities to become effective on July 1, 1974.

The Civil Service Retirement Law provides for an automatic increase of Civil Service annuities whenever the COL, nationwide, goes up by at least three percent for three consecutive months over the Consumer Price Index (CPI) for the month used as the base.

The present base month is October 1973. February 1974 was the first month since October 1973 that the percentage rise in the CPI equaled at least three percent over October 1973; the percentage rise equaled 3.6 percent this past February.

If the percentage rise continues to stay up by at least three percent in March and April, annuities will be increased by the highest percentage increase in the CPI during the

Early Retirement Now Optional For All DoD Employees

In 1973, the President signed into law an early optional retirement program for Federal employees whose command or agency is undergoing a major reduction in force.

In accordance with this program, the Civil Service Commission has authorized the early optional retirement of all civilian employees of the Department of Defense in the 50 states and the District of Columbia. This authorization will extend from May 1 through Aug. 31, 1974.

All retirements under the early optional retirement will be strictly voluntary on the part of the employee. Employees meeting the following requirements are eligible to retire under this authorization:

(a.) Attainment of age 50 and completion of 20 years of creditable service, including five years of civilian service; or (b.) regardless of age, completion of 25 years of creditable service, including five years of civilian service.

If the retiring employee is under age 55, the basic life annuity rate will be reduced by 1/6th of one percent for each full month (two percent a year) that the employee is under age 55. This annuity rate will not be increased when the annuitant reaches age 55.

Like Optional Retirements

All retirements of those employees exercising the early optional retirement will be treated as optional retirements except employees who are actually reached for separation in a RIF action. Employees who are reached for separation in a RIF action continue to be eligible for a discontinued service annuity. The different types of retirement affect future retirement rights should the employee be re-employed later. Interested employees should contact their

Personnel Management Advisor for further information.

There is no guarantee when or if the Civil Service Commission will again make this early optional retirement available, especially on such a broad scale. Therefore, individuals contemplating retirement in the near future, but who do not wish to retire, at least fully, during the specified dates, may want to consider another possible option.

Employees may retire and be re-hired (either part-time, intermittent, or even full time) as re-employed annuitants. In these cases the employing activity pays the individual the difference between his annuity and what his salary would be as a regular employee.

This kind of an action would require concurrence from both the department involved and the employee and should be approached only with involvement of the department's Personnel Management Advisor.

three-month period, plus an additional one percent authorized by law.

Formerly, in order to receive a COL increase, a person's annuity had to begin on or before the effective date of the increase. This requirement was changed by a new Public Law signed in October 1973. The new law provides that an immediate annuity which begins after the effective date of a COL increase will be the greater of the following two annuity rates:

(1) The amount of the actual annuity earned as of the date of separation; or (2) the annuity that would have been payable based on total service and high-three average pay that existed on the day before the last COL increase became effective, plus the percentage of that COL increase.

For example, if you retire no later than June 30, 1974, the amount of your earned annuity through the date of your retirement will be compared with the annuity based on your service and average pay through Dec. 31, 1973, plus the 5.5 percent COL increase which became effective on Jan. 1, 1974. Your annuity will be whichever is the larger amount

Increase Likely in July

For the purpose of this comparison, you will be assumed to have met the age and service requirements for retirement on Dec. 31, 1973, even if actually you were not eligible to retire at that time. Employees who retire on or before June 30, 1974, will also receive the increase which is likely to become effective July 1, 1974.

The exact percentage will be announced if and when the COL increase in annuities becomes definite. This information will not be available until the latter part of May.

For employees retiring after June 30, 1974, your earned annuity as of the effective date of your retirement will be compared with the annuity based on your service and average high-three pay that existed on the day before the last COL increase became effective on June 29, 1974, plus the percentage of that COL increase. Your annuity will be whichever is the greater of these two amounts.

Employees wishing further information on retirement should contact their Personnel Management Advisor to arrange for retirement counseling.



RECEIVES BENNY SUGG AWARD - Mel B. Sorge, head of Central Staff (1.), had the pleasure recently of presenting a Beneficial Suggestion Award check for \$185 to Evelyn M. Peck (r.), a financial control clerk in the Accounting and Disbursing Division of Central Staff. Mrs. Peck's suggestion of discontinuing one copy of the weekly cost report (CFM 004) was figured to save the government \$2,700 per year. Her division head, Don T. Green, looks on.

Membership Tea for Maturango Museum Docents, Luncheon Helpers Set May 8

Monday luncheon volunteers will hold a casion for the membership tea. On hand will joint membership tea next Wednesday in the be Sue Byrd, creator of the gourmet menus Mojave Room of the Commissioned Of- at the Monday luncheons; Ada Scarficers' Mess, beginning at 3 p.m.

Primary purpose of the get-together will be to introduce the two organizations to Clung, Debbie Cattern, Betty Jane women who would like to become members. Leonard, Clare Hunter, Helen Reynolds, The Docents' principal function is to man Jean Christman, Pat Silberberg and Lu the museum on weekends, while the Hillyer. These women will see to it that volunteers are the women who prepare and newcomers are well fed and well informed. serve the Museum Mondays' luncheons.

International Fashion Show Ends Tonight

Fashion Show, co-sponsored by the China Lake branch of the American Association of the globe. They will be modeled by 71 adults University Women, the Human Relations and 33 children during the two-hour fashion Committee of the Desert Area Teachers event. Association and the IWV branch of the NAACP, will be held tonight at the Community Center, beginning at 6:30.

The price of admission is \$2 for adults and \$1 for children. All proceeds will go to the Martin Luther King, Jr., scholarship fund as a contribution from the California Teachers Association.

The show features clothing and costumes

The Maturango Museum Docents and the the volunteers, are planning a festive ocborough, who will provide floral decorations, Clarine Pugh, Lorraine Mc-

Husbands are also welcome to the tea. Lorrie Van Hagan, chairman of the Anyone interested in joining one of the two Docents, and Willa Schaniel, chairman of organizations, or both of them, is welcome.

The final presentation of an International from 35 different countries in the world, representing nearly every type of culture on

The commentators are Rose Varga and Ava McClendon.

Two soloists will enliven the evening. They are Maria Stankowich, who will be accompanied by Noriko Iwamura on the piano, and Every Jo McClendon, whose accompanist is Frank Dickey.

The Dan Lydon Combo will provide the music during the remainder of the program



gift to the Center from E. H. Heinemann, who is a former member of the NWC Advisory Board, were brought here recently from the Salton Sea area. The trees, now just 3-4 ft. tall, are of two varieties--one that will grow to a maximum of 30 ft. in height while others have the potential for growing as high as 70 ft. tall. Vern Bradshaw (in foreground at left), a planner and estimator in the Public Works Department's Maintenance Control Division, was flown to the Salton Sea site by Joel Halop, his Division head, in one of the Navy Flying Club aircraft to look over the trees before the decision was made to bring them here for use in landscaping at various locations. Shown examining the trees upon their arrival are (in left photo) Capt. W. H. Sturman, NWC Public Works Of- different kinds of shrubs that help to combat erosion.



ADDITIONS TO NWC LANDSCAPING - Some 300 palm trees, a ficer, and Halop. First of the palm trees to be planted were put in place recently outside the Enlisted Men's Dining Room. On that occasion, Capt. Sturman began the preparations by turning the first shovels full of dirt. Others in photo are Bradshaw and Harry Raney, a laborer in Code 70415, who is waiting to finish the job started by his department head. Two groups of three trees each were planted at the Enlisted Men's Dining Room; others will be set around the golf course and the remainder will be placed as requested by individual departments. All of this work is on a reimbursable basis. Bradshaw, whose specialty is grounds care, is responsible for conservation and economical upkeep of landscaped areas around the Center. He also oversees the planting of

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Wildflower Festival Staged at China Lake

WILDFLOWER SHOW BIG SUCCESS - Featured within the comparativel confined area of the Community Center, the beauty and wonders of the desert in springtime were displayed magnificently this past weekend during the 27th annual WACOM-sponsored Wildflower Festival. This year's event included, as an added attraction, a field trip to Little Petroglyph Canyon where ancient rock carvings abound. Saturday's trip was led by Jim Baird, while on Sunday K. H. Robinson and Carroll Evans were in charge of the outing. A total of 100 cars averaging four persons per vehicle took advantage of this opportunity to see and take photos of the area that has been preserved as a national monument. In photos (reading clockwise from top right) are: (1) Baird is seen giving preliminary instructions to the party he led before they started down into Little Petroglyph Canyon. (2) Dr. Howard Harmon, superintendent of the Sierra Sands Unified School District, looks over some of the many rock carvings to be seen. (3) Panamint Hall in the Community Center was filled with tables on which countless varieties of wildflowers and desert plants were identified. (4) Close-up of a rock carving. (5) NAF Chaplain F. R. Zobel and his daughter, Deanna, age 4, inspect the papier mache centerpiece (a replica on the basalt cliffs on which the petroglyphs are found) that was the focal point of interest at Cactus Hall in the Community Center. (6) A visitor from Santa Ana gets his own photo record of the petroglyphs.





Photos By PHAN Joe D and Don Yockey







