

# TUDOR

NEWSLETTER

SPRING 1979

## STOCKHOLDERS' MEETING

On April 28 and 29, 1979 the stockholders of Tudor Engineering Company held their annual meeting in San Francisco at the Sheraton Inn near Fisherman's Wharf. Those in attendance from the Corporate and San Francisco offices were Louis W. Riggs, Robert N. Janopaul, Stanley H. Froid, Paul E. Potter, William W. Davis, Donald J. Croft, Robert W. Ganse, Roberto E. Iniguez, Grant A. Larsen, James W. Meyer, Robert W. Myrdal, Rainer Rungaldier, Tevis T. Thompson, Jr. and David C. Willer. From the Atlanta office of PB/T, those in attendance were Douglas J. Mansfield, Oral I. Conyers, and Frits H. Fenger. From the Boise and Lewiston offices were Davis C. Toothman, Theodore H. Purcell, Steven R. Alters, James W. Grow and Richard F. Orton. Joining the group, from the Seattle and Kennewick offices, were Keith D. Bull, Michael B. Harrington, Harry P. Hosey, Wilbert A. Pacheco, and Bela Vadasz.

As in the past years, considerable time was devoted to presentations and discussions covering the past, current and future business operations of the company. It was the consensus of the group that the firm is currently quite healthy and that the outlook for the future growth and vitality is bright and holds great promise for everyone at all levels of the company's operations.

Another important matter that involved all stockholders was the election of the Board of Directors of Tudor Engineering Company. Elected to serve on the Board this year were the seven directors who have guided the activities of the firm for the past year: Louis W. Riggs, R. N. Janopaul, S. H. Froid, D. C. Toothman, P. E. Potter, K. D. Bull, and D. J. Mansfield. The Board chose the following officers:

- L. W. Riggs - President
- R. N. Janopaul - Executive Vice President
- S. H. Froid - Senior Vice President
- D. C. Toothman - Senior Vice President
- P. E. Potter - Vice President
- K. D. Bull - Vice President
- D. J. Mansfield - Vice President and Secretary
- W. W. Davis - Vice President and Treasurer
- O. I. Conyers - Vice President
- M. B. Harrington - Vice President
- T. H. Purcell - Vice President
- T. T. Thompson, Jr. - Controllor and Assistant Secretary



The list includes two new vice presidents, Mike Harrington and Ted Purcell. Mike joined the Company in 1964 in the San Francisco office working on the BART project, then moved on to a project office in Yakima, Washington, where he worked on a highway project, and eventually transferred to Tudor's Seattle office in 1969. In his new capacity, Mike is now serving as Vice President and Manager of Engineering for

the Seattle Regional office, which is under the overall direction of Keith D. Bull. Ted Purcell joined Tudor in 1967 in the San Francisco office and worked on a variety of projects before transferring to the San Diego office in 1972. In 1973 Ted transferred to the Boise office. Ted, in his new capacity, is now serving in a parallel position to Mike - that is, Vice President and Manager of Engineering for the Boise Regional office, which is under the overall direction of Dave Toothman.

Congratulations to both Mike and Ted!!

## RALPH A. TUDOR MEDAL



Louis Riggs is shown presenting the Ralph A. Tudor Medal for 1978 to Mr. Richard Lovejoy of Panama City, Florida, at the Society of American Military Engineers' Annual Awards Dinner held in Boston on May 17th. The Ralph A. Tudor Medal, established by the Society in memory of Ralph Tudor, is offered annually as an award to a civilian member of SAME, under 36 years of age, for the most outstanding contribution to engineering design, construction, research, development or planning.

Mr. Lovejoy received a Citation from the Society which aptly explains why he was so honored. It read: "Mr. Richard E. Lovejoy distinguished himself in the performance of outstanding service to the United States as a mechanical engineer at the Naval Coastal System Center, Florida, during calendar year 1978. His design of test equipment and the enclosure for the channel finder, a sea bottom contour navigational guidance system, enabled the Channel Finder Development Program to be completed two years ahead of schedule at a savings of approximately 1.5 million dollars. In addition, his successful designs of a towed planning hull sled for fast delivery of pollution control equipment for the United States Coast Guard and a submarine mounted swimmer delivery vehicle shelter, demonstrate exceptional professional achievement. The singularly distinctive accomplishments of Mr. Lovejoy reflect great credit upon himself, the United States Navy, and the Society of American Military Engineers."

While attending the SAME Annual National Meeting in Boston, Mr. Riggs received an Award of Appreciation for 1978 from the Society in recognition of his outstanding service to SAME. Louis retires from the SAME Board of Directors this year, culminating many years of service and achievement with the Society both on the local and national level.

## SF BAYSIDE FACILITY

On May 7, Tudor Engineering Company, in joint venture with Brown & Caldwell, Kennedy Engineers, and Geotechnical Consultants, Inc., was interviewed by the City and County of San Francisco for the Bayside Facilities Planning Project. This 15-month Planning Project is designed to complete the necessary studies for the bayside portion of the San Francisco Wastewater Program, which is relatively well advanced in other parts of the City. The wastewater project is designed to intercept and treat all sewage and storm flows which are now discharged into the San Francisco Bay at several dozen locations.

A total of three firms were interviewed and in due time we were informed that our joint venture, Caldwell-Gonzalez-Kennedy-Tudor, had been selected. (Joe Gonzalez is the President of Geotechnical Consultants.) Contract negotiations are presently underway and the City's schedule calls for a Notice to Proceed on or before July 15, 1979.

The Bayside Facilities Planning Project will determine the best ways to collect the combined sewage and storm flows and treat them on the bay side of the city. Subsequently, the treated flows (plus some chemicals and other materials) will be transported across the City to the proposed Southwest Water Pollution Control Plant on the Pacific Ocean, through a 6-mile long Crosstown Tunnel. Three other tunnels also will be part of the bayside system. The four tunnels are Tudor's responsibility. They total some 15 miles in length, each tunnel encountering both hard rock and soft ground.

After the 15-month Step 1 Facilities Planning Project is complete, the Project should move into Step 2, final design. Tudor Engineering Company's Principal in charge of our portion of this major project is Bob Janopaul. Don Rose will be Project Manager, for Tudor's portion of the work. Brown and Caldwell's Don Feuerstein will be the General Manager for the joint venture.

## MARTA — ROLLING ALONG

Progress continues on the Metropolitan Atlanta Rapid Transit Project, for which Tudor, in joint venture with Parsons Brinckerhoff Quade & Douglas, is serving as General Engineering Consultant. Pictured below is Avondale Station at the eastern terminus of the current construction phase. The station is essentially complete, as is the entire East Line. Revenue service will start on the East Line on June 30 with all seven East Line stations in operation. In order to obtain the highest degree of system reliability, vehicles are currently being tested on the East Line seven days a week. There are currently 32 vehicles in Atlanta, with 20 of these expected to be in revenue operation on June 30. It will cost twenty-five cents to ride the train; the MARTA fare was raised from fifteen cents in March. Testing is also taking place on the West Line, with that portion of the system scheduled to carry passengers in December of this year. Design and construction are also proceeding on the North and South Lines with well over \$75 million of construction currently underway. Numerous Tudor employees have contributed greatly to the MARTA project, and each can take pride in the successful development of this newest of rapid transit systems.



## EPRI HYDRO STUDY

In mid May a contract was signed with the Electric Power Research Institute (EPRI) to provide a simplified methodology for the economic screening of low-head, small capacity, hydroelectric sites. EPRI is a research organization supported by power utility companies throughout the country. The intent is to produce a manual which will permit the rapid evaluation of small hydro sites. With literally thousands of potential sites already located throughout the country, a major portion of which are situated in the East, there is an emphasis in the low-head and small capacity particular to the eastern plants. This, the third in a "family" of such manuals being produced by Tudor's San Francisco office, (the others have been for the Corps of Engineers and the Bureau of Reclamation) will be smaller in scope than the others, and is scheduled for completion in December.

## SF POSTAL FACILITY



A new General Mail and Vehicle Maintenance facility for San Francisco is now being designed in the San Francisco office. The facility will consist of a 620,000 square foot General Mail Facility and a 24,000 square foot Vehicle Maintenance Facility. The buildings will be located in the eastern part of the City of San Francisco adjacent to San Francisco Bay in the India Basin Redevelopment Area. The buildings will cover about 11 acres of the thirty-two acre site. The facility will house the mail processing, administrative support and vehicle maintenance operations for an area which covers the City and County of San Francisco, San Mateo County and part of Santa Clara County. The project will enable the consolidation of activities now performed at six different locations in San Francisco and will result in more highly mechanized and efficient mail handling for the San Francisco area. The project construction cost is estimated currently at about \$30,000,000. Because of the significant inflation in building construction these days, especially noticeable for a building of this size, the project design is being carried out on a rushed 9 month schedule.

Project control and Architectural design for the project is in the charge of Stone Marraccini and Patterson, a San Francisco firm, well known throughout the country for their innovative architectural designs. Tudor is responsible for structural, civil and transportation engineering associated with the project and also for equipment design in the vehicle maintenance facility. Overall Tudor responsibilities for the project are being managed by Bill Buckland, with Don Croft, Don Moore and Jim Meyer heading up Structural, Civil and Transportation design teams respectively. Grant Larsen is preparing the specifications. Ken Heilig has been designing and specifying equipment for the VMF. Richard Mayes and Cissie Hsu are doing the major part of the structural designing and Joe Lawrence, Gil Zambrana, Louisa Bravo and Alex Novikoff are doing the structural drafting. Don Scapuzzi and Joe Eng are assisting with the Civil Design and Hernando Orozco is doing the bulk of the drawing. Because of the current, high load of work in the San Francisco office, Basil Katula is doing some of the checking of the structural design in the Seattle office.

The 60% drawings were presented to the client in Washington, D.C. in mid-May. The design, both structural and architectural, was well received and go ahead was given for the completion of final design. The final drawings are to be presented to the client on the 7th of July with the job due to go out to bid on the 20th of August.

## BOISE NEWS

Land development projects have long been a mainstay in the Boise office, and have usually been straight-forward and predictable. Not so any more.

The local highway authority (the Ada County Highway District) recently unveiled a new volume of Standard Specifications, a Quality Assurance Manual, and a newly organized Inspection Department. Historically, many features of subdivision design were left to the judgement of the consulting engineer. Not so any more!!

Today, the storm drainage, utility locations, trench compaction, geometric standards and pavement sections are all subject to the scrutiny of district review staff. Calendar time required from concept to completion has been dramatically increased. The "silver lining" may be that development clients now must place greater reliance on their engineer. Time will tell if "California-style" land development will work in Idaho, and if the increased engineering costs being borne by our clients will result in the expected long-term benefits to the local taxpayers.

## PROFESSIONAL SOCIETY ACTIVITIES

Nearly a year ago, David Torgeson (M, ASCE) issued a challenge to the Southern Idaho Section of ASCE: "There is not enough discussion of technical matters at society functions." Thereupon he was appointed by the President of the Section to chair the Technical Affairs Committee.

After several abortive attempts to fill the void, we are happy to report a modest success. Dave was able to convince Brian Grant (A.M., ASCE) that a technical group addressing topics in hydrology was needed. Under Brian's leadership, an organizational meeting attended by 18 engineers was held last month. Representatives from the Bureau of Reclamation, SCS, USGS, local government, as well as several other consultants were counted. According to Brian, the interest is very high, and the group appears to be well on its way to becoming a vital forum for discussion of technical matters.

## OWYHEE ANECDOTE

It is somewhat unusual for us to hear another consultant's presentation to a potential client. Folks in Idaho's vast Owyhee County don't stress formality, though; and the unusual recently happened to David Torgeson of the Boise office. The occasion was a regular meeting of the Homedale Highway District. The topic of discussion was the replacement of a bridge, washed out this spring on Succor Creek. (The name is deceiving - flows of more than 13,000 cfs have been measured.)

Tudor's competition, believing that the District intended to undertake the bridge replacement with federal funds, presented a blow-by-blow description of the application and approval process, complete with sample forms. When it came time for Torgeson to speak, he replied that the topic had been well presented, perhaps exhaustively.

The Board members must have been exhausted, because the telephone rang early the next morning with a request to undertake an investigation at the site to determine what solutions might be possible solely with local funds.

According to Torgeson, "There must be a lesson for us there someplace."

## TRAINING PROGRAM

The State of Wyoming has no official training program for water treatment plant operators, but does have a certification program. Don Armstrong, Manager of Engineering in Tudor's Riverton office, was quick to see the need. He has successfully provided training programs for small communities for some time now. A recent account in the Powell Tribune mentions eight persons completing the 30 hour course in preparation for the State's certification exam held May 16.

## LEWISTON NEWS

Jim Grow, who is frantically trying to keep up with four survey crews who are in turn trying to keep up with the ever-increasing workload, is occasionally heard saying "When will it end?" He has already purchased 12 pair of snow shoes in preparation for this winter.

Steve Alters reports that construction on the Central Orchards Sewer District project is well underway, with another 10 mile project scheduled for June.

Bob Beal's expertise on bridge inspections is being used again this year. He and Bob Moorhead have recently begun inspecting 20 bridges for Nez Perce County, near Lewiston.

## KENNEWICK SPRING EVENTS

During the past few months the Kennewick office has really been moving. Office space was doubled by 1,800 square feet to facilitate the increase in personnel and projects relative to the acquisition of Columbia Engineers Services and the continuous increasing development in the area. The interior and exterior of the building have received a thorough and complete facelift.

Currently the staff has increased to twenty people and more are needed. Current projects such as Meadows Park (200 lot subdivision) and Country Ridge (200 lot subdivision) are nearing completion. More recent projects of Columbia Vista (165 lots) and Arrowhead Heights (360 lots) are two new jobs in size that should keep the office going for a day, a week, a month or whatever.

## TRI-CITIES OPERATIONS EXPANDS

On March 19, 1979 Tudor signed the final agreement for acquisition of the civil engineering practice of Columbia Engineers Services, Inc., of Richland, Washington. This practice, combined with our Kennewick branch office, will be under the management of Wil Pacheco with Keith Bull as principal-in-charge. Two Columbia employees were added to the Tudor payroll: Jay Spady and Stan McHutchison, both civil engineers. A special welcome to them both.

Columbia, which will continue to provide consulting services in its other engineering fields and environmental sciences, had developed a civil engineering practice over the last several years and had engaged in considerable residential land development planning and design. Tudor will maintain that practice, but will continue to expand its Kennewick branch office into its other specialties as well - highways, bridges, street systems, water and waste treatment systems, structural, military and energy projects.

## ENGINEERS' WEEK SCHOLARSHIPS

Engineers' Week, sponsored by the San Francisco Bay Area Engineering Council, is held each year in February. Its purpose is to promote interest in careers in engineering and public recognition of engineering accomplishments. This year 33 scholarships and grants ranging in value from \$50.00 to \$2,000.00 were awarded to high school students in the Bay Area. These students are outstanding in scholarship, leadership, and service to the community and show a mathematics and science orientation which would make their study of engineering a realistic possibility.

The Tudor Engineering Company Scholarship of \$500 was awarded to Stephen Michael Tong this year. Representing Tudor at the award presentation was Robert Janopaul. Stephen is a senior at Newark High School in California. He is an Eagle Scout, a manager of the varsity football team, and senior class president. He is a holder of a National Merit Scholarship Letter of Commendation and has maintained a GPA of 3.5 and over for the past four years.

## NEW FACES FOR

### ... Lewiston

...Bob Moorhead graduated from Cooper Union School of Engineering in New York City with a B.S. in Civil Engineering. He comes to Tudor from Orofino, Idaho where he was the Administrative Assistant, and is presently working on various sewer projects and bridge inspections.



...Dan Medlock is originally from Orofino and is working on a survey crew under Trevis Green. Most of their work lately has been layout work at Potlatch mill on the \$72 million tissue mill project.



...Dennis Bishop has recently assumed Bruce Larsen's duties of calculating and drafting while Bruce is running the number 3 survey crew. Dennis is a certified Engineering Technician, originally from Lewiston, and has previously worked for another consulting firm in Lewiston.



...Gary Gray works with crew chief Bruce Larsen on a survey crew. Gary hails from California and attended the University of Washington in Seattle.



...Wayne Johnson also works with Bruce Larsen on a survey crew. He recently moved to Lewiston from Bozeman, Montana, where he ran a pet shop. Prior to that he worked for the Montana State Highway Department.



...Ralph Escamilla is one of the newest survey crew members. Ralph most recently worked as a construction engineer for the Garfield County Engineering Department in Pomeroy, WA.



...Bob Neal is also a new member on the survey crew. He commutes from Moscow, Idaho, and has worked for the Idaho Transportation Department.



...Bob Ingram (Bob #4), another new survey crew member, is from Lewiston and has a varied experience in construction inspection and surveying for the past thirty years. The crew is mainly working with Bob (#1) Beal on the Central Orchards Sewer District project.



### ... Seattle



...Jim Richardson joined Tudor as a structural designer in March after 4 1/2 years with PBT in Atlanta. He drove cross country with his wife, Patty, and son, Matthew, and was grateful to reach the west coast after passing through several snow storms. In 1965 Jim worked for the Bridge Department of the California.



...Bob Toothman joined the Seattle Office from the Lewiston office on January 22, 1979. Bob's first assignment in Seattle was working on drainage and irrigation for I-82. He is presently working with Harry Hosey on the hydro plants - equipment specs. Bob enjoys music, travelling, fishing and is an ardent fan of cats.

### ... San Francisco

...Ben Collins joined Tudor in November of 1978. He fit in so well that he was not listed in the last issue of this newsletter. Ben is a parttime employee in the word-processing center. He spends his free time building up his portfolio of photographs with the hope of a modeling career.



...Diane Alexander is probably Tudor's youngest and best dressed employee. She recently graduated from Washington High School in San Francisco and is now training in the field of engineering drafting. Diane is making excellent progress under direction of Frank Chiappella.



...Joe Lawrence is a senior drafter who is currently preparing structural drawings for the San Francisco Postal Facility. He is a welcome addition to our staff and to our softball team. Joe appears to be a nice sensible guy except for his insane desire to go rock climbing.



...Gary Durham joined the San Francisco staff in May as a mechanical engineer. He is married and lives in Novato. Gary graduated from the University of Illinois in 1969. His interests include photography and running.



...Alex Novikoff came to Tudor as a Job Shopper/Drafter and became a Tudor employee on May 21. Alex lives in Santa Rosa and his interests include chess. He is currently working on the San Francisco Postal Facility.



...Tom MacLennan is the new electrical engineer in the San Francisco office. The bulk of Tom's office time is devoted to the electrical aspects of small hydroelectric projects. Outside of the office, Tom devotes most of his time to his wife and daughter.



...Hugh Brown came back, and we're glad he did. Hugh was a Tudorite from 1965 to 1968 and was in charge of the interim design of the Calaveras Water Project. He rejoined Tudor in February of this year and is managing the engineering of several small hydro projects.



...Trish Waszak joined Tudor in March as a full time operator in the word processing center. She lives in San Francisco and spends much of her spare time reading, running, and going to the beach. Weekends usually find Trish camping - a great escape from the weekly tedium.



### ... Kennewick



...Gary Waddoups joined Tudor in February as a design engineer. Gary is such a quiet person you never know he is around but he really enjoys going to lunch with the girls. That's okay Gary, everyone enjoys your company.



...Eugene Lively came to Tudor in April as a draftsman. Eugene, like Gary, is so quiet you don't know he's around. I'm sure, in time, he will adjust to all the commotion around the Kennewick office.

## ROLLINS POWER PLANT

Construction on the Rollins Powerhouse is progressing well towards a hoped-for early completion. First Stage concrete was completed late in May, along with the penstock installation. The draft tube was set in place on May 17 and the first Second Stage concrete was placed on June 1.

Delivery of the spiral case and stay ring is expected in late June, depending on train and/or truck schedules, as fabrication has been completed in Birmingham, Alabama. The first shipment of the turbine rotating parts and the refurbished generator is expected by the first day of September.

The contractor has experienced very few problems with the construction despite the relatively limited work area. Weather during the winter months brought occasional snow that made access to the job site impossible for a day or two at a time unless 4-wheel drive vehicles were available.

Now that the spring rains have subsided and the warmer foothill weather prevails, construction has picked up and the contractor is working towards earning at least part of the available bonus.

Resident Fred Estep reports that the trout fishing is fantastic with hardly a day going by that somebody isn't pulling a 16 inch Rainbow out of the river just below the site, of course, only during lunch or after work!!



## DROP NINE POWER PLANT

Construction is also progressing well on the power plant at Drop Nine on Turlock Irrigation District's main canal. Tudor prepared the final civil/structural design of this power plant with most of the work being done by Hans Albring while the final mechanical design features were prepared by Don Guild. The plant is being constructed by District forces with Tudor providing some design services. The plant is expected to begin producing power in the fall. This plant is one of the first in the nation to be constructed at an irrigation canal drop and will utilize two 550 kilowatt open flume Leffel turbines with a rated head of 17 feet.

The Turlock Irrigation District is one of the most progressive agencies in the country in the pursuit of small scale hydropower. They are currently constructing a power plant at Drop One on their main canal, similar in design as the plant pictured above. Tudor also prepared the civil/structural/mechanical design for the Drop One plant.

## VENEZUELA HOLIDAY



During the month of March, Louis Riggs and Roberto Iniguez traveled to Caracas, Venezuela, to attend a Caracas Metro Board of Control Meeting from March 15 through 17. Prior to their departure it was learned that interesting work was to take place during the week of March 12 at the site of the Turimiquiri Intake Tower (designed by Tudor) and Dam being built by Guy F. Atkinson Company in Venezuela. A decision was then made to combine the trip to Caracas with a side visit to the Turimiquiri project site.

Both travelers left San Francisco on March 12 and arrived in Maiguétia (Caracas airport) at 11:30 that night. Early the next morning they flew to Barcelona, near the project site. They rented a car and drove to Puerto La Cruz and checked into the hotel. Travel time to the job site was about one hour and the visitors arrived at Guy F. Atkinson's field office at 10:30 a.m. They spent most of the day looking at the various construction activities in progress such as the dam, intake tower, anchor blocks for dam concrete facing, quarry operations, etc. The enclosed photograph shows Louis Riggs and John Johnson, field engineer for Guy F. Atkinson, discussing the project in general. The road in the background leads to the intake tower. At 2:00 p.m. Louis, Roberto and John Johnson completed the tour of the site and after lunch returned to the hotel in Puerto La Cruz.

Our sources inform us that Louis and Roberto were so rested up the next morning, they went jogging on the beach near the hotel before departing for Caracas to attend the Caracas Metro Board of Control meetings.

## SEATTLE OFFICE EXPANDS

The work spaces of the Seattle office, after ten years of wear and tear, have undergone a major refurbishment. Brick colored carpet with movable partitions in shades of gold, sable and blue provide a colorful backdrop for the work stations in the office. Partitions provide a tack-board surface for personal memorabilia and sometimes work information, permitting each space to be individualized. In remodeling the work space, long plan tables have been provided which allow for flat file and tube file storage.

If you have called Seattle you may have heard music "of spring" (or radio talks advising you about a lot of things you're not interested in) while waiting for your call to go through. This is only one of the many advantages of our new telephone system, which also includes hands-off answering, conference calling, hands-off waiting, section or universal paging, line privacy and other features. Best of all, phones may be moved to any of a variety of selected locations, a feature not yet available from "ma bell".

As we move along in improving our environment and, likely our efficiencies, we are preparing to meet the support needs of word processing and other technologically advanced equipment. We hope that we will continue to be favored with lots of sunshine which has lasted as long as three or four days at a time in Seattle during remodeling.

... Kennewick cont.'

...Stan McHutchison, otherwise known as "Grizzly Adams", came to Tudor from Columbia Engineers Services. Stan has several hobbies which include bike riding and manicuring his mustache. Stan is married and in his spare time works as an engineer.



...Randy Mawdsley is a recent addition to the survey crew. Randy is from Kent, Washington, and really enjoys working in this area. Randy also enjoys working with Tom Wessels whom he calls "sir".



...Dave Miller is a recent addition to the survey crew. He and his wife, Rene, and son recently moved to Kennewick from Oregon. Dave, we would like to thank you for posing for this picture.



...Wil Pacheco has joined the Kennewick office as manager. Wil arrived from Atlanta just in time to enjoy all the pounding and hammering on the outside of the building during the final finishing. We would all like to say welcome to Kennewick. (More in adjacent article)



...Tereso Rodriguez joined Tudor on February 12. Tereso worked in Hermiston, Oregon, as Assistant City Engineer. With wife Linda and three children, Tereso has a busy schedule but he always makes it to the breakroom on time.



...Jay Spady came to Tudor on March 19 from Columbia Engineers Services. He is a civil engineer. Jay is married and has a new daughter, Michelle.



**HYDRO PAPERS BY TUDOR AUTHORS**

Tudor, in an effort to exploit our expertise in small hydroelectric projects, has been called upon to provide speeches and papers. The following are the efforts, so far this year, to meet that need.

Dave Willer provided a paper on "Case Studies - Small Hydroelectric Projects" at ASCE Water Systems Speciality Conference in Houston, Texas, on February 27, 1979.

Harry Hosey and Dave Willer participated in an Engineering Foundation Conference on hydroelectric power at Tidewater, Maryland, in March 11-16, 1979. The attendees included representatives of the Department of Energy, Corps of Engineers, U.S. Bureau of Reclamation, manufacturers and consultants.

Dave Willer presented a paper on "Low Head Hydro-Potential - Economics of Project Development" to the Northwest Electrical Light and Power Association in Spokane, Washington, on April 24, 1979. Harry Hosey from Seattle attended.

Harry Hosey presented a paper on "Feasibility of Dry Falls Hydro Project" and Dave Willer appeared on a panel discussion on "Quality Feasibility Studies for Small Hydro Projects" at DOE's PRDA conference in Albany, New York, on May 8-9, 1979. Tom O'Neill from San Francisco attended.

Dave Willer presented a paper on "Federal Legislation Pertaining to Small Hydro Program - PURPA" to the Associa-

tion of California Water Agencies on May 11, 1979, in Sacramento, California. Robert Janopaul of the Corporate office was also in attendance.

Dave Willer is scheduled to appear at a National Conference of State Legislatures where he will present a paper on the "Economics and Institution - Constraints Imposed on Small Hydro Projects" in Corvallis, Oregon, on July 12-13.

Dave Willer will present a paper on "Case History Studies - Small Hydroelectric Projects" on July 30, 1979, to the Department of Energy Small Hydro Power Workshop at Kellogg West Conference Center, Pomona, California.

Dave Alden will present a paper to the ASCE Hydraulic Speciality Conference on "Engineering Problems Posed in Low-Head Hydro Projects" on August 9, 1979, in San Francisco.

**PACHECO'S ON THE MOVE**

In May of this year Wil Pacheco moved from Atlanta to Kennewick, Washington, where he assumed the role as Manager of Tudor's Kennewick office. During his nearly six years on the MARTA project, Wil served as a Line Manager, headed the Design Management Office and, for the past two years, was Assistant to the Project Director. Wil's problem solving ability, good spirits and contributions to the cribbage fund will be missed at PB/T but, we are sure they will be warmly welcomed at Kennewick. Wil says he likes the Tri-Cities area very much; this is his first home in any other than a major urban area. Now that a house has been acquired in Richland, Wil will be joined by his wife, Marge, and son, Jack, who are now making the long move from Atlanta.

**CONGRATULATIONS TO:**

...Gary and Yaffa Weinstein on the birth of their son, Matthew Weinstein. Matthew was born on Friday, April 6, 1979, at 5:00 a.m.

...Don Guild of the San Francisco office who has obtained his Mechanical Engineering license from the State of California.

...Jay and Karen Spady on the birth of their daughter, Michelle Leann Spady. Michelle was born on Thursday, May 10, 1979.

...Craig and Debbie Brown on the birth of their son, Justin Mitchell Brown. Justin was born March 19, 1979.

**OUR APOLOGIES**

Either having difficulty making the adjustment to a new year or still under the influence of the beverages consumed at the Christmas party, we seemed to have trouble keeping our facts straight in the last issue of the newsletter. We would like to offer our apologies to Bela Vadasz for chopping five years of his Tudor experience off his record - Bela received his 20 year Tudor award at the Seattle Christmas party. Sorry Bela - we just couldn't believe that such a young man could have accrued so many years!

We would also like to apologize to Sheri Weaver, Steve Daniel and Tim Green for transferring them to the Kennewick office without their knowledge. Under our new section of "NEW FACES" these three employees should have been listed as new faces in the Lewiston office. We would like to take this opportunity to transfer them back to Lewiston.

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The TUDOR NEWSLETTER is published by Tudor Engineering Company for the information and enjoyment of its employees, their families, and friends.

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# TUDOR

NEWSLETTER

SUMMER 1979

## MARTA OPENING



Amid great jubilation, MARTA opened its revenue service on Saturday, June 30. The opening day ceremony at the East Lake Station, spanning Fulton and DeKalb Counties, was attended by then Secretary of Transportation Brock Adams, Georgia Governor George Busbee, Atlanta Mayor Maynard Jackson, the MARTA Board of Directors and some 2000 guests. Tudor was represented by Stan Froid and Doug Mansfield. After the bands played and the welcoming remarks were made, Brock Adams gave the system some great accolades: "This system shall represent the best of what can be done between federal and local government... this is not mass transportation--this is class transportation."

The system was officially opened to the public at 12:05 p.m. when the first paying customers started at Avondale Station and headed west to downtown Atlanta. Presently 6.7 miles of the East Line are in revenue service. The 5.1 mile segment of the West Line and the 1.9 mile segment of the North-South Line, completing the \$1 billion 13.7 mile Phase A system, will be in operation by Spring 1981.

Tudor's role in the MARTA project, under the leadership of Louis Riggs, began back in 1966 when PB-T-B was retained to do planning, route location, and preliminary engineering. In 1971 the referendum approving mass transit in Metropolitan Atlanta was passed and in 1972 PB-T-B was named general engineering consultant (GEC). At that time Paul Potter, Doug Mansfield, Oral Conyers, Bob Ganse, Bela Vadasz, Wil Pacheco and Frits Fenger helped form the core of the management staff that was to run the design and construction management program. In 1976 Parsons Brinckerhoff and Tudor took over the GEC contract.

Over 60 design contracts to more than 80 A/E firms were awarded on the project and supervised by the joint venture. Literally dozens of Tudorites have worked on the project either in Atlanta or in the home offices of San Francisco, Seattle and Boise. All are to be congratulated for a job well done.

Perhaps the greatest satisfaction to those involved in the design of the system is the acceptance and quiet praise of those using the System. Over 16,000 rode the system on the first day and more than 100,000 used the system in the first week of regular operation. The Atlanta Daily World has gone on record to say, "MARTA's performance record...has been superior."

## WEST SEATTLE BRIDGE JOB

Back in May, the Tudor Seattle office, in cooperation with two other Seattle consulting engineering firms, completed and submitted to the City of Seattle a layout report which contained recommendations to replace the existing, damaged, bascule bridges across the Duwamish River with two new bascule bridges 65 feet clear above the waterway. The original plan would have been within the budget, mostly available from federal funds. However, there was a public consensus that preferred a high-level, fixed bridge at a higher cost.

The City Council managed to raise enough additional money to pay for such a bridge and called for a new consultant-selection procedure for the new design. The design team in which Tudor was participating was duly selected the second time by the City's committee. Andersen-Bjornstad-Kane-Jacobs, Kramer Chin & Mayo, and Parsons Brinckerhoff are our team partners.

Bela Vadasz and Joe Sacco are responsible for geometric and traffic design and approach structure design, respectively, for the 6000-foot long 172 million-dollar freeway project. Joe has already established his home away from home in the Seattle area for the first phase of the work.

Notice to proceed with the accelerated four-month location and design report phase has been received, and design is proceeding. Several alignments within the corridor are being tested, and a great number of types and materials for the main bridge (140 feet clear above the water) and the approaches are being developed and reviewed. Francois Martin, Mujib Ahmed, Rosemary George, Harry Jasper, Basil Kattula, Cheng-Nan Lin, Tim Marks, Jim Ozanne, Jim Richardson, Patricia Romelfanger, Hwa-Chuan Zien and others play in important roles in bringing the project to completion.

The report will be submitted in December, and we expect to have a contract and notice to proceed for preliminary and detailed design in January.

## ROLLINS FIELD TRIP

A number of people from the San Francisco office, tired of hearing all about small hydroelectric projects without seeing any, took off on the last Saturday in June to take a look at the Rollins Project currently under construction. The party, ably organized by Chuck Spinks, consisted of Chuck and his wife, Charl, Dave and Joy Church, Lemma Wendim-Agegnehu, Dave Alden, Jim Meyer, Dave Willer and Tony Lea. The group travelled by van, in order to allow a convivial interchange of information.

At Rollins, Fred Estep joined the group and led an excellent tour of the work, including a walk through the 400-foot long penstock. Lunch at a local establishment followed, after which Bob Carr, the Project Manager of the Yuba-Bear Project, led the party up to the Chicago Park Power Plant. Bob and his wife, Delta, had joined us at lunch. He gave a thorough tour of the Chicago Park facility, a manned operation from which the Rollins Project will be operated. It was the first experience for some of being inside a working hydroelectric plant.

After the Chicago Park tour, the party returned to the Bay Area with a better feeling for the internal workings of a hydroelectric plant.

## NORTH FORK STANISLAUS HYDRO

After several months of long negotiations between Calaveras County Water District (The Owner), Northern California Power Agency (The Power Purchaser) and Bechtel Inc. and Tudor Engineering Company (The Engineers) a contract has been executed to initiate final design on the project. The effective date of the contract is August 23, 1979.

The division of work between Bechtel and Tudor is such that Tudor will be responsible for the features in the upper mountain area, mainly, the North Fork Diversion Dam and Tunnel, New Spicer Meadow Dam and Power Plant, Beaver Creek Diversion Dam and Tunnel, and Collierville Afterbay Dam. Bechtel will be responsible for the features in the lower areas around Collierville, mainly, McKays Point Diversion Dam, Collierville Tunnel and Power Plant, and Transmission Line. The upper mountain area, because of its elevation and accompanying winter inclemency, remains inaccessible from approximately November through July.

Design work is to commence in the Spring of 1980, and topographic maps will be needed then for this purpose. At the request of the Engineers, in order to gain time and have topographic maps available next April, the Owner has signed a contract with Towill, Inc., effective October 1, 1979, to have certain survey work performed in the upper mountain area before the end of the month which will make topographic maps available when design work is initiated.

Activities in this project are presently moving slowly. However, it is expected that full design efforts will commence in the Spring of 1980. An agreement for engineering services is presently being negotiated between Tudor and Bechtel. This agreement will be finalized shortly.

## BAYSIDE FACILITIES PLANNING

The notice to proceed on the Bayside Facilities Planning Project was received on September 14, 1979. This enables the joint venture of Caldwell-Gonzalez-Kennedy-Tudor to proceed with the task of determining the best method of collecting, storing, transporting and treating San Francisco's combined storm water and sewage flows on the bay side of the City. Tudor is responsible for the tunnel work on this planning project, and must evaluate four tunnels totaling some 15 miles in length, whose combined estimated cost is about \$250 million. All tunnels will pass through both hard rock and soft ground. Tudor has been notified that the City hopes to proceed rapidly from the present planning stage into final design. Bob Janopaul is the Principal-in-charge of this project. Don Rose and Bob Ganse are Tudor's project manager and assistant project manager, respectively.

## MARTA CONSTRUCTION



While the trains are running on part of the MARTA line, construction continues on other parts. The photo below shows the status of Five Points Station as of July of this year. Five Points Station is the crossing of the North-South and East-West lines. It will be a four level station and will cost \$41-million to construct. A team of Tudor engineers led by Don Croft went on temporary duty to Atlanta in 1976 to complete the final design of this station.

## TRI-CITIES SUMMERTIME EVENTS

The summer in Tri-Cities has been very hot and, at times, rather dusty and windy, but business has been proceeding very smoothly. The survey crews are holding down all of their equipment in the field and in the office, Wil Pacheco has things pretty well in hand.

Jay Spady has been responsible for several baseball games this summer between Tudor and other companies--so far they only came back bragging once. Bob Grow says his pitching was just fantastic and that's why Tudor won. Better luck next year!!

The staff in the Tri-Cities office has been fortunate to have several visitors this summer. Louis Riggs visited in June and everyone here enjoyed meeting and talking with him individually. We also appreciated having Tevis Thompson with us for a couple of days. Besides bringing two glorious days of much needed rain to the Tri-Cities, Tevis improved our record keeping with a few accounting lessons. Keith Bull is always a welcome visitor to our office and we would like to thank Francois Martin for the assistance he gave to some of our staff in the operation of the 9830 Computer.

## CANOE TRIP



In what has become an annual rite of summer, the more fool-hardy souls from the San Francisco office ventured out on the 1979 Tudor Canoe Trip. The site this year was the lower American River below Folsom Dam near Sacramento. Participants included Chuck and Charl Spinks, Tony Lea, Sarah Westsmith, Bob and Sue Myrdal, Dave Alden, Dave and Joy Church, Candy King and her husband, Ed Sykes, Fred and Janie Estep, Joe and Rhoda Culpepper, Gail and Nelson Rodriguez, Greg Reichert and assorted friends, relations and offspring.

The weather was fine, the water was flowing well and the food and drink were excellent. A few minor mishaps occurred, but nothing important was lost. Everyone reached the downstream end of the fourteen-mile trip tired but pleased with an enjoyable day in the sun. Our thanks go to Dave Alden for planning and organizing the trip.

However, the fun had just begun! Fred and Janie Estep hosted the first Annual Auburn Tudor picnic at their home. All canoe participants who were interested in making it a weekend trip were invited to bring their sleeping bags and camp out on the Estep "ranch". Fred and Janie not only provided a delicious cook-out dinner, followed by a challenging game of dominoes, but also woke us up the following morning with a tremendous pancake breakfast. After a lazy morning many tired happy guests headed back for San Francisco while those who were still gluttons for punishment drove to Rollins Power Project, with Fred as our able guide, to view the progress. The tour was very informative and the remaining few returned to the Bay Area exhausted after a very rewarding weekend.

Our thanks go to Fred and Janie for all the work they went to to make the weekend such a success. The warmth and hospitality was only matched by the excellent cuisine - but watch out, when the word gets out, next year's annual picnic may be attended by a much larger crowd!!

## NEW FACES

### ... san francisco

...Greg Reichert joins the ever-growing hydro group as a civil engineer. He is a graduate of Purdue University and received his M.S. at Stanford University. Greg was raised in Dayton, Ohio, and enjoys bicycling, running and camping. He is a loyal member of the Tudor softball team and participates in many company outings.



...Sally Simone is a hydraulics engineer and is currently working on flood insurance studies. She graduated from Vanderbilt University in 1978. Prior to joining Tudor, Sally was a piping stress analyst for EDS Nuclear. Her time outside the office is devoted to enjoying the sights and sounds of San Francisco.

...Leith Thomas, a resident of the Bay Area for ten years, has worked in a wide variety of office situations. Her background includes work in industries ranging from securities processing to trucking, equipment maintenance and food distribution. She is now a trainee in word processing and is performing some clerical functions.



...Debbie Duffant comes to Tudor with a background as Market Support Specialist of computer-software systems. Debbie will be with the word processing office for approximately 6 months. At the present time she is in the process of developing 5 acres of land near Auburn, California, for an eventual homestead.

...Dante Quiba has been the accounting clerk since the end of June. He graduated from high school in the Philippines in 1975, after which his family moved to the United States. He is presently attending San Francisco State majoring in Business Administration. His hobbies include chess, pool, ping pong, basketball, swimming, playing the piano...



...Charles Decaney is a new accountant. He graduated from the University of the East, Manila, in 1965. He first moved to the United States in 1977, stopping first in Hawaii for a year and a half. Charles has been living in San Francisco by himself, but expects his family to join him sometime in December.



...Joseph Roger graduated from U.C. Berkeley with a B.S. in Civil Engineering in June of 1979. Joe is currently working on the San Francisco Bayside Facility.

...Craig Giordano is a recent graduate of San Jose State. He is a new recruit to Rainer's flood insurance studies team. While not at work, Craig enjoys music, skiing and racketball.



...Eileen Fung joined Tudor in September as a full time clerical assistant. She grew up in San Francisco and now lives in Foster City. She spends much of her free time reading, writing poems and listening to classical music.

...Jim Stewart's word processing background with IBM, and Xerox is paying off in that he is already matching Operator II level standards. Spare time means a drink or two at some of his favorite disco's.



...Parnian Kaboli is a part-time employee with Tudor and a full-time student at Stanford University. She is pursuing her doctorate degree in geotechnical studies while assisting Don Rose on the San Francisco Bayside Facility Project. When Parnian has any spare time she enjoys playing the piano and cooking.

...Cheryl McDonald is our new receptionist. She intends someday to work in television as a news anchor and/or public affairs show host. Cheryl is currently working on a Master's Degree in Radio and Television at San Francisco State University. She also works at radio station KPFA-FM 94.1 in Berkeley where she anchors the Saturday evening newscast and co-produces a public affairs program called "Eastbay Beat". The program deals with social, political and economical issues around the Bay Area.

...Derek Bolton is a graduate of the University of Belfast in Northern Ireland with an M.S. from the University of London. He joins Tudor as a civil engineer and is currently working on feasibility studies of hydroelectric projects. He previously worked for CH<sub>2</sub>M Hill. While not busy at the office Derek enjoys backpacking, downhill skiing, flyfishing, playing classical guitar, reading, exploring California and eating American style breakfasts.



...Dick Everett is an imported civil engineer from New Zealand. He came to San Francisco in August and has taken up residence in Marin County. Dick is married and has four children. He enjoys boating, sailing and fishing. Having been warned of the cold San Francisco Bay water, Dick's sailing enthusiasm has been somewhat limited.

### ... seattle

...Denise Taylor joined Tudor as a Secretary on June 11. She was previously employed with the Aetna Life and Casualty Company as a Supervisor for 3 years.



...Debra Hirschel rejoined Tudor on July 2 as an Engineer. She was previously employed as a Drafter during the summer of 1978. Debbie graduated in June of this year from the University of Washington and received her B.S. in Civil Engineering. In her spare time, Debbie enjoys hiking, skiing, and tennis.

### ... tri-cities

...Art Fuller comes to Kennewick from Prescott, Washington. He and his wife Karen are expecting their first child in the near future. Art is presently working with Tom Wessels on the survey crew.

...Kathy Phillips is from Seattle and works as a drafter. Rumor has it that Kathy is planning to marry an ex-employee of Tudor, Randy Mawdsley - news travels fast, right Kathy?

...Cathy Weisenberger is from Long Beach, California. Cathy came to Tudor from J.U.B. and works as a drafter.

## SEATTLE

This year the Seattle office picnic was held at St. Edwards Park in Kirkland. We had the pleasure of the following guests:

Louis & Pat Riggs, Bob & Beth Janopaul, Stan & Harriette Froid (also their daughter, Lori), Dave & Loreen Toothman, Paul & Dawn Potter, Doug Mansfield and Bill & Blanche Davis.

The usual games were enjoyed, volleyball, baseball and croquet. Added were enjoyed by the children including water balloon fights, a watermelon eating contest and looking for coins in a hay stack. Delicious salmon, roast beef and other varieties of meat plus salads, fruits, and cakes, were enjoyed by all. Special thanks to Rosemary George and DeWitt Jensen, for organizing the picnic and keeping the children amused.



PICNICS

SUMMER PICNICS

SUMMER PICNICS

SUMMER PICNICS

SUMMER PICNICS

## TRI-CITIES

The Tri-Cities office picnic was held on Saturday, July 14, at Sacajawea Park. As in the tradition established last year, everyone brought a salad or dessert to complement the steak lunch. After lunch everyone was too full to really get into their usual volleyball game so they chased a frisbee around. All in all everyone had a very nice time including our special guests, Keith and Diane Bull from Seattle.

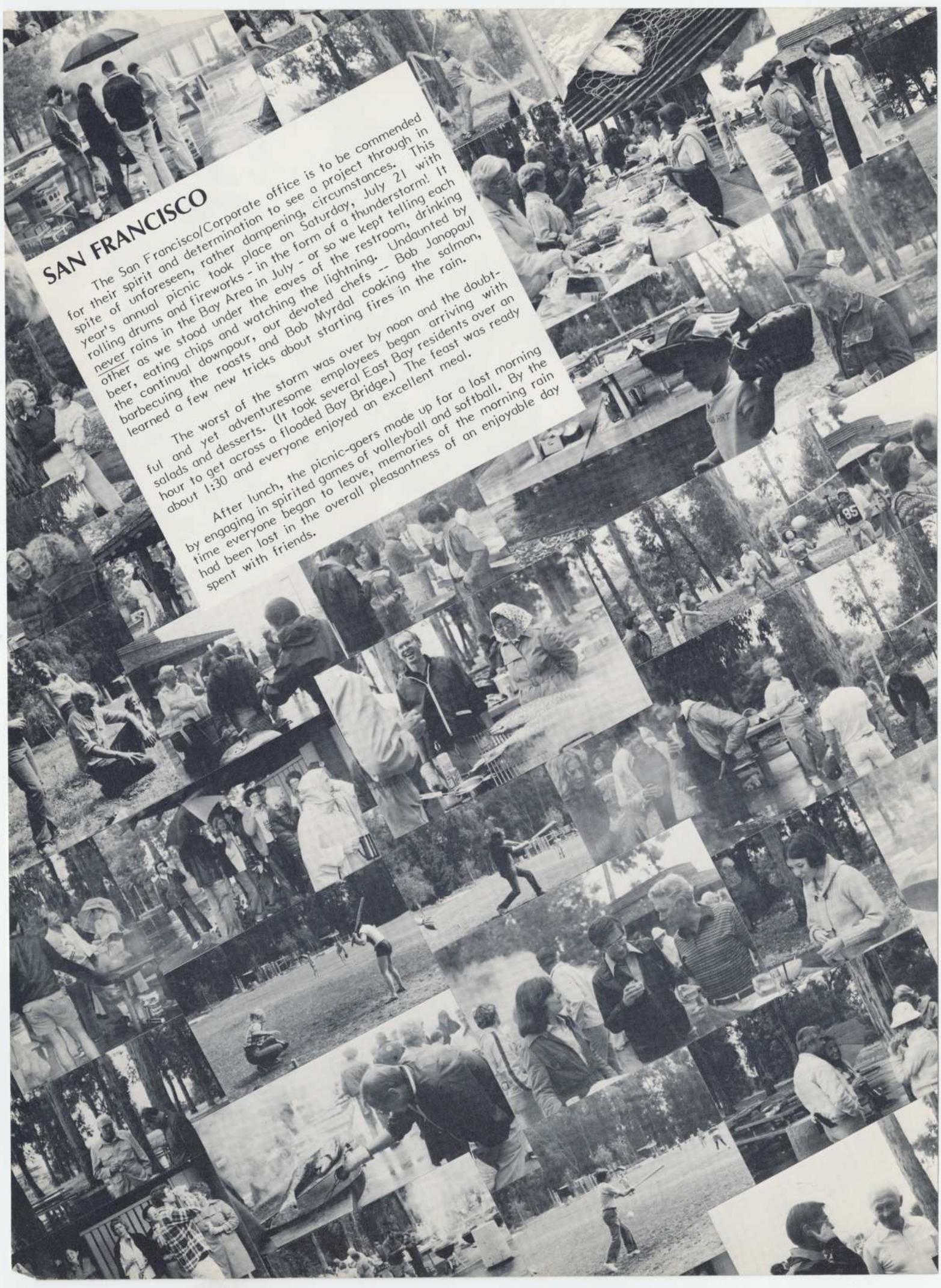


# SAN FRANCISCO

The San Francisco/Corporate office is to be commended for their spirit and determination to see a project through in spite of unforeseen, rather dampening, circumstances. This year's annual picnic and fireworks - in the form of a thunderstorm! It never rains in the Bay Area in July - or so we kept telling each other, eating chips and watching the lightning. Undaunted by the continual downpour, our devoted chefs - Bob Janopaul barbequing the roasts and Bob Myrdal cooking the salmon, learned a few new tricks about starting fires in the rain.

The worst of the storm was over by noon and the doubtful and yet adventuresome employees began arriving with salads and desserts. (It took several East Bay residents over an hour to get across a flooded Bay Bridge.) The feast was ready about 1:30 and everyone enjoyed an excellent meal.

After lunch, the picnic-goers made up for a lost morning by engaging in spirited games of volleyball and softball. By the time everyone began to leave, memories of the morning rain had been lost in the overall pleasantness of an enjoyable day spent with friends.

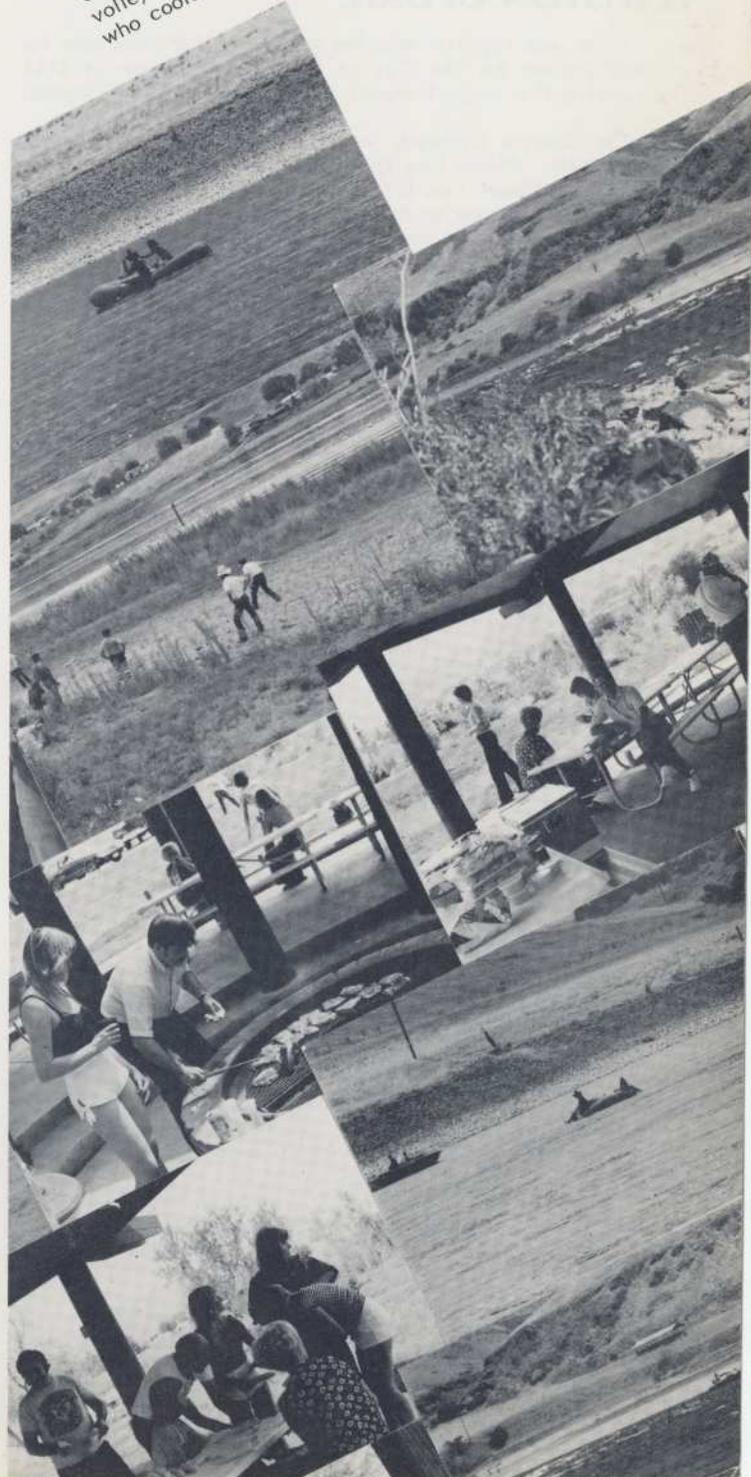






## LEWISTON

The Lewiston office picnic was held on August 25th at Hellsgate State Park. As the adults were busy preparing the food, the youngsters were kept busy catching fish. With a good showing of 36 employees and guests, there was still more food and drink than could be consumed. Among the guests, Carolyn and Don Payne made the trip from the Boise office. After dinner and dessert, for those who still had room, games of volleyball and horseshoes were enjoyed. There were also a few who cooled off with a quick swim.



## LEWISTON UPDATE

Tudor was recently selected to write a facilities plan for a sewer project for the City of Weippe (population of 614). The construction project should end up being about \$250,000.

The Central Orchards Sewer District projects are progressing well. Phase One (\$1.2 million) is 90% complete on construction, Phase Two (\$1.1 million) was awarded to Shunn Construction Company on August 23, and Phase Three (approximately \$1 million) will be bid sometime in late October.

## 20 YEARS AGO

From the Lewiston Tribune - August 23, 1959

Lewiston's Jimmy Grow was like a tiger in the ring when he belted out a unanimous 10-round decision over Teddy Davis of Hartford, Conn., last night at Bengal Field. He will probably not fight again for at least six weeks because of injuries. Grow got a big edge on the cards of the two judges, Walter Grubb and Eugene Auer.

## TUDORITES RETURN

We are happy to welcome back to the Tudor family a few "old faces." Jim Albert rejoined the San Francisco staff after spending two years of duty in Caracas working on the joint venture rapid transit project. Since his return Jim has been reacclimatizing himself to speaking English and eating french fries. He and Jeanette have been kept busy redecorating their condominium. Jim is very happy to be back in the "good ole U.S. of A." Jim has been assigned to the Bayside Facilities Project.

Jim Ricereto has returned to Tudor to work with the Corporate office in organizing all business development activities. Jim spent the past two years working for Parsons Brinckerhoff in their New York City office in a similar capacity. He's glad to be back in San Francisco but is shocked to see that housing prices have doubled since he left!

Roger Brassfield and Richard Rudolph are back with us again. Unfortunately, they have been around us a very short time. Both have accepted long term assignments in Caracas to participate with PB-T-B, S.A. on construction management activities for the Caracas Metro. Roger left for Caracas on September 2 and Dick on October 10, 1979. Both will be gone approximately 2 years and will return to Tudor in the fall of 1981.

Al Barrio's nostalgia for the west coast finally got the best of him. He left Boise in December, 1978 and came to settle in Santa Rosa with his family. Upon visiting the San Francisco office Al found himself again working for Tudor. Al is a senior drafter and is currently helping out on the Bayside Facilities Project. The newsletter staff is grateful to have Al in the San Francisco office - keep a lookout for his cartoons.

## CONGRATULATIONS TO:

John Perry and Paula Davis who were married on July 6 and honeymooned up on the Lochsa River.

Sherri Rada and Dave Kole who were married on August 9 in Lewiston and went to Nevada for their honeymoon.

Maudjean and Dave Thompson on the arrival of their daughter, Carly Amanda on August 4.

Candy King, Tom O'Neill and Chuck Spinks of the San Francisco office, who have obtained their Civil Engineering licenses from the State of California.

Kathy Dorbin on her marriage to Dick Rossi on July 14. Horton Smith, King County Superior Court Judge performed the ceremony at a garden wedding held in Seattle, and a reception followed.



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The TUDOR NEWSLETTER is published by Tudor Engineering Company for the information and enjoyment of its employees, their families, and friends.

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# TUDOR

NEWSLETTER FALL 1979

## TUDOR OPENS DENVER OFFICE



As part of its plan for developing projects and opportunities in the western states, Tudor Engineering Company has opened an office in Denver, Colorado. John Williams, who was previously a project manager and who also served as office manager of the San Diego office for Tudor during the mid 1970's, has been named office manager. John rejoined Tudor on October 8, and since has been busy establishing a base for Tudor's operations in the Rocky Mountain States.

Initially the Denver office will serve as a project office, reporting to the corporate office, for the purposes of establishing liaison with the Water and Power Resources Service (formerly the U.S. Bureau of Reclamation) and a number of Denver based clients interested in small hydroelectric power plants.

John Williams has 20 years of engineering experience. He has been around the world working primarily on planning and design of water resource projects with particular emphasis on hydroelectric development. His most recent assignment was on location as the project director for the Karkheh River Project in Iran where he was in charge of developing irrigation for 200,000 hectares (490,000 acres), flood control, and 2,500 MW of power using ground water and 250,000 hectares (620,000 acres) of surface runoff. John is returning to the Denver area after a number of years of traveling, and he and his wife Janet have recently purchased a home in Denver where they intend to settle down.

Since he has been in Denver, John has assisted Gordon Little and Don Armstrong with hydro projects in Utah and Wyoming while also arranging for office space and support. The office that we presently have is at an interim location until our staff expands to the point where we will require larger quarters. Our address in Denver is:

Tudor Engineering Company  
621 - 17th Street  
Suite 1410  
Denver, Colorado 80293

The phone number is:

(303) 893-2503



## WESTERN LOW HEAD HYDRO STUDY

January 10, 1979: On a business trip to Denver, Bob Janopaul and Dave Willer learn that the Bureau of Reclamation will be seeking an engineering firm to inventory small hydroelectric projects in the seventeen western states.

June 28, 1979: An advertisement in Commerce Business Daily announces a study to develop an inventory of potential low-head hydroelectric sites in the seventeen western states. The study will also require appraisal level cost estimates and designs and economic analyses for selected sites. The term of the contract will be 22 months and in the range of \$750,000. Interested firms are directed to write to the Bureau in Denver. Tudor immediately does so.

July 27, 1979: The Bureau issues its RFP for a "Low-Head Hydroelectric Evaluation and Inventory." The Scope of Work is divided into two phases. The first phase will consist primarily of computer activities, utilizing the Corps of Engineers data base of approximately 15,000 sites. The contractor will screen this data base to eliminate sites not in the seventeen western states, with a head greater than 66 feet, with less than 1000 kW of capacity, or with known serious environmental and social constraints. In addition, the contractor will be required to identify an additional 500 potential hydroelectric sites for energy into the Corps' data base. Using the Corps' analysis program, the contractor will develop a prioritized list of the sites for review by the Bureau. The Bureau will then select 100 sites for a more detailed analysis in the second phase. This second phase will entail the development of site-specific preliminary designs, cost estimates, economic analysis, and environmental and social impact evaluations for the 100 sites.

August 1979: Tudor's San Francisco Office prepares the proposal. It is proposed to perform all production activities in San Francisco with extensive support by the regional offices. Initially, the regional offices will collect environmental and social data and will identify the 500 new sites. During the second phase, regional office personnel will visit each of the 100 sites and collect the data necessary for the San Francisco Office to perform the appraised level studies. Gordon Little is proposed as Tudor's Principal Investigator. The proposal is submitted to the Bureau on August 27, 1979.

September 21, 1979: The Bureau informs us that we are one of several firms which will receive further consideration.

October 15, 1979: Bob Janopaul, Dave Willer and Gordon Little travel to Denver. They are joined by John Williams, Manager of Tudor's recently established office in Denver. The group spends most of the day with Bureau personnel discussing the project and Tudor's qualifications.

October 23, 1979: The Bureau requests a "Best and Final Offer", based on the October 15 meeting and our subsequent review of the original proposal. The number of sites to be screened in the first phase has been reduced from 15,000 to 3,000.

October 29, 1979: Tudor submits its "Best and Final Offer".

November 26, 1979: Tudor is informed that it has been selected to perform the inventory and evaluation. Great rejoicing follows.

December 7, 1979: A Notice to Proceed is issued.

## INTERSTATE HIGHWAY I-82

On September 19, 1979, the Seattle Office of Tudor Engineering Company was awarded a contract by the Washington State Department of Transportation to design a five mile section of Interstate Highway I-182 between Goose Gap Road and the Columbia River, south of Richland, Washington. I-182 is a four-lane divided spur line that connects I-82 with the Tri-Cities of Richland, Pasco and Kennewick.

The first part of our contract is a Project Development Study. This is a two-month study to determine the optimum number and limits of construction contracts and to determine the detours and construction sequencing to minimize disruption to existing traffic in the area.

The Project Development Study is scheduled for early completion. The plans, specifications and estimates for all construction contracts are scheduled to be completed by June 13, 1981.

The estimated construction cost of the project is \$36,500,000. This includes the bridges which will be designed by the WSDOT Bridges and Structures Division. Total estimated construction cost of our contract is \$20,500,000.

The team assigned to this project is essentially the same team that did the I-82 project in the vicinity of Sunnyside, Washington. It consists of DeWitt Jensen, Jim Schroeder, Rosemary George, Debbie Hirschel, Pat Romelfanger, Bob Toothman, Milton Odo, Jack Bjork, Einer Handeland and Don Hoel.

## SOUTH AMERICA EXERCISE

Once again Louis W. Riggs and Roberto Iniguez departed for Caracas on October 15 to attend the PBTB Caracas Board of Control Meeting. During their stay in Caracas they took care of business matters, participated in other affairs organized by PBTB management personnel, enjoyed the hospitality of Mr. Luis Soux of Inelectra and visited with Roger Brassfield, Miguel Cornejo, Heinz Mueller and Richard Rudolph, Tudorites presently stationed in Caracas. After three days of activities Louis came back to San Francisco while Roberto flew to Panama to meet his wife Josefina before heading back for South America.

From Panama Roberto and Josefina went to Santiago, Chile where they spent five days. Roberto spent most of his time meeting with clients representatives, particularly Mr. Luis Molinare, Director of Public Works, and Mr. Enrique Bollman, Director of Vialidad. He also spent time with prospective local associates and representatives of local entities interested in doing business with Tudor. Josefina on the other hand spent her time visiting with Imelda Martinez, Maria Teresa Molinare and Marcela Bollman. They had an opportunity to fly to the southern part of Chile in the Ministry of Public Works' airplane and observe some of the highway reconstruction which has already been initiated. Both Roberto and Josefina had a wonderful time and came back with good memories of their stay in Santiago, the hospitality of the Chilean people and the time spent with Raul and Imelda Martinez.

Roberto and Josefina stopped in Ecuador on the way back to San Francisco. Both spent four days in Cuenca visiting with relatives and old friends. They also spent two days in Quito where Roberto took care of company business. On November 3 they arrived in San Francisco a little tired but full of remembrances of the very enjoyable days spent in South America.

## WEST PORTAL OPENING



Pictured is San Francisco Muni's recently completed West Portal Station which is located at the west end of the Twin Peaks streetcar tunnel. Tudor was the responsible PBTB member for development of this station and, together with Reid and Tarics, Architects, prepared the design and construction drawings. Frits Fenger, Heinz Mueller, Don Moore, Grant Larsen, and Bill Buckland spearheaded the early planning and design phases for the Station. Bob Ganse and Ocie Williams attended to Tudor's construction phase responsibilities. Tudor was also retained during construction to provide "design services" to BART's resident construction engineer.

The station was financed and constructed by BARTD as a part of a unique appendage to the BART system, the Market Street streetcar subway which runs one level above BART in the downtown Market Street subway but branches away and continues under Market Street to join the Twin Peaks Tunnel.

West Portal Station is one of the key facilities in the new MUNI Metro, Light Rail Subway/Surface System. The Metro's new articulated light rail vehicles will run on the upper track level of the Market Street Subway, replacing the existing streetcars on Market Street. The "J" and "N" line cars will emerge from the subway at the Duboce Street Portal. The "K", "L", and "M" cars will continue through the full length of the Market Street subway which was built as part of the BART project. The west end of the subway connects directly to the east end of the Twin Peaks Tunnel, originally completed in 1917. West Portal Station at the other end of the Tunnel serves as the western terminus of MUNI Metro subway operations. Further west the new cars will operate on the surface similar to the existing streetcars.

The MUNI Metro has many interesting features. The new articulated cars "bend" in the middle to go around curves. Cars will run either as single units or coupled together in trains of up to four cars. Special movable steps in each car will permit loading from high platforms in the subway or from street level after leaving the portals.

The Metro project also included complete rebuilding of all streetcar tracks and overhead wire and power supply and the construction of a complete new "Metro Center" maintenance facility at Ocean and San Jose Avenues.

MUNI has been test-running the new cars on the Market Street subway and in revenue service between Metro Center and West Portal Station. It hopes to initiate N line revenue service in the subway starting January 14, 1980.

The station project encompasses a number of other features for the community as well as MUNI. It is built beneath an old park and playground area which has now been completely restored to a facility which far surpasses the original recreational area. Above the station is a large grassed playground, a tennis court, a challenging "tot-lot" for youngsters and the MUNI's new operations equipment and office building. A major power substation is also located in the facility.

Tudor participated in the final inspection in mid July and BART subsequently turned the facilities over to MUNI.

## S.F. POSTAL FACILITIES

On November 1st the bids were opened on the San Francisco General Mail Facility. It was a disappointment to find only four bidders, however the low bid of \$40,288,000 by a joint venture of Tutor-Saliba-Perini is considered realistic given the current market conditions. In comparing the 25% difference between the A-E estimate and the contractor's bid the Project Manager, Architect Clark Davis of SMP, explained: "Almost the entire disparity between our final estimate of August and the bid is attributable to the rampant and uncontrolled inflation that is now present in construction on the West Coast. This runaway condition will continue, in the contractor's opinion, for at least the next two years."

It is pertinent to note that the construction cost index increases published by Lee Saylor Incorporated have shown significant increases in the past year. Ready mix concrete has gone up in the order of 17% per annum, reinforcing steel 32% and structural steel 14%. In contrast the labor costs have risen at the rate of about 7% per annum, in keeping with the U.S. government guidelines.

At the present time the bid is under consideration by the U.S. Postal Service. If the construction goes ahead, which does appear likely, Tudor will check shop drawings and give advice to the contractor during the two year construction period. Bill Buckland will be responsible for Tudor's contribution to the construction phase activities with assistance from Don Croft, Richard Mayes, Cissie Hsu and Joe Lawrence.

## SMALL HYDRO CONFERENCE

On October 1-3, 1979, Messers Bob Janopaul, Dave Willer, Harry Hosey, Gordon Little and Don Guild attended the Waterpower '79 Conference, an International Symposium on the Potential of Small Scale Hydropower in Washington D.C. Tudorites were very visible at the meeting as Gordon Little, Harry Hosey and Dave Willer each gave a paper. In addition, Dave Willer at a planning session, gave a ten minute talk on "There is gold flowing over those existing dams." This session was chaired by Major General C.R. Heiberg, III, Director of Civil Works, Corps of Engineers. Finally, Dave Willer was chairman and organizer of the workshops on Planning which were well attended by the participants. As the conference ended, all agreed that it was valuable from a technical viewpoint and outstanding from a business development viewpoint.



## HICKMAN POWER PLANT



On Saturday, October 6, 1979, Bob and Beth Janopaul and Don and Nancy Guild attended the dedication of the Hickman Power Plant. The power plant is the first small hydro power plant to go into commercial power production following President Carter's small hydro directive.

The plant develops 1000 kW from two vertical open flume propeller turbines at a head of 19 feet. The new power plant replaces a gate structure which dissipates hydraulic energy to control irrigation water releases. The new power plant will control irrigation releases and convert the hydraulic energy into electric power. The power plant was constructed by Turlock Irrigation District employees within a construction schedule of one year. The generating equipment was furnished by General Electric Company and James Leffel Company. The civil and mechanical design was done by Tudor. Drop #1 hydroelectric power plant, which is located upstream, was designed in conjunction with the Hickman Power Plant and is under construction and expected to go into power production by the start of the irrigation season in March of 1980. Drop #1 power plant has an installed capacity of 3000 kW.

## SLY CREEK POWER PLANT

Many moons ago the wise men of the not so distant land of Oroville and Wyandotte had a vision of water flowing out of the hills. This water would be almost magical, transforming the parched grasslands into lush and wonderfully productive fields to enable America to feed the world's hungry. This water had a second magical property - that of exciting tiny electrons throughout the land into making lights glow, air conditioners air condition, radios blast and toothbrushes hum. Well, these enlightened men saw their project through to completion. Because of them California blooms and the good ole U.S. of A. suffers a little less from costly overseas oil imports.

Well, there are also farsighted men in the land of Oroville and Wyandotte today, and Tudor San Francisco is helping them to fill a niche left out of the original plan. A small power plant will be constructed at the base of one of the project dams. This project at Sly Creek Reservoir in Butte County is very similar to the Rollins job. Like Rollins, an existing reservoir and outlet works will be utilized. Power will be produced by a turbine and generator salvaged from the abandoned Melones Power Plant.

So far the small scale hydro group at Tudor San Francisco has determined the project is economically feasible, filed a license application with the Federal Energy Regulatory Commission and completed a preliminary environmental impact report. PG&E will purchase the power for use within its California network.

If all proceeds on schedule the design work will be completed during the summer of 1980. Construction will start in early 1981 and the project will be in full operation by January, 1983.

# WORD PROCESSING CENTER

In its largest sense, word processing encompasses everything from the thought in the author's mind, to the dictation from Jim Meyer, transcribing chicken scratch for Hugh Brown, Dick Everett and Gary Weinstein, editing Dave Willer's letters, revising (usually frequently for all), copy making for Don Rose who has an on-going battle with the Kodak, mailing the many cc's and bcc's for RWG, filing, retrieval, long-term retention, or finally deletion! At the receivers end, this cycle starts again.

Through the use of N.B.I.'s improved technology, word processing is the process of producing written communication, at higher speed, with more accuracy and less work. All the possible features that our word processing center offers are identified and described below. The four categories under which the features are classified are: letter/memo features, report features, communication features and management features.

They are the four central features of our text editing system. Following is a discussion of the features by category:

**LETTER/MEMO FEATURES** are functions focusing on changes within one page. Memos and letters are the most common examples of page-oriented documents, though they may extend several pages in length. The key letter/memo feature is edit, which may be divided into insert and delete based on character, word, line or page. The important thing is to be able to easily change selected portions of the page without retyping the entire page. Formatting is the ability to predetermine specific page layouts which the operator can recall for use with very simple command codes. Format includes justification, the ability to have even edges on both right and left sides of the text; centering, whereby the system automatically calculates the length of the work or phrase and centers it on the page or column; tabs, where the system can store groups of tab positions so that the operator has to set them only once for any particular type of job; and indentation, the ability of the system to identify paragraph breaks, and space indent.

With hyphenation, the system knows automatically when a word will not fit formatting requirements and stops to alert the operator when a word must be hyphenated.

Form letter is probably the feature that launched the word processing industry. It is the ability to generate essentially the same information repeatedly, with the provision for insertion of variables such as names, addresses and amounts.

**REPORTS AND SPECIFICATIONS** require all the features that pertain to letters/memos plus additional features that manage the editing requirements of multi-page documents.

Two examples are global edit and pagination. Global edit is the ability to change a character, word, phrase or line on not just one page but on all pages throughout the entire document. Pagination, the ability to renumber the pages of a report automatically, is extremely useful for reports which go through several revision cycles.

Sorting is the ability of the system to extract specific information according to select fields (name, zip code, key words, etc.). The value of this feature is seen through applications such as alphabetizing address lists, or sorting by zip code for bulk mailings.

Headers and footers are features that allow for page by page generation of uniform information such as our company name, date, page number, specification number or any repetitive information (chapter and section titles, etc.). Footnoting is the ability to provide space for notation at the bottom of those pages that contain the number notation in the text itself.

Columnar interchange is the ability to switch a whole column of information on a page with another column. (Now's your chance accounting!!)

Mathematics is the ability of the system to perform calculations such as: addition, subtraction, multiplication, division and combinations of these operations, including the use of constants. The system can calculate averages, percentages, and retain results in memory for use in later calculations. Soon our monthly billings will be coded with the appropriate calculations, thus enabling the system to calculate portions of the billing, which will save man-hours for both accounting and word processing.

**COMMUNICATION FEATURES** will enable Tudor's San Francisco center to transmit data over a telephone line with the Seattle and Boise centers, and, also, with its own data processing center. By connecting with the Bowne Information Systems we will be able to access and use any of the data bases of construction text stored on COMSPEC (like SPEC-TEXT, FAA MASTER, and NAVFAC MASTER); and direct use of all the COMSPEC special text editing and formatting features; and to the COMSPEC high speed printers and laser imaging and printing facilities.

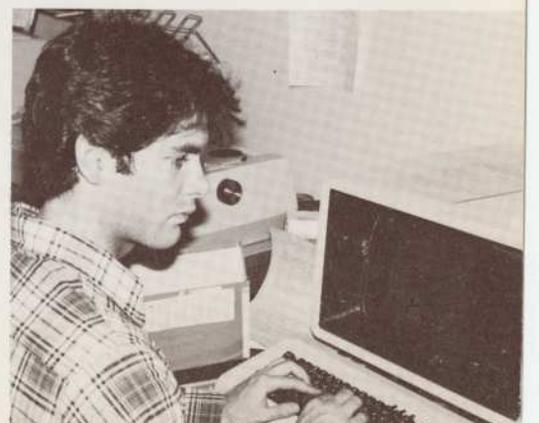
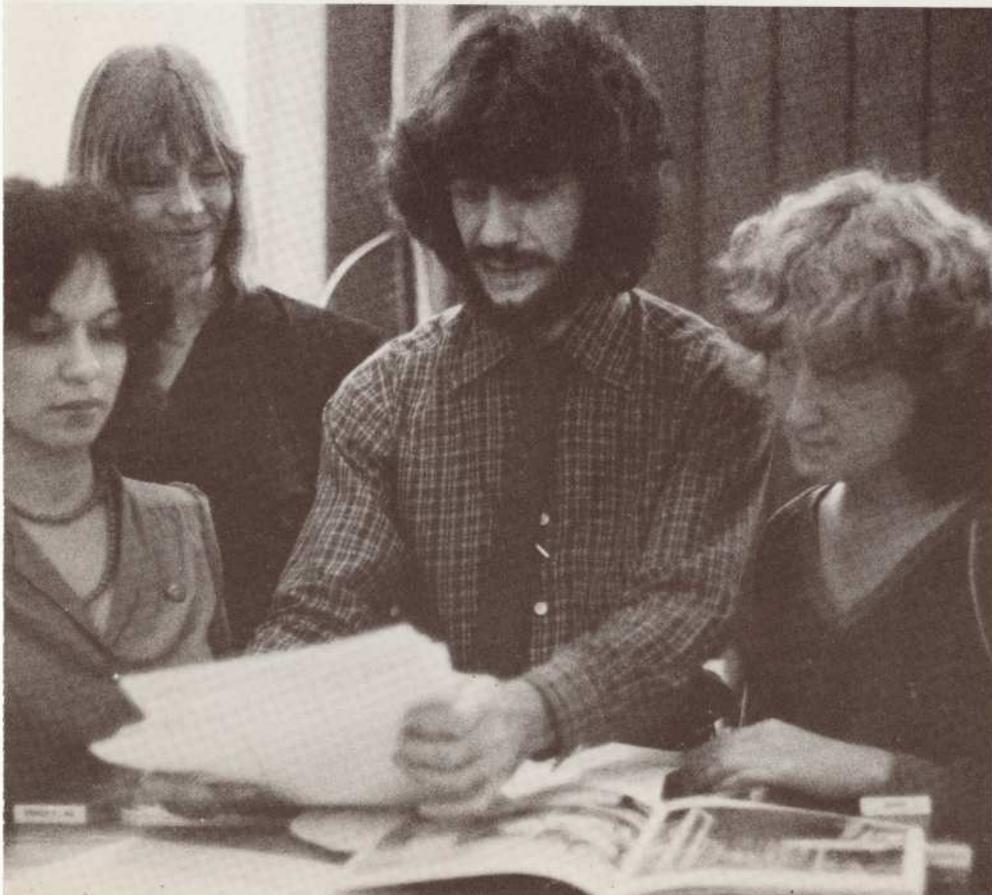
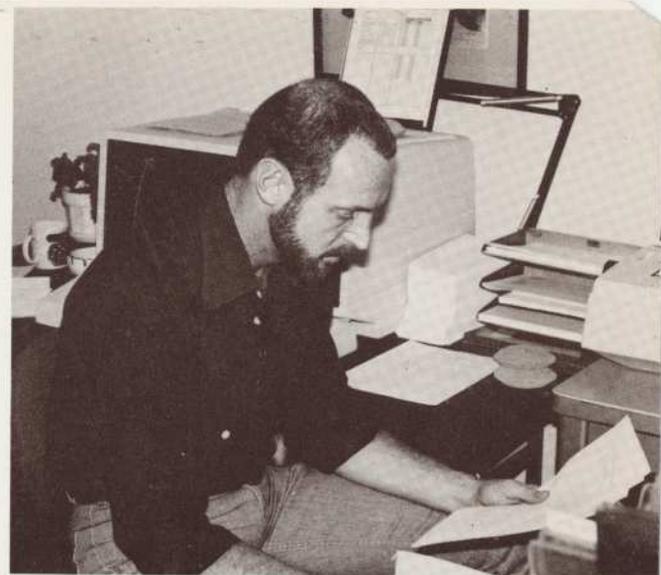
**MANAGEMENT FEATURES** focus on controlling the text editing process. They are divided in three categories--features that act on the reports, features that tell about the reports, and the report security function.

Features that act on the reports are purge, file, and back-up. Purge is simply the deletion of reports based on certain criteria. File is the keeping of reports on the system for some predetermined length of time. Back-up is the ability to store versions of the text in secure places as insurance against loss of vital information.

Features that tell about reports (and the system) are system status, inquiry, and message switching. System status includes documents in processing and on-line status of communications lines, peripherals in use. Inquiry allows someone to get specific answers from the document history (i.e., date created, description, author, typist, times revised, times printed, time to print, etc.). When installation of point-to-point communication is complete, message switching will allow operators to send messages from point to point or to all points.

Document Protect protects individual documents on a specific disk. The disk itself may or may not be password protected. There are three levels of document Protect: No Access - No user can access, print, copy or delete the document without knowing its password. Modify Protect - This allows a user to copy or print the document but only those who know the password can modify or delete it. Delete Protect - This level doesn't require a password. It allows you to protect documents from accidental deletion.

**AND LAST BUT NOT LEAST**, staffing Tudor's word processing specialists was one of the most important jobs in this entire procedure. The word processing operator must enjoy working with machines. It is not only a job that requires special training, it also takes some management and administrative talent. Verbal ability is necessary to be aware of grammar and spelling rules to properly transcribe data, proofread material, and to understand oral and written instructions. The key to the center's success is team spirit achieved through compatible personalities and thick-skins, thus creating an atmosphere amicable (and productive) to all.



## WARM SPRINGS HYDRO STUDY

Tudor Engineering Company has been retained by the San Francisco District, Corps of Engineers to conduct a feasibility study to determine the best of four proposed alternatives for hydroelectric development at Warm Springs Dam in Sonoma County, California. The firm is quite familiar with the project because of our prior involvement in the design of two of the main features: the spillway and the bridge over the reservoir that connects relocated roadways into Sonoma County's road network.

Because the project is under construction, the Corps of Engineers would like to have the study completed within a period of 75 days, in the event modifications to the project features are needed. Roberto Iniguez will be Project Manager. Other members of the San Francisco office staff that will participate on the study are Derek Bolton, Gary Durham, Don Guild, Tom McLennan, Chuck Spinks, and Lemma Wendim-Agegnehu.

## AERIAL TRAM INSPECTION '79



Starting on Monday, October 15, Stan Froid and Rainer Rungaldier conducted the traditional annual inspection of the Palm Springs Aerial Tramway. Wednesday afternoon they were joined by Steve and Gale Alters, flying in from Lewiston as their own pilot and navigator, respectively. On Thursday, at the break of dawn, Steve and Rainer set out on the dread, once-in-3-years inspection of the Mountain Station power line. Once again, they accomplished the 6000-foot descent without mishap, except for the usual loss of a patch of skin here and there, and a set of very sore muscles each. They also encountered the by now obligatory rattlesnake, and this time it was Steve who almost stepped on it. Conclusion: The tram is well, the powerline is well, and the inspectors are recovering.

## RIVERTON UPDATE

The town of Meeteetse is a small rural town in northwestern Wyoming, 100 miles from the Riverton office. The Town Council retained Tudor to prepare a Preliminary Engineering Report for a new water treatment system. We have assisted the Town in obtaining the following grants: \$100,000 from the State, \$10,000 from Continental Oil Company, \$23,000 from FmHA and an application before the HUD small cities program for \$295,000. As soon as the HUD grant is finalized, design will begin. Because of our performance on the water system, the Council hired Tudor without competition to perform their wastewater planning.

Work is continuing on the corrections to the wastewater system in Thayne, Wyoming. This fall construction of the rehabilitation items, such as pond relining, electrical repairs, and pump modifications, was begun. A decision in early December will determine which of the two systems designed by Tudor will be constructed.

## BOISE UPDATE

The Boise crew has begun buttoning-up projects for the coming winter. Les Ankenman, Paul Kunz, and Brian Grant have been blithely humming Christmas carols while sending Adrian Moody, Dick Waller and the rest of the surveyors out into the cold.

Paving operations in the numerous subdivisions have nearly come to a halt. This will insure a good crop of mud in the spring, and will give the guys a chance to use our new 4WD Suburban then.

The Highlands Mall shopping center will hibernate for a few months - most of the flood control structures are now complete. Paul and Brian will now need another excuse to spend their afternoons away from the office.

Neal Eagar is spending his days on the telephone receiving sewer hook-up information from homeowners in a newly annexed area of the West Boise Sewer District.

Bob Mayers and Tim Burgess are gathering data for water system improvements in Melba, Idaho. (A successful bond election in November has given Tudor the go-ahead).

Randy Witt has returned to the ranks of the full-time drafters. The last bass fishing tournament was several weeks ago. He will, however, begin making plans for the 1980 season anytime.

Everyone in the Boise office has plenty to occupy themselves. They are all thankful that President Carter has permitted the thermostat to remain no lower than 65°F., and look forward to a prosperous new year.

## TUDOR RESCUE ONE

"Passers-by who witnessed the accident heaved the truck upright and revived the driver..." so reported the Idaho Statesman Friday, November 2.

The paper failed to acknowledge the efforts of the highly trained mobile crew of Tudor Rescue One, comprised of David "Hoss" Maffey, Garry Ames, and Jerry Blaisdell. The three, while not engaged in their daily occupation of surveying, often assist damsels in distress, and perform other life-saving duties.

The rescue of the 18 year-old driver, Karen Brower, was complicated by the fact that she was pinned by her pickup truck face-down in the icy waters of Mores Creek.

Two questions remain yet unanswered by other accounts: Are trusses a bona-fide medical expense under the terms of Tudor's group policy? To what job number should the time be charged? Jerry, David and Gary deserve a big pat on the back for unhesitatingly jumping in (literally) without concern for these vital questions.

## NEW FACES FOR . . .

### . . . san francisco



...George Schneider moved to San Francisco from Atlanta (where he did not work for PB/T) in November. George received his degree from Georgia Tech and worked the last two years in Alabama as a civil engineer. With Tudor, George will be working with Dave Willer on small hydro projects. He enjoys backpacking, camping and travels of all kinds, playing the sax and flute, listening to KFAT, being in San Francisco, photography and sailing.



...Pnina Eitan is a graduate of "Technion" Haifa Israel as a structural designer. For the past ten years she designed and planned sewage and drainage for a civil engineering consulting company in Israel. She recently came to the United States following her physician husband. In her spare time she enjoys travelling and hiking with her twin daughters.



...Mark Nothafft joined Tudor in November and is currently working on the San Francisco Bayside Project. Mark is originally from Bolivia but he received his engineering degree from Arizona State University. Prior to joining Tudor, Mark worked on subdivision design in Phoenix for one year. In his spare time he enjoys tennis, chess and ping pong. He has been a tennis instructor for the last eight years.



...Barbara Inaba joined Tudor's Hydro Development group in November. She is a civil engineering graduate from the University of Washington in Seattle. Prior to joining Tudor Barbara worked for Sverdrup & Parcel and Associates in San Francisco. Born and raised in Hilo, Hawaii, Barbara enjoys many outdoor sports. She is pleased with the Bay Area rhythm of life as compared to Hawaii.



...Eldon Floodeen joined Tudor in December. He is a civil engineering graduate of the University of Washington and has been a resident of California in the Bay Area for 23 years. With Tudor, Eldon will be assisting on the small hydroelectric projects. Eldon's interests include outdoors, camping, skiing, photography, and reading.

### . . . riverton



...Debbie Fife joined our staff on October 22, 1979, as a clerk. Debbie has had various experience in secretarial and bookkeeping jobs working for different businesses in Riverton. A native of Riverton, Debbie enjoys skiing and horseback riding. Her husband drives a truck and they have a little girl who is three years old.



...Barbara Root is a native of Wyoming, and joined the Tudor Staff in September, 1979. Barbara worked as a Real Estate Secretary and Office Manager for seven years prior to coming to Tudor. Hobbies include FFA projects and keeping in stride with two high school boys. That really does take care of the spare time!

...Dick Shelton, a surveyor joined us in June. Dick is a native of Boise, Idaho, he and his wife Millicent and 3 boys ages seven, five and three are now living in Riverton. Dick is a registered Land Surveyor in the States of California, Nevada, and Idaho. He loves Wyoming's hunting and camping.



...Lynn Savory is a graduate of Alfred State College in Western New York with an A.A.S. in Surveying Technology. He came to Tudor via Mountain State Surveying in West Virginia and Commonwealth Associates of Jackson, Michigan. His wife Laure recently presented him with their son Zachary.



...W.E. Williams, Jr. (Bill) joined Tudor on October 8 at the Riverton office as a surveyor. A 1974 graduate of Whapton State School of Science in agricultural drafting. He has close to four years of experience in Field Surveying. His experience includes 300 mile and 450 mile high voltage transmission line surveys in Nebraska and Minnesota. Bill is looking forward to good hunting and fishing in the Wyoming mountains.



...Bob Orsatti graduated from Rensselaer Polytechnic Institute with a B.S. in Environmental Engineering in May of 1979. Originally from Philadelphia, Bob joined Tudor's Riverton office in July to be close to the mountains, where he spends some free time backpacking and fly-fishing. Fine wine, women and song fill the rest of the voids in his busy schedule.



...Bob Perry joined our staff in October. A native of Wyoming, Bob has lived in Montana for the last seven years where he worked for Missoula County and later owned his own business. He is back in Wyoming to finish work on a degree in Architectural Engineering. He is married and has four children, two girls and twin boys.



...Marilyn Vigil has been a resident of Riverton for 17 years. She studied drafting in Glasgow, Montana, then came to start her career in drafting for Tudor in July. In her spare time she enjoys drawing and writing poems. She plans to travel.



...Ron Hopkins joined us in April as a drafter. Ron keeps busy in his spare time by teaching our new folk about the Indian way of life.



...Liz Metzke worked with Tudor last summer and left for a short time to go back to school to study Engineering Technology. Liz is currently a drafter at Tudor and works in Thayne as an inspector on the Thayne project.



...Bradley Nelson comes to Tudor from Denver, Colorado where he was a design engineer for Special Products Co. He is a graduate from the University of Wyoming with a B.S. in Agricultural Engineering. When he is not causing trouble in the office he is out rodeoing or hunting.

## NEW FACES FOR continued . . .

### . . . seattle



...Milton Odo joined Tudor on October 1 as a Civil Engineer. Prior to joining Tudor, he worked for URS Company in Seattle. From 1968 to 1977, he was with Metcalf and Eddy Pacific in Honolulu, working primarily on the H-1 Freeway project. He received his B.S. in Mechanical Engineering from Oregon State University. Milton is married and has two children.



...Chuck Jensen joined Tudor on October 23 as a drafter. In the near future, Chuck hopes to finish his B.S.M.E. and become a designer. His hobbies include music, hunting, mathematics, weight lifting and hopefully, sailing.



...Tim Marks joined Tudor as a Civil Engineer on September 4. He is a 1973 graduate from the University of Washington. His design experience in bridges makes him a valuable asset on the West Seattle Bridge Project. Tim is married and has two children. Primary interests include skiing and backpacking.



...Kris Lindstrom joined Tudor on September 27 as a Secretary/Receptionist. Kris received her degree from Washington State University in Broadcasting. In the near future, she would like to get involved in the broadcasting business. Special interests are refinishing antiques furniture, skiing and backpacking. Kris recently became engaged to Walt Fox, who is a resident of Portland, Oregon and a newscaster in that area.



...Bob Lochow began Business Development work with Tudor on September 17, moving back to his home town from Washington, D.C., where he was with the American Road and Transportation Builders' Association. Bob and his wife now live in a condominium in Redmond, where there is no lawn mowing or leaf raking. His hobbies include shop models, boating, electronics and recorded music.

### . . . boise



...Tim Burgess is a member of that vanishing species, "native Boisean". He completed his undergraduate work in civil engineering, graduating in May 1979 in Moscow, Idaho. Tim joined us after a brief stint with another consultant; he became the third man of Boise's Land Development department. His wife Anita demonstrates the good taste and forbearance typical of Idaho wives - she permits him to hunt and fish during his leisure time.



...Steve Browne is an unusually reticent young man who has worked several months in our drafting room. He is from Twin Falls, Idaho. He and his wife Chris have one child, a son, and enjoy winter sports which we understand include snowmobiling and skiing.

...Nathan B. Smith comes to Tudor from a private employer at the Idaho National Engineering Laboratory. As a structural engineer he is assisting Les Ankenman in layouts for subdivisions and mobile home parks. Nate's wife, Nancy, is a mechanical engineer with a masters degree from the University of Idaho. Presumably dinner table discussions at the Smiths' concern the Second Law of Thermodynamics, the principle of the Conservation of Energy and other lofty subjects. In his spare time Nate enjoys tennis and flying.



...Mary Holmgren has the rare distinction of being the only regular reader of Scientific American in the Boise office. Unfortunately, she has few opportunities to display her erudition while answering the switchboard. Another of her subscriptions is to Gourmet. Her two sons and four grandchildren have just cause to celebrate Mary's recent move from West Palm Beach, Florida to Boise; not the least of which is her famous "Paradise Jelly" (call or write for the recipe).



## CONGRATULATIONS TO

...Don and Linda Armstrong on the birth of their daughter Julie on Wednesday, November 21, 1979.

...Boise's own Richard F. Orton, Jr. who successfully overcame stiff competition and won a council seat in the City of Meridian. Orton polled more votes than the winning mayoral candidate in his unopposed council race. As usual, his greatest competitors were voter apathy, electoral inertia and communal disinterest.

...Jerry Blaisdell who single-handedly caused an air pollution alert Monday, November 12. Nearly everyone in the Boise office was smoking a nasty green cigar that morning to celebrate the birth of Jerry's new son. Jerry's wife, Penny, and son, Andrew Hult, are reported doing well.

...David Torgeson, Boise office, who finally realized a lifelong personal ambition. He was recently accepted as a charter member in the Society of Native Oregon Born (S.N.O.B.).

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The TUDOR NEWSLETTER is published by Tudor Engineering Company for the information and enjoyment of its employees, their families, and friends.

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# TUDOR

NEWSLETTER

WINTER 1979

## RIGGS WINS GOLDEN BEAVER AWARD



Jack Feller, president of the Beavers, presenting the award to Louis.

As president of Tudor Engineering Company, Louis Riggs has accepted many top awards for engineering design. He recently received one of the most prestigious honors of the heavy construction industry by The Beavers, a fraternity of men who design and construct massive civil engineering projects. The award was presented to Louis at the Beavers' 24th Annual Awards Dinner on January 18 in Los Angeles attended by 1865.

The award was made for Louis' direction of design on a variety of complex projects. A list of the company's accomplishments included engineering work on multi-billion-dollar transit systems in San Francisco, Atlanta, and Caracas, Venezuela; interstate highways and bridges in the United States; Exchequer Dam in central California; ports in Guam, Hawaii, Peru, Chile, Oregon and Washington; and other projects.

According to others in the profession, perhaps his most spectacular achievement has been foundation engineering on the world's deepest bridge pier for the Ponte Salazar. With a main span of 3,324 feet, this is the longest suspension bridge in Western Europe. The record-breaking pier goes down 262 feet. The other main pier was designed with its cutting edge tailored to fit the sloping sub-surface rock.

A Fellow of American Society of Civil Engineers and winner of its A.P. Greensfelder Construction Prize in 1967, Louis received an Honor Award in 1974 from the Building Industry Conference Board in San Francisco. He is a Past President of the Consulting Engineers

Association of California, of The Engineers Club of San Francisco and of the University of California Engineering Alumni Society. In addition, he has held various executive positions of the American Consulting Engineers Council, the National Research Council's Building Research Advisory Board, and the Society of American Military Engineers. He is a member of Chi Epsilon, Tau Beta Pi, the American Public Transit Association, the American Public Works Association, and, of course, The Beavers.

Louis is a Registered Professional Engineer in several states and with the National Council of Engineering Examiners. He has spoken on engineering subjects to many important groups throughout the United States as well as in Japan. He has also published a number of technical papers.

Among his other activities, Louis is involved with many civic, educational and charitable organizations, including his service as 1970 Chairman of the United Bay Area Crusade's Architect/Engineer Division.

Other Tudorites who attended the dinner were Stan Froid, Bob Janopaul, Dave Toothman, Paul Potter, Keith Bull, Bill Davis, Oral Conyers, Dave Willer and Fred Estep. Louis' guests included Jim Lammie and Walter Douglas. Pat was there for the occasion but was excluded from the all male affair.

Our congratulations to Louis!

## CHINATOWN TRAFFIC STUDY

After months of waiting, Tudor finally received the go-ahead for conducting a traffic study of the world-famous San Francisco Chinatown core area. While there are general agreements on the severity of the traffic problems, there are few agreements on their solutions. Hence, an extensive citizen outreach program is being conducted in an effort to inform the public and to uncover some of the inscrutable traffic problems. It was recognized at the outset that this will truly be a comprehensive traffic analysis, as we are required to examine the operations of five modes of transport, both independently and as a whole. Besides, the study and all written reports must be done in both English and Chinese. Guess who's doing it? The assignment was first given to Jim Meyer, who passed it on to Gary Weinstein, who subsequently passed it on to Joe Eng, who had nobody to pass it on to so accepted it. The deal was that Jim and Gary will do the Chinese portion of the study.

# TUDOR'S CHRISTMAS FESTIVITIES

## SEATTLE CHRISTMAS PARTY

The Seattle Office Christmas party was held on December 2 at the Mercer Island Beach Club. Guests of honor were Pat and Louis Riggs.

While everyone was engaged in various conversations, they enjoyed delicious hors d'oeuvres, awaiting an outstanding prime rib dinner.

After all were full and content, Louis presented 15 year awards to Bela Vadasz and Francois Martin. Bela and Francois then spoke about their adventures while employed at Tudor.

Music followed, with tapes provided by Wallace Hilde.



## LEWISTON CHRISTMAS PARTY

The annual Christmas party was held at the Lewiston Airport Restaurant and Lounge and was attended by 31 Tudor staff and friends. Honored guests Dave and Loreen Toothman represented the Tudor Boise office, while Bob and Jo Rae Grow hailed from the Kennewick office.



## RIVERTON CHRISTMAS PARTY

The Riverton staff held its Christmas party at the El Toro in Hudson on December 9, 1978. Since they aren't as big as the other Tudor offices they all managed to sit at one table big enough to hold 20 people.

Spectacular centerpieces were available for each couple. The meals were ordered from the menu so everyone had the thrill of choosing their favorite item. Each serving was very....good.

A few couples had to leave early. Tom Axthelm and his fiance had to attend a wedding (not theirs, just observing yet). While others like the Foleys were making a night of it and attended another party besides Tudor's. The remaining few stayed through to the late hours enjoying their share of the dancing, drinking, and closing down of the place.

## KENNEWICK CHRISTMAS PARTY

The Christmas Party for the Kennewick office was held December 15, 1978. It started out at 6:30 for a little social gathering and then dinner. The party was held at the Thunderbird/Red Lion Motor Inn. Everyone from the Kennewick office was present except one couple who were unable to attend. Dave Toothman and his wife Loreen came over from Boise, Steve and Gail Alters and Jim and Doris Grow came over from Lewiston. The menu, selected by Larry Gaddis, was most enjoyable, New York strip steak and all the trimmings. After dinner the party adjourned to the lounge for dancing and much more socializing until the wee hours.

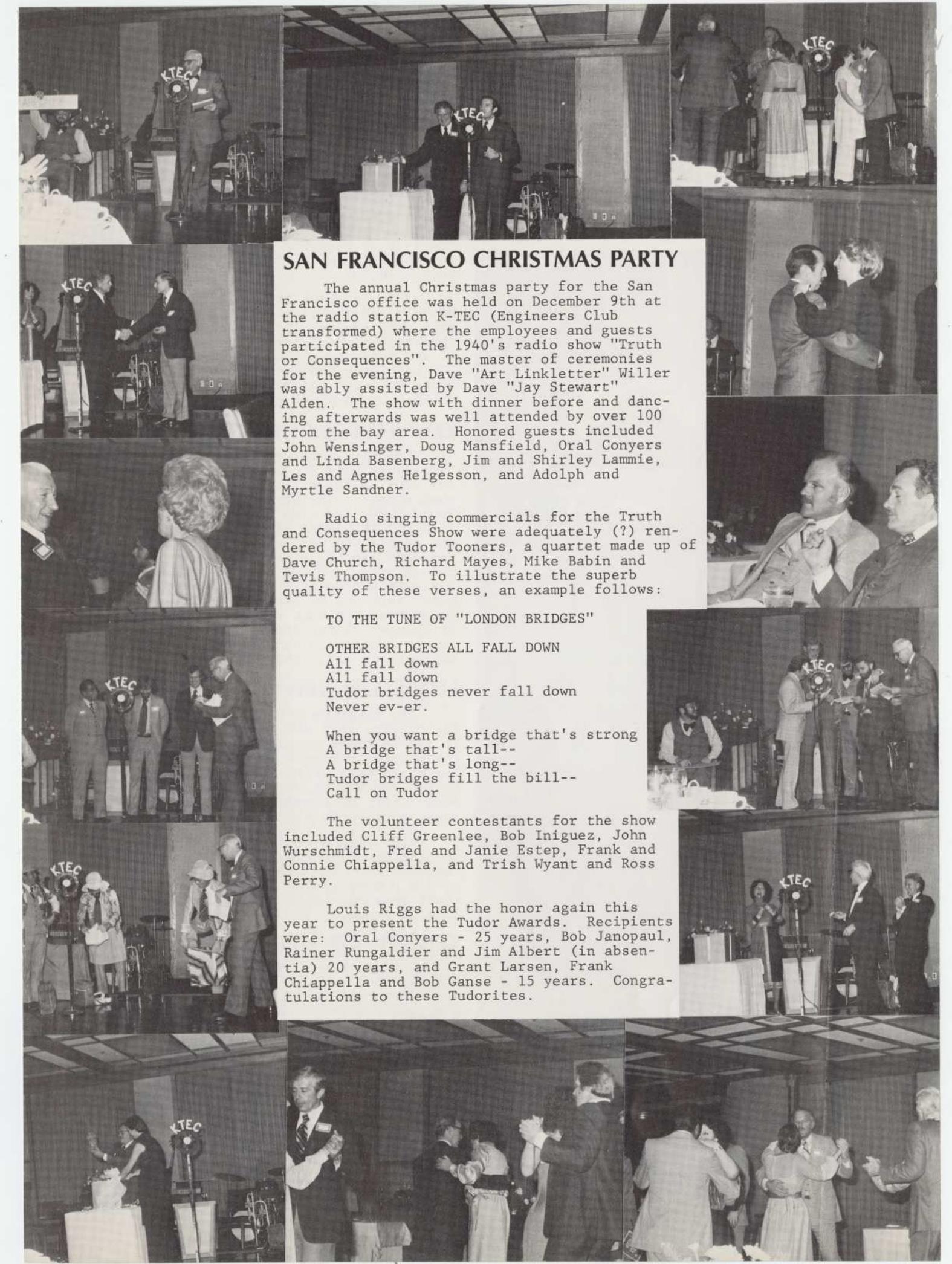
## LEWISTON NEWS

The Lewiston office has undergone an inside face lift with over 1,000 square feet in the basement now used as office space for the Central Orchards Sewer District group. The Thain Road office, consisting of Bob Beal, John Franck, Nate Matasy, Tim Green and John Perry, have moved in and are "getting acquainted" with all the new faces.

Bids were opened on project #1 of the central Orchards Sewer District project on December 14. The Contract has been awarded to S & H Contractors of Lewiston who will start construction on the 10 miles of sewer line on January 15, 1979, weather permitting.

## KENNEWICK UPDATE

During the month of November, we were blessed with a very white Thanksgiving, and, in December, a very brown Christmas. During the past few weeks the Kennewick area has been faced with below freezing weather and an even lower chill factor, but this hasn't slowed the progress on the jobs. We are currently working on the design of two large subdivisions, the Meadows East, comprised of 200 single family lots, and Country Ridge, with 203 1/2 acre lots. These projects along with several small subdivisions are keeping us jumping. All jobs are proceeding as well as possible and the only big problem is that the survey crews seem to have a little difficulty when the wind and snow start blowing - they can't seem to keep the equipment on the ground.



## SAN FRANCISCO CHRISTMAS PARTY

The annual Christmas party for the San Francisco office was held on December 9th at the radio station K-TEC (Engineers Club transformed) where the employees and guests participated in the 1940's radio show "Truth or Consequences". The master of ceremonies for the evening, Dave "Art Linkletter" Willer was ably assisted by Dave "Jay Stewart" Alden. The show with dinner before and dancing afterwards was well attended by over 100 from the bay area. Honored guests included John Wensinger, Doug Mansfield, Oral Conyers and Linda Basenberg, Jim and Shirley Lammie, Les and Agnes Helgesson, and Adolph and Myrtle Sandner.

Radio singing commercials for the Truth and Consequences Show were adequately (?) rendered by the Tudor Tooners, a quartet made up of Dave Church, Richard Mayes, Mike Babin and Tevis Thompson. To illustrate the superb quality of these verses, an example follows:

TO THE TUNE OF "LONDON BRIDGES"

OTHER BRIDGES ALL FALL DOWN  
 All fall down  
 All fall down  
 Tudor bridges never fall down  
 Never ev-er.

When you want a bridge that's strong  
 A bridge that's tall--  
 A bridge that's long--  
 Tudor bridges fill the bill--  
 Call on Tudor

The volunteer contestants for the show included Cliff Greenlee, Bob Iniguez, John Wurschmidt, Fred and Janie Estep, Frank and Connie Chiappella, and Trish Wyant and Ross Perry.

Louis Riggs had the honor again this year to present the Tudor Awards. Recipients were: Oral Conyers - 25 years, Bob Janopaul, Rainer Rungaldier and Jim Albert (in absentia) 20 years, and Grant Larsen, Frank Chiappella and Bob Ganse - 15 years. Congratulations to these Tudorites.



### BOISE CHRISTMAS PARTY

Tudor Engineering Company of Boise steadily gains in its reputation of "breaking in" new banquet facilities. Tudor staff, family and friends congregated on the evening of December 1 at the newly remodeled Crystal Ballroom, located in the old Boise Hotel, for the annual Christmas party. (The group "broke in" Morgan's Exchange last year, as the alert reader will recall).

Bob and Beth Janopaul were guests of honor at the party, along with Steve and Gail Alters, Jim and Doris Grow and Bob Toothman from Lewiston and Larry and Julie Gaddis from Kennewick. It was Bob's great pleasure to present a ten year Tudor Award to Mildred Richards. (Sadly, the moment of presentation was not caught on film. Also missing are pictures of the after-dinner entertainment - an instrumental combo called "The GERITOL FIVE MINUS TWO").



## NEW FACES FOR

### ... san francisco



...Evy Iatridis recently joined the San Francisco office as the receptionist. Evy speaks, writes and reads Greek so she should be a big help in deciphering some of the engineers' handwriting!!?



...Irene Dunnigan is the new secretary to Stan Froid and Bert LaVigne. Irene has worked with a travel agency and will be making all SFO travel arrangements in addition to her secretarial duties.



...Joe Culpepper has recently returned from PB/T Atlanta to be a construction inspector on the Rollins Power Project. He will reside near the project and near Fred and Janie Estep.

### ... seattle

...Mary Sund has rejoined the Seattle office on December 1 as a secretary. After leaving Tudor three years ago, Mary was employed as a secretary for a lumber company in Seattle until she decided it was time for a change of scenery and moved to San Jose, California. However, after 1½ years in San Jose, Mary decided that Seattle was home.



...Jim Ozanne has joined the Seattle office as a transportation engineer. Jim was previously employed by Deleuw Cather in Atlanta working on the MARTA Avondale yard and the Civic Center Station. Jim and his wife, Connie, are both avid game players and like music and dancing.



### ... kennewick



...Sheri Weaver recently came to work as secretary, replacing Andrea Axtell who moved to Arizona. Sheri previously worked as a secretary for Heston & Howell Reporting Service.



...Steve Daniel is a recent addition to the survey crew. He has previously worked on Lewiston survey crews for Jim Grow and Associates.



...Tim Green is doubling as surveyor and draftsman. Presently he is drafting on the Central Orchard Sewer District project.

## RIGGS ELECTED TO NATIONAL POST

The member organizations of the American Consulting Engineers Council have recently elected Louis Riggs as one of three Vice Presidents to serve on the ACEC Board of Trustees. Louis will serve a two-year term and will officially take over his duties in May. This added responsibility should make his already hectic travel schedule even more harried, but Louis looks forward to a challenging and rewarding term of office.

Elected to serve concurrently with Louis as vice presidents are Clifford E. Evanson, TAB Engineers, Inc., Northbrook, Illinois, and William A. Herrmann, Zurheide-Herrmann, St. Louis, Missouri.

## CONGRATULATIONS

...Doug and Ann Mansfield on the birth of their son, Brandon Wesley Mansfield. Brandon was born on November 30, 1978.

...Steve and Natalie Wong on the birth of their daughter and first child, Tammy Natalie Wong. Tammy was born on December 13, 1978.

...Rick and Jane Orton on the birth of their daughter, Sara Serine Orton. Sara was born on December 28, 1978.

...Bob and Cecelia Mayers on the birth of their son, Danial Isaac Mayers. Danial was born on December 18, 1978.



...Gail Hayashi who became Mrs. Nelson Rodriguez on November 25, 1978. Gail and Nelson were married in San Francisco at the Swedborgian Church. Elaine Lee, also of the accounting office, was her maid-of-honor. The wedding was followed by an 11-course Chinese dinner at the North China Inn in the City. Gail and Nelson spent their honeymoon in Las Vegas and are presently living in Fremont.

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