7  What’s so important about safety? It can be a matter of life and death and the Safety department is building an excellent track record of safe work practices.

11  Optimism about the prospects of Africa has reached new heights as Western Crew 773 is involved in a successful exploration venture in Somalia.

14  Paired for success, Atlas Wireline Services and McCullough restructure to achieve a good working relationship.

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Front Cover: Western Geophysical Crew 786 completes a survey off the east coast of New Zealand. (See story on page 22)

Many of you will remember Bill Matthews, a good friend now retired, who crossed paths with many Westerners over the span of his long career. Those of you who were fortunate enough to know him will remember that he was always great at providing some unusual but often thought-provoking pieces of information. Bill has come across a real nugget this time and was kind enough to send me a copy of a poem which follows.

The poem was written by Mrs. Dolores Humphrey, widow of world-renowned explorationist Bill Humphrey, in celebration of receiving her U.S. citizenship last May. Her heartfelt thoughts so impressed me that I wanted to share them with a larger audience so I requested her permission to print them in this issue of the PROFILE. She told me that she wrote her poem "con el corazón en la mano"—"with my heart in my hand".

New Citizen

Listen: do not fault this country—
Oh no, not to me!
For I have lived in other lands
Far across the sea.

And there is none that I have known—
None—that can compare—
Not one where total freedom lends
Fragrance to the air.

Nor have I known another place
Where some humble cause,
Unglamorous—but just—can be
Strengthened by the laws.

Where people's cries do not always
Meet a shuttered ear—
Where a secret weapon—hope—can
Outmaneuver fear.

It wages wars that yield no gain
Nor even glory—
So swift to help...and then denounced!
The same old story.

To those who claim this country has
Nothing good to give,
I state this fact: this is where the
Whole world wants to live.

Listen: do not fault this country
With a word or line—
I've loved it through a lifetime and
Now—THIS LAND IS MINE!

She has expressed her feelings so poignantly that it humbles most of us who take our magnificent country for granted. America the Beautiful is still the greatest place to live on this globe.

Mrs. Humphrey, the New Citizen, deserves our grateful appreciation for awakening us as to what a privilege it is to be an American. How lucky we are!!
Western integrates high-speed data communications link

In April, Western Geophysical became the first company in Texas and the surrounding six-state area to implement a new type of high-speed data communications link.

The link is used to couple tape drives, terminals, and printers located in the Western Atlas Center Office Building to the IBM mainframe computers in Western Geophysical's headquarters facility. Now located over a mile apart, equipment in the two locations has in the past been limited to a 200- to 400-foot maximum distance.

The link is composed of equipment and services provided by Southwestern Bell (SWB) and Datasync Corporation. The Technical Support department supervised and coordinated activities between SWB, Datasync, IBM, and a number of Western departments for the project.

Southwestern Bell installed fiber-optic cables between the two locations as well as specialized electronic equipment to operate and service the communications lines. Western contracted SWB for two "T3" lines which operate at a speed over 45 million bits of data per second each.

State-of-the-art channel extender equipment available from Datasync Corporation provides the interface between the "T3" communication lines and the IBM mainframe computers. This is the first device that Western has discovered which will transparently connect IBM computers to high-speed peripherals over public access communications facilities.

Equipment in the computer room at Western Geophysical implements a high-speed link up never before realized between facilities.

The capability represents a significant breakthrough providing support for the Western Atlas corporate financial systems. It is very important for Benefits, Payroll, Insurance, and other financial departments to have "local" access to the computer. Timely issuance of insurance claims checks, payroll checks, and invoices are only a few benefits realized from this system. In the past, another complete computer system would have been required to provide similar on-site services. Initial set up, and monthly operating costs would have been enormous.

The success of this project has resulted in a similar service being implemented between the Western Research facility and the Western Geophysical computer facility. This system is using fiber optics owned and installed by Western and will be instrumental in a consolidation of Western Research Computer systems. Further applications of these capabilities are being studied.
Research geophysicists added to Western Geophysical staff

Western Geophysical has announced the addition of Scott MacKay and Alfonso Gonzalez as senior research geophysicists in the Houston headquarters office.

Scott, formerly an explorationist, will be primarily responsible for defining velocity fields and for seismic imaging in complex areas. Originally from Boston, Scott earned a B.S. degree in geology and chemistry from Bridgewater State College in Massachusetts and an M.S. degree in geophysics from Colorado School of Mines. He is presently enrolled in a Ph.D program at the University of Houston.

Alfonso, who has worked in geophysical research and development for over five years, will be responsible for research in seismic imaging and velocity estimation. He holds a B.S. degree in oceanography from the University of Baja, California and received his Master and Ph.D degrees from Stanford University, where he worked with the Stanford Exploration Project. A member of SEG and EAGE, Alfonso originally is from Mexico City.

Western Atlas divisions represented at AAPG convention in March

Five Western Atlas divisions participated in the 73rd Annual American Association of Petroleum Geologists (AAPG) convention held in Houston in March. These included Western Geophysical, Core Laboratories, Atlas Wireline Services, Downhole Seismic Services, and J.S. Nolen Associates. The focal point of all participating divisions was integrated Western Atlas services.

Western Geophysical demonstrated the new multi-workstation capabilities of the CRYSTAL® system. Also on display was Western’s spec data from the offshore areas of the Gulf of Mexico.
Mexico, Chukchi Sea, and Eastern Beaufort Sea, and the onshore areas of Michigan, South Texas Wilcox, and upper mid-Gulf Coast.

Western Research featured integrated exploration and production, showing improved methods for describing reservoir properties using the integration of core and logging information with seismic data.

The Well Data System™ (WDS), a portable log analysis software system that can be supported on an IBM PC-AT™ or compatible, VAX™ or MicroVAX, or Concurrent 3200 series minicomputer, was shown by Atlas Wireline Services. Two new interpretation packages were also featured: Strata Logik® and DIPVUE™. New logging instruments featured were Dielectric and Thin Bed Resistivity (TBRt).

Core Laboratories featured their newest service, Mineralog™ analysis, which identifies minerals within core samples by use of infrared spectroscopy. Also displayed were Petrographic Image Analysis (PIA), the electromagnetic goniometer (EMG-200), sidewall core analysis, a computerized workstation which integrates core and log analysis data, and formation damage studies. Core Laboratories is the only company in the world to perform formation damage studies in the laboratory under actual reservoir conditions.

Downhole Seismic Services focused on providing the interface between geophysical and wireline data. Borehole seisms create vertical traces that can be correlated with conventional seismic data. Featured were the LRS-1300, an acquisition tool which has a flat amplitude and phase response throughout, and Tomex™ technology that uses the drill bit as a downhole seismic source and can create a zero-offset survey in real time while drilling.

J.S. Nolen and Associates emphasized the interface between surface modeling and the reservoir simulation workstation. The interface between the Dynamic Graphics ISM package and Executive Assistant™ Nolen’s reservoir simulation workstation package, is accomplished through a series of simple keystrokes.

SPE names Marc H. de Buyl distinguished lecturer

Marc H. de Buyl of Western Geophysical has been selected as a 1988-89 Society of Petroleum Engineers (SPE) Distinguished Lecturer. He, along with 20 other prominent energy professionals, will begin traveling in September, presenting to the SPE’s local chapters new ideas and important developments on key issues and technology. De Buyl’s talk, “Optimal Field Development with Seismic Reflection Data,” discusses the seismic contribution to field development and production.

De Buyl joined Western Geophysical in London in 1979 where he was appointed manager of exploration services. Currently, as manager of production geophysics, he directs research activities on geostatistical techniques focused on improving reservoir characterization with seismic data. He holds an M.S. degree in geology from the University of Brussels and studied geophysics at the Colorado School of Mines prior to joining Western. A member of SPE, SEG, EAEG, AAPG, and a fellow of the London Geological Society, he has written several technical papers for SPE publications.
DSS offers training in VSP technology

Downhole Seismic Services' development of the borehole seismic market took a logical step forward with a recent expansion in training services. DSS, the leading provider of proprietary technology for 3-component VSPs, walk-away, large offset and salt-proximity surveys, and frac monitoring, is now offering courses emphasizing acquisition, processing, and interpretation of borehole seismic data.

The first training session began in May of this year when two representatives of Ina-Naftaplin traveled from Yugoslavia to Houston for a course in VSP technology and equipment.

According to General Manager Bob Hardage, the need for training in this area is universal and DSS is prepared to offer courses designed to meet client needs. Course length, structure, and fee will be determined on an individual basis.

Instructors for DSS' new classes include Bob Hardage; Director of Research, Development, and Engineering, Peter Aronstam; and Manager of Data Processing, Interpretation, and Marketing Services, Akkas Manzur, among others. Field training, if required, is handled from the Alvin, Texas, and Harvey, Louisiana, offices, and is supervised by operations managers James Jackson (onshore) and Paul Henson (offshore).

For more information on DSS courses, contact Bob Hardage at (713) 952-1133.

Core Laboratories purchases Pennsylvania core analysis company

Core Laboratories recently acquired Consultant Petroleum Engineers (CPE) and retained CPE President John D. DePetro as consultant. Consultant Petroleum Engineers, a core analysis company based out of Bradford, Pennsylvania, has capitalized on the oil industry in the Appalachian area since 1945, often working in Texas, Kentucky, Oklahoma, and Canada as well.

According to DePetro, final transactions were completed June 1 and Core moved CPE equipment to its Nutterfort, West Virginia, office, near Clarksburg. DePetro, who will continue consulting in an independent capacity as well as for Core, is a native of Pennsylvania who received his Engineering degree from the University of Pittsburgh.

Greg Cruise awarded 1988 Litton scholarship

Gregory M. Cruise, son of Ted J. Cruise of Western Geophysical, has been named a winner of the 1988 Litton National Merit Scholarship. Greg plans to pursue a chemical engineering degree. He has been working as a lab assistant at his school's science department. Outside of school, he has been involved in scouting for many years, achieving Eagle Scout rank, and participating in many community volunteer projects.

Nine students, all children of Litton
employees, were named winners this year and bring to 64 the number of scholarships Litton has awarded since the program’s inception in 1983. The four-year scholarships awarded this year range from $1,000 to $2,500 per year.

The National Merit Scholarship Corporation selected the scholarship recipients based on test scores, academic records, personal leadership, and significant extracurricular accomplishments. It also determined the scholarship amounts based on the winners’ financial needs and the cost of the selected university.

Atlas Wireline Services holds third national NDE seminar

Atlas Wireline Services conducted its Third National Seminar on Non-Destructive Evaluation of Ferromagnetic Materials March 23–24, 1988, at the Adam’s Mark Hotel in Houston, Texas. Over 50 representatives of the oil and gas industry and academia from around the world attended the sessions. The seminar provided a forum for scientists and engineers working in this area to establish new and important links between logging instrument designers and those who are looking for better, more reliable evaluation methods.

Dr. Walter Fertl, executive vice president of Atlas Wireline Services, provided the audience with an overview of the two-day program. Areas of focus included basic interaction between the electromagnetic and acoustic fields and ferromagnetic materials, downhole measurements of various geometrical casing parameters, physical methods to detect corrosion of ferromagnetic materials, and associated data acquisition and interpretation.

Dr. Sam Marinov, section manager, casing evaluation R & D for Atlas Wireline, was seminar coordinator. He spoke on new developments of casing inspection services and automated electromagnetic parameter measuring systems currently being investigated by Atlas.

The first and second of these seminars were held in 1984 and 1986. Their success and the numerous requests from both researchers and users prompted Atlas Wireline Services to continue sponsoring seminars on a biannual basis.

Atlas Wireline Executive Vice President Dr. Walter Fertl initiates the third NDE seminar held in Houston in March.
In 1969, Astronaut Neil Armstrong placed his footsteps on the moon and returned safely back to earth. Several years later, however, Armstrong lost a finger when his wedding ring got caught in the door of his truck as he jumped off.

Accidents can occur at any time, often when least expected. Keeping safety uppermost in the minds of Western Geophysical employees is an important task assigned to the Safety department. "Employees are the greatest resource we have," says Safety Director Wayne Prince. "We want to help create a safe work environment for everyone." Wayne joined Western in 1974 as the security director in charge of facility safety, guard services, first aid, and fire prevention. He took on the added responsibilities of the Safety department in 1983.

The Safety department conducts Western’s safety program for land and marine operations worldwide. In addition, the department provides support for Core Laboratories, DSS, Aero Service, LRS, and J.S. Nolen safety programs as required. The department’s involvement typically begins with a safety audit at the worksite to spot potential safety hazards. Classes are then conducted to train personnel in various aspects of safety such as fire-fighting, defensive driving, first aid, etc., depending upon the specific needs of the work party.

In addition to on-site training, the Safety department has developed an extensive series of videotapes and handbooks to allow employees to learn safety procedures at their own pace. Educational materials are available in English, Spanish, French, and Portuguese.

The Safety department also ensures compliance with government regulations that impinge on worker safety. “In the last four years, there have been at least eight new compliance programs that affect Western’s U.S. operations,” says Wayne.

Director Wayne Prince and Secretary Judy Smith go over some safety reports and inspection forms prior to Wayne’s leaving for South America.

In order to comply with recent changes in state and federal motor carrier safety acts, the Safety department now requires all company drivers to take physical examinations every two years and pass written and road tests. For conforming with hazard “Right-to-Know” laws, the Safety department conducts classes to help employees work safely near oilfield sites where poisonous hydrogen sulfide gas presents a danger. Lifeboats and survival equipment on Western's marine vessels are checked routinely to comply with provisions of the “Safety of Life at Sea” act.

Dick Bye is the safety supervisor for marine operations. Dick joined Western in 1981 after a 20-year career in the U.S. Coast Guard. “Marine conditions are often hazardous and the crews are trying to get the job done under severe conditions,” says Dick. “Perhaps we can not totally eliminate accidents. But we try to limit the injuries to everyday cuts and bruises.”

Dick spends a great deal of time inspecting the vessels to make sure the safety and fire-fighting gear meets USCG and other regulatory standards. He also conducts marine fire-fighting and CPR classes.

Dick receives substantial support from Gerry Reynolds, facilities manager of Western’s London office, for monitoring vessels operating in the North Sea and the Mediterranean. Keith Bailey, stationed in Calgary, provides assistance in supporting marine crews working in Canadian waters.
Safety programs for Western's land crews are coordinated by several safety supervisors. Butch Allen assists crews operating in South Texas, southeast U.S., and along the eastern seaboard. Gene Stramel is the safety supervisor for the Rocky Mountain and the West Coast regions. Mike Roberts, an administrator in the Anchorage office, assists Gene in meeting the needs of the Alaska land parties.

Safety Officer Jeff Howell has been assigned to a crew in Nigeria for the last three years and will soon be starting up the safety program for a new party in Gabon. Larry Cozart joined Western in December, 1987. He graduated from Texas A&M in 1977 with a degree in industrial engineering. Most recently, Larry has worked as a "floater" with parties in Venezuela, Colombia, Egypt, and helps out wherever needed. Larry is also responsible for drill safety for all the crews and management of hazardous materials.

The department has recently hired several new graduate safety engineers to discharge the increasing workload. John Wells, who joined Western in June after graduating from Murray State College in Kentucky, has been assigned to a crew in Venezuela. Other recruits are Michael Bertness, an Indiana University graduate, and Orlando Herrera, a safety engineer working with a Colombian crew.

Butch Allen began with Western in 1979 and for two years worked as a juggie, troubleshooter, truck driver, and permit agent. Butch has seen a tremendous improvement in worker safety in recent years. "We've been keeping statistical records that show that the Eastern U.S. Land division crews are reporting 30% to 50% fewer lost days and fewer auto accidents." Reducing field accidents is important because many of the oil company clients now require a crew to be in the top 5% in terms of safety in order to qualify for bidding on a contract.

The Safety department uses a popular incentive program to help promote safety among the work crews. Crew members qualify for a choice of individual prizes, such as a cap and shirt, back pack, cigarette lighter, duffel bag, etc., for having worked without a lost-time injury for one year. Five-year safety awards offer a choice of coveralls, windbreaker, flight bag, or garment bag.

If the entire crew goes six months without an accident, they are treated to a dinner. "The crewmembers look forward to the safety dinners," says Wayne. "They all watch out for each other and do their utmost to avoid a careless accident that might deprive them of a sumptuous dinner."

Coordinating the awards program is the responsibility of department Secretary Judy Smith. Judy has been with the Safety department since her first day at Western more than 10 years ago. "Judy is often here in the office alone since most of us spend a great deal of time in the field," says Wayne. "She literally runs the place." Judy also checks driving records of employees using company vehicles and
Crew 347, working out of Bogota, Colombia, conducts a safety meeting at the base camp.

Party 346 Safety Officer Orlando Herrera (left) and Safety Engineer John Wells proudly display a new fire extinguisher cabinet designed by John.

keeps field crews supplied with first-aid kits, educational materials, and safety equipment such as fire extinguishers.

The distinction of having the best safety record currently belongs to Party 390 in Nigeria. Despite working in dense jungles and swamps, the crew of 400 recently completed 970,000 man-hours without a lost-time injury. Besides achieving a safety record, Party 390 has evolved several innovative safety procedures, under the guidance of Jeff Howell, that are now being emulated by other companies (see box).

While accident prevention is an important aspect of the Safety department’s responsibilities, safety supervisors are equally concerned about providing emergency medical care when an accident does occur.

Five years ago, Western set up a First Responder training program for both marine and land parties. “We use instructors who train fire department’s paramedics to teach our employees to take vital signs and communicate with doctors in emergency rooms,” says Wayne. “We average about one emergency call a month. I know of two lives that have been saved as a direct result of First Responder training.”

Such emergency care training has enabled Western employees to provide vital community service by participating in rescue efforts. In 1982, the Western Inlet crew was able to transport a critically ill Japanese seaman to the shore despite rough seas near St. Paul Island, offshore Alaska. In January 1983, the Western Shore rescued crewmen off a sinking vessel in the Gulf of Mexico when the seas were rough and visibility was limited to half-a-mile.

Western Geophysical takes an active interest in efforts to promote safety throughout the industry. Wayne has been the chairman of the IAGC (International Association of Geophysical Contractors) Safety Committee for the last two years.

Western also serves as a working partner with government regulatory agencies in implementing safety guidelines. For instance, Keith Bailey has helped write rules for the Canadian counterpart of OSHA (Occupational Safety and Health Administration) applicable to seismic operations.

Wayne was part of a seismic industry delegation that worked with California state officials to develop blasting certification regulations that ensure worker safety without hampering seismic operations.

Safety through Innovation

Diversity of Western’s operations around the world often requires safety supervisors to develop special procedures to adapt to local conditions. The most recent example is a sling, devised by Jeff Howell, to ease the burden on Nigerian workers who have to carry heavy equipment in the jungle.

“Nigerians are used to carrying loads on their head,” commented Jeff as he described the unusual safety hazard. “They would take off their hard hat, make a pile of leaves on top, and hoist up a drill pump, weighing as much as 100 lbs. It’s hard enough to do on a flat surface, so you can imagine the slips and falls they suffered while walking through the jungle.”

Jeff designed a rope sling that could hold a heavy piece of equipment. A long pole is inserted through the sling to allow two men to share the load. The Nigerian workers liked the sling so well that the client company has asked all seismic crews in the area to adopt the new technique. Any resistance is rebuffed with the comment, “Well, Western’s doing it.”
Safety Check

How well do you know your safety facts? See if you can answer the following questions.

1. What is the leading cause of puncture wounds on a seismic crew?
2. What is the origin of the word Mayday?
3. What happens when the vestibular apparatus of your inner ear is overstimulated?
4. When is a crewmember most likely to have an accident?
5. At what wind speed does a tropical storm become a hurricane?
6. How many gallons of gasoline does it take to create the explosive force of 415 lbs of dynamite?
7. How far from safety are 90 percent of drowning victims?
8. What is the average medical expense for treating a sprained ankle?

Answers:

1. Scramwhetter
2. French word meaning "help me"
3. You feel sick.
4. Just before or after a break.
5. 74 mph
6. 3.5 gallons
7. 10 winds
8. $200

A crewmember from Party 703 executes proper flagman techniques after completing Western Geophysical's flagman's safety course.
CREW 773
works the deserts of Somalia

Photographer, Greg Trest

As light breaks over camp, another day begins for Western's operations in Somalia. The typical day begins with a check-in call via radio from Western's base headquarters in Mogadishu to Party 773 operating between the towns of Garowe and Laasaanood. The crew checks in twice daily, at 7 a.m. and 6 p.m., reporting crew production, operation status, safety updates, and any maintenance problems.

Western's office in Mogadishu houses the management and support staff for crew operations in Somalia. Maurice Flynn is the resident manager, Bill Browne is operations supervisor, and Bob Mitchell is the crew administrator. Yacoob Abdulkader is the staff expert on moving personnel through customs, obtaining necessary visas, and assisting crewmembers with travel arrangements. With a seven-week-on/three-week-off work schedule, crew personnel are constantly shuttling through Mogadishu's airport, and Yacoob organizes the transport efficiently.

Moving from base operations in Mogadishu to the base camp, a twin-engine Donier 228 small-field aircraft becomes the bloodline to the crew. Capable of carrying up to 18 crewmen plus cargo, the plane is a true necessity for remote operations. Driving is only allowed on Somaliian highways during daylight hours; consequently, a drive to or from the crew would take two days. The plane can make the trip in less than two hours. The plane also offers the luxury of having field data flown in for processing so prospect details can be analyzed and the project kept on target.

Western's base camp consists of 11 trailers. Besides serving as air-conditioned sleeping quarters for the crew, converted trailers double as shower facilities, a dining area, recreation room, laundry facility, repair and technical support housing, and a remote processing center. The base

Surveyor Mike Fokakis checks a satellite receiver station in the Somali desert.

A local hire makes geophone repairs in Crew 773's base camp.

Driller Alan Kroschell (left) and Mechanic Tom Turnwald work on a drill truck motor at 773's base camp.
bull dust that blows constantly, but bulldozers are a welcome solution, able to traverse small mountains, deep wadis, extremely rocky land, and spiny scrub brush. Without the aid of the dozers, seismic production would be slowed to a crawl. Uniformity of data would also be impossible due to constantly having to bend lines for accommodating the impassable terrain.

The first groups to work the prospect are the line-cutting crew and camp is mobile so as successive seismic lines are completed and the crewmembers move on to other lines, the base camp moves with them to remain at the hub of the operation.

Not all crew personnel stay at the base camp, however. Since many of the lines under contract are over 200 kilometers long, many workers find it impractical to return to the base camp at days’ end. Remote fly-camp setups suit these crewmembers’ needs better. Moving on a daily basis as the crew advances down the line, the fly camp consists of tents and cots that can be put up and taken down in a matter of hours. Complete with its own cooks and clean-up crew, the fly camp offers a quiet night under the stars.

The climate in Somalia is tolerable with temperatures ranging from 95° during the day to 55° at night; however, the dust and extremely rugged terrain are true obstacles. Not much can be done about the powder-fine marking each with colored pin flags. Once the vib and receiver points are marked, a surveyor goes back and shoots each elevation point in.

The survey crew also has the duty of deploying satellite receiver stations. Received satellite coordinates are used to verify seismic line positions with exacting precision. Working as much as 150 to 200 kilometers ahead of the base camp, at days’ end the surveying team is just one of three crews to have its own fly camp.

Following behind the cutting crew and survey team, the drill crew is the second team to operate out of a fly camp. At first light, the drill crew moves into place to start their series of downhole tests. The advance drill trucks alternate down the line cutting a hole every 31 stations. The frequency of downhole sites is specified by the

survey team. The surveyors go with the bulldozers, mapping out the designated line to be cut using range poles and theodolite to sight the line in. To help the cutting crew stay on course, the surveyors move up the line constantly checking coordinates to assure they stay on track.

After the line is cut, the survey chain crew moves in to set out the specified vibrator and receiver points,
client, and to keep production moving, one truck is always drilling while the others move down line to the next designated point. Following close behind the drillers, the weathering truck collects the necessary downhole data as it moves from site to site.

With preliminary work completed, the recording crew starts laying out cables and geophones so the required data can be gathered. Operating out of a third fly camp, the juggies begin laying out cable along the seismic line followed by a second jug crew deploying the geophones. While one team is busy in front of the buggies laying out cable and geophones, another crew is at work at the back of the line picking up the cable. This flip-flop, team effort allows the vibrators to move continuously down the line.

Once the line is ready, the vibrator buggies go into action. Each buggy, working in sync with the other buggies on the line, completes a specified sweep at each designated vib point before moving on to the next station. Vibrator buggies are used instead of trucks because they twist and bend in the middle allowing for handling the rough terrain in this part of Africa.

During each sweep, the reflected seismic information is received by the geophones, digitized, and passed back up the cable to the recording buggy where it is recorded on magnetic tape for subsequent processing. Utilizing the high-resolution Field Ancillary Computer Effort (F.A.C.E.) software package and the Micro-max computer system, Western is able to process data in the field with amazing accuracy and resolution.

Besides field processing capabilities, Party 773’s base camp has other unique qualities. A full-time doctor and surgeon is on staff in the base camp medical trailer. When Western’s field safety representative is away, the doctor fills in. Adding safety check-ups to his normal daily rounds, he makes sure the men are aware of accepted safety guidelines.

Western’s base camp also boasts its own water supply. Two wells provide all of the water necessary to run the camp and to supply the field crews.

Western sees to it that its staff has all the necessary tools and conveniences to keep this operation successful. From fly camps to base camp to headquarters in Mogadishu, Crew 773 activities are a successful operation for Western Geophysical.
Atlas and McCullough
ACQUISITION AND RESTRUCTURING

McCullough, the newest member of Western Atlas International’s petroleum services family, came on board January 1, 1988, as an operation of Atlas Wireline Services. With the acquisition of the McCullough division of NL Industries by Atlas Wireline Services, Atlas has restructured its wireline services business into three operating units—Atlas Wireline-North American Operations, focusing on openhole services in the United States and Canada; McCullough North American Operations, focusing on cased hole services in the United States, Canada and Mexico; and Atlas Wireline-International, offering openhole and cased hole services overseas and equipment sales by its export sales group.

All three operating units are supported by Atlas Wireline’s integrated Research and Engineering, Technical Operations, Technical Marketing Services, and other Houston-based staff functions in addition to LRS manufacturing. Each of the units is managed by a senior vice president of operations reporting to Carroll M. Browning as head of Atlas Wireline Services.

Mr. Browning says the restructuring serves several key objectives—to provide better service for our customers through specialized expertise at the well site, to enhance our service...
offerings, and to achieve better balance in both the openhole and cased hole market segments.

"With oil and gas price uncertainty depressing new well drilling, cased hole wireline work associated with recompletions and workovers is increasing and has become critical to us," Browning said. "Bringing the Atlas Wireline and McCullough cased hole efforts together into one operating unit will provide us with the approximate 50/50 split between openhole and cased hole we see in the market activities today.

"Our decision to acquire McCullough took into account broader, strategic considerations as well," Browning stressed. "McCullough needed technology available within Atlas and to be associated with a full service wireline company committed to the business. Through the other Western Atlas divisions, McCullough gains a strong link to other downhole information and analytical disciplines related to the cased hole business. Acquiring McCullough puts us in a stronger position against our competition. The restructuring along openhole and cased hole lines brings us two motivated operations groups, relatively intact and already largely focused on their respective business segments."

**Reputation, Product Fit, and Performance Critical**

Browning points out that the decision to acquire McCullough was also influenced by McCullough's reputation in the business, close fit to existing Atlas product lines, and recent division performance.

"Founded in 1926, McCullough Tool Company was one of the older line companies in our business," he said. "They maintained a strong competitive position in cased hole tools and services. McCullough personnel were early innovators in mechanical tools, perforating, pipe recovery, nuclear logging, and pipe corrosion logging. For example, McCullough led in the development of multi-shot perforators and perforator firing systems, gamma ray scintillation counters, and downhole neutron generators. Its pipe recovery systems became the standard for the industry, and McCullough still leads that segment of the business today."

Browning continues, "Since we first looked into acquiring McCullough, we have been aware of a good fit with Atlas's product mix. Atlas Wireline is a leader in formation evaluation behind casing, perforating, production logging, and pipe corrosion monitoring. McCullough is a leader in cement bond logging, perforating, pipe recovery, mechanical services, and high-pressure work. By pooling our strengths, we have good coverage in all areas of the cased hole business. We have a complete base from which to continue penetrating the higher technology business segments, with new products like our PC-based Well Data System (WDS™) software, using advanced reservoir modeling and interpretation techniques. The combined Atlas Wireline and McCullough service network gives us more opportunities to market our specialty capabilities, like the new coiled tubing-conveyed logging systems.

"When we examined McCullough's recent results, we were pleased to find that they had responded to the market decline without compromising their future," Browning said. "By stressing field service quality, aggressive selling, cost control, and a tightly focused research and development program, McCullough was able to return to profitability in late 1986. While all other major competitors in North America were still shrinking, McCullough managed to increase sales, gain market share, reopen a few closed districts, reinstate a field engineer hiring program, and introduce new tools, including a new state-of-the-art bond tool in 1987."

As John DallePezze, McCullough's senior vice president, explains, "All the hard work and difficult decisions our team made in 1986—to retrench selectively without losing our competitiveness—paid off in 1987. We were able to make a modest, but significant profit through a division-wide effort to keep costs under control and..."
increase our sales. Our total 1987 sales were up about 16%, with a 25% increase in our completions business and a doubling of our cement evaluation logging activity.”

**Integrating the New Organization**

Since McCullough’s acquisition by Atlas Wireline, a major effort has been underway within Atlas Wireline to integrate its joint cased hole business under the McCullough operation. About 85% of Atlas’s cased hole business, equipment, and personnel has been integrated into existing McCullough operations as part of Atlas Wireline Services. Atlas Wireline-North America will continue to offer cased hole services in certain markets, primarily offshore and in Alaska, where multiple service units are currently impractical. Together, Atlas and McCullough will have almost 100 service locations and will have sales offices in an additional 15 oil center cities.

Dick Wood, senior vice president of Atlas Wireline-North America states: “The acquisition and restructuring make sense for Atlas. It is up to all of us—Atlas, McCullough, and the support groups—to make this work. We can do it if we keep in mind that we are one company, cooperating in our respective but still strongly related business segments. Cooperation will be especially important in our sales and marketing efforts where we will often be selling to the same company.

“Many of us in Atlas”, he adds, “experienced the earlier Lane-Wells and Pan Geo Atlas Corporation merger,” and this acquisition can be even more successful—each operation helps the other. What we need to do now is move quickly to make the acquisition investment pay off through improved positions in both openhole and cased hole services.

**Making the New Organization a Reality**

The progress of the Atlas Wireline and McCullough teams in setting up their new organizations has been assessed by Browning as “good—especially in light of their accomplishing this in six months. Now we need to focus on making the structure a reality in the marketplace,” he said, “integrating operating systems; cross training field and sales personnel; adjusting marketing, maintenance, logistics, and research and engineering support programs; monitoring and improving field service quality; and reestablishing good business management control systems at each level of the new organization.

“Initially, we wanted to make certain that both operations retained the level of business they had before the acquisition—a feat they appear to have accomplished in almost all markets,” Browning continued. “Now each operation must begin to increase its business. Although our work to date has necessarily focused on absorbing and integrating our cased hole business, I want our openhole group to understand that allowing Atlas Wireline-North America to focus on that segment is also a key element of the restructuring strategy.”

Browning concludes, “Atlas Wireline will be successful in this environment only if the customer is convinced that Atlas and McCullough are better at their jobs than the competition. Making that happen is the challenge we now face. Now that Atlas has completed the integrating and organizing phases, every person in this company will be working to make that goal a reality.”
Party 321, a shothole crew out of Rosenberg, Texas, under the direction of Party Manager Sam Sloan, has been working with the Department of the Interior and the National Park Service acquiring seismic data in the environmentally protected Padre Island National Seashore. With a park ranger assigned to each facet of the operation, head surveyors John Arnold and Philip Cuno helped establish strict work corridors for drilling and shooting. Consequently, the acquisition of data had minimal impact to area wildlife (peregrine falcons, sea turtles, coyotes, etc.).

Powderman Craig Payne supervised the daily drilling activities which were unique to such a sensitive environment. No foreign substances were allowed to touch the ground. With a little ingenuity, and a great deal of plastic, all of the holes were drilled, cuttings dried, and literally scattered in the wind, sharply reducing the recuperation period for the local flora.

Following drilling, the recording crews' use of motorized vehicles was restricted, with the exception of four-wheel-drive motorcycles in certain areas. Avoiding bird eggs in nesting areas, ephemeral ponds, mud flats, primary dunes, and other local features, Cable Pusher Juan Falcon coordinated the truck drivers and their telemetry equipment.

Party 321's recording crew receives instruction on working within the national park.

Crew 321 works the shoreline of South Padre Island.

Water buggies with terra tires were used on Padre Island to lessen the possibility of rutting.

Truckdrivers and troubleshooters on Crew 321 are (from left to right) Joe Valenzuela, Jesse Chavez, Keno Falcon, Gerald Valenzuela, and Raul Nevarez.
Complementing 321's crew are Geophone Technician Domingo Tobar, Box Repairman James Branum, Transcriber Operator Jack Skanning, and Mechanic David Billips.

Being an industry leader requires setting standards to which others can follow. A one-year environmental study on seismic effects is being done on Padre Island with the results to be distributed to every national park in the United States. Having already received a letter of commendation from the Department of the Interior for work performed in the Big Thicket Wildlife Refuge, Western is once again recognized as the best choice for exploration in areas where pain-staking efforts are required.

Special thanks to Kel Brown in Houston for setting up radio communications between the ranger station and crew in such a remote area. The entire crew did an outstanding job working within the established guidelines.

Known as “environmental imprinting”, freshly hatched sea turtles are released on Padre Island National Seashore to test the waters of their “would be” natural environment. Party 321 worked around this procedure, careful not to disturb the work in progress.

Observers for Crew 321 are brothers Ismael (left) and Joe De Leon who combined, have over 26 years of service with Western.

As a park ranger supervises drilling operations, Crew 321 lays down plastic protective sheets to confine splashing mud.
As the sun burns off the early morning fog that engulfs the “Bushcat” (Party 390’s houseboat), crewmembers begin another day toward the completion of the Nenbe expedition in Nigeria.

There are no plush palm trees or tropical ferns here, only African mangroves and brackish creeks snaking through the Niger Delta region. The climate is either hot and dry or wet and rainy, the only divergence being a scorched dusty wind from the Sahara Desert known as the Harmattan.

This area is not ideal for a 3-D survey; however, Crew 390 surprised the skeptics and accepted the challenge. Under the leadership of Area Manager John Mathewson and Field Supervisor Richard Degner, the crew has successfully explored the region.

In Port Harcourt, Party Chief Mark Caruso is a resourceful liaison between the crew and the client. Assistant party managers Eric Phannenstiel, Jim Sledzik, and Mma Okezie handle an assortment of duties on a rotational basis from the field. Administrators Mike Sampson, Moses Beyor, and Emma Iroanya handle monthly payrolls. Other office personnel include Purchasing Manager Ted Habib and Secretary Trixie Ingbewebor.

As usual, the heart and soul of the operation is in the field and the diverse crew is comprised of representatives from seven countries. For the past two years the crew thrilled in this grueling environment, led by party managers Duncan Riley and Paul Reed. Safety Manager Jeff Howell establishes safety awareness that sets a precedence among seismic crews. (See p. 7)
The smooth operation of any seismic crew relies heavily on the mechanics. Chief Mechanic Harvey Whiteman and mechanics Rick Howell and Keith Olson keep engines operating at peak efficiency.

The Western Discoverer, piloted by Peter Phillips and Kolbjorn Hansen, enables Crew 390 to record the majority of water shots with airguns. Chief Navigator Tom Vasquez uses the WISDOM® system to maintain the rigid specifications. Deployment of water equipment for river crossings and maintenance of all base stations is handled by navigators James Eagles and John Huxley.

Party 390 is looking forward to a new long-term contract in Nigeria with renewed vigor. There will be many hardships to overcome and in the bush, the only thing for certain is the uncertainty. But, as before, Crew 390 is ready for the challenge.
After completing the summer and fall season of 1987 in the North Sea, the Challenger went into the shipyard in Kiel, West Germany for major classification certificates that were up for renewal.

The Challenger has seen some personnel changes over the past year and a half. Senior Coordinator Richard Rowland lost his back-up coordinator, Keith Prior, to Party 114 but felt very much at ease with replacement Stuart Thorne. Technicians Peter Edwards and Colin Briggs have continued to do their share of keeping the instruments in good working order and training new people at the same time.

Senior Observers Kevin Tompkins and Ian Cobban have done an excellent job of mastering a dual-cable operation while Nigel Ackland adjusted to his new position as assistant coordinator.

The gun department, lead by Senior Gun Mechanic Bob Lamplough, changed sources many times but kept up the pace with the support of Robert Gunn, Don Jenkins, and Chris Hayden. Navigators Mark Osborne and Jerry Murphy filled in for Dave Uren while he was on sick leave but systems are now back to normal with everyone on regular rotation again.

The crew of Party 109 wishes everyone within Western Geophysical a good summer and fall season...keep on shooting!

From left to right, Chris Hayden, Paul O'Connor, and Peter Williams board the Challenger in Kiel, West Germany.

Taking a welcomed break in the rec room is Chief Engineer Ove Nygaard.

Gun Mechanic Don Jenkins guides water guns up the gun tray aboard the Western Challenger, currently working in the North Sea.

Coordinator Dick Rowland tests the handmade gangway watch station.
Party 786 recently completed a land seismic data acquisition survey in New Zealand. The survey was a challenging and interesting exercise which offered a new set of hurdles for Crew 786.

Field equipment was shipped from the Australian port of Brisbane on March 1, 1988 to the New Zealand port of Napier. Napier is located on the eastern coast of New Zealand’s north island and boasts a population of approximately 30,000 people. The town provided an ideal base for the majority of the survey, offering beautiful surroundings, a moderate climate, and excellent motels. A temporary camp shift was made to an outlying district for some of the survey’s extreme kilometers. The line crew was hired locally from Napier.

Cyclone Bala occurred before the survey began and caused erosional slip damage to some of the more rugged lines. Fortunately, careful scouting and crew coordination with local road repair authorities ensured no start delays.

With the assistance of Geophysicist Rick Workman, parameter testing began on March 15 and production acquisition began on March 17. The desert-trained crew had to adapt to new traffic circumstances, detouring somewhat confused civilians around the four large Western vibrators. Everything from bewildered sheep to civilians shared the line with the vibes. It was not uncommon for area farmers to drop their work for a brief ride in the vibrators or for guided tours of the recorder.
The rugged area also provided some communication problems for the crew, the most serious being the loss of contact between recording truck and vibrators. This problem was ultimately overcome by the rapid construction of an infield extension antenna.

The total survey extended over two and a half months, ending on May 15. The responsible attitude of the locally hired crew and careful supervision by Western staff contributed to the completion of an accident-free job.

Western staff for the survey consisted of:
- John Schulstad – Area Manager
- Joe Borg – Field Supervisor
- Doug Cumming – Party Manager
- Rick Workman – Chief Geophysicist
- Mike Perella – Seismologist
- Kevin Roberts – Instrument Technician
- Bernie Dale – Instrument Technician
- Doug Davis – Lead Vibrator Technician
- Bruce Nicholson – Observer
- Bob Clark – Observer
- Barry McQueen – Head Mechanic
- Wayne Johnson – Cable Repairman
- Malcolm Whyte – Line Boss
- Gina Hawke – Vibrator Operator
- Dean Markby – Vibrator Operator
- Keith Van Hyum – Vibrator Operator

Vibrator operators relax during a recorder move-up with a game of hacki sack.

A surveyed seismic line shows the controlling nature of New Zealand topography.

Vibrator Mechanic Doug Davis (left) and Vibrator Operator Keith Van Hyum carry out repairs during parameter testing.
Western Crew 702 is currently conducting seismic work in western Kansas and eastern Colorado. The surroundings consist of high plains, few trees, and frequent sightings of antelope herds. Thunderstorms with hail are common during the hot summer and winters are cold with sudden snow storms. Temperatures range from over 105°F to −15°F to −20°F.

Party 702 also travels into northern and central Oklahoma. In May, the crew worked in east-central Arkansas where flooded rice fields replaced Kansas pastures, and workers dodged the spray from crop dusters rather than scanning for rattlesnakes. The month-long prospect was a nice change, but most crew members were glad to get back to easier conditions in the plains.

Party 702 is headed by veteran Party Manager H.D. (Slick) Watts, now in his 36th year with Western. Slick recently welcomed new Geophysical Trainee Randy Billinger, joining the crew after graduating from Kansas State University with a Geology degree.

Most of the crews’ 24 members agree that the terrain of the high plains makes for ideal layout conditions. Permit agents Kenny Wagner and Danny Mainus have a good working relationship with the farmers and ranchers of the area, making it easier to overcome problems and prepare permits for the upcoming survey crew. 702’s three-man survey crew is led by seasoned Surveyor Manley Mainus. Steve Stafford recently became a survey helper, leaving the jug line. Steve Shoff caps off the team. These three do an excellent job of laying the

Party 702’s jug crew consists of (from left to right) Jesse Robinson, Tim Urich, Jesse Henry, Blake Stewart, Scott Reitz, Octavio Baeza, and Dennis Arnold.

From left to right, vibrator operators Monte Lewis, Brian Crissler, Bryan Fisher, and Michael Schlageck work in the fields outside of Alva, Oklahoma.
Cable truck drivers Kenny Blake (in truck) and Gary Gilbert begin the day loading equipment.

Pictured in the recording truck is Junior Observer Earl Dyess.

way for the jug crew.

Head Vibrator Operator Michael Schlageck leads the way for the four LRS-315 vibrators. Mike calculates logistics in order to maneuver around the gullies and ravines, keeping the vibrator operations running smoothly. Head Vibrator Mechanic DeWayne Anderson ensures continuous optimum output.

Observer Chris Neff, in the recording truck, receives data and is assisted by Junior Observer Earl Dyess. Both strive for high-quality production and agree the experience and dedication of the jug crew and troubleshooters make the task easier.

Several crewmembers became eligible for safety and service awards recently. Receiving one-year safety awards were Party Manager Slick Watts, Head Vibrator Mechanic DeWayne Anderson, Lead Vibrator Operator Michael Schlageck, Cable Truck Driver Kenny Blake, and Helper Jesse Henry.

Receiving service awards were Permit Agent Danny Mainus (10 years), Surveyor Manley Mainus (five years), and Cable Truck Driver Octavio Serrato Baeza (five years).

In closing, Party 702 would like to announce that we now call Woodward, Oklahoma, home. The crew moved from Colby, Kansas, and plans to spend most of the summer and fall operating in the same region.
Working for Western Research, Service Coordinator and Expediter Catherine Trudeau buys parts and equipment for land and marine crews' communications needs.

As chief surveyor for Crew 773, Ian Cook works the rugged lands of Somalia.

As project engineer, John Franklin aids in the development of acquisition systems used by Western Geophysical field crews.

Senior Secretary Cathy Schreiner has worked for Vice President Vic Boyd for seven years. Some of her responsibilities include handling contracts, proposals, travel itinerary, and visas for Latin American and West African crews.

Recently transferred to Zhuoxian, China, Geophysical Technician Paul Bergum works in land processing.
Charlotte Garcia, secretary, works on a proposal for Latin American Operations.

Legal Assistant Paul Stanford is primarily responsible for corporate secretarial functions and associated Western Atlas subsidiary duties. He has 4½ years paralegal experience and assists the corporate lawyers.

Secretary Betty Covington manages the R&D and field support libraries located in the Western Research building in Houston.

Under the direction of Otis Johnston, mechanical design functions for Western Research are performed by the Mechanical Engineering department, located in Alvin, Texas.

Rusty Hagen, computer operator, hired on with Western in 1986 and works in the computer area that handles land processing and corporate networking.
Working recently on the Padre Island National Seashore is Dan Scott, permit agent for Party 321. (See p. 17)

Navigation Supervisor Dale Bottensek has been busy lately installing the systems being put onboard Western's newest vessels, the Atlas and Hercules.

Senior Electronic Assembler Va Siu Lam, working on the production control assembly line, has been with Western for eight years.
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- Digital Spectrometry
On April 24, 35 employees of Western Geophysical participated in the “Walk America ’88” in Houston for the March of Dimes. Pictured is part of that group during the post-walk picnic.

Winning second place in a recent YMCA volleyball tournament in Houston is the Western team the “Y NOTS.” Clockwise from bottom left is Mel Malone, Patty Hirsch, Richard Van Dock, Ellen Edgar, Allison Cieslewicz, Steve Vasey, and Rich Cieslewicz.

Managers Jim Finger (bottom, left) and Reese Schmidt (bottom, right) celebrated 15 years of service with Western with Director of Engineering Ted Cruise (top, left) and Senior Vice President Damir Skerl.

Westerners enjoy a relaxing dinner during a busy schedule at the European Association of Exploration Geophysicists’ (EAEG) June 1 meeting in the Hague, Netherlands.

In Memoriam

Western Geophysical wishes to extend condolences to the family of Permit Agent John Wayne Johnson. John died March 9 from injuries received in a chain saw accident. He was 47 years old and is survived by his wife, Renee, three sons, and two daughters. Those who knew him will be saddened by his passing.—John R. Davis
Lead Keypunch Operator Novell Young (center) celebrated 15 years of service in April with L.S.P.C. Manager Pat Peck (left) and Keypunch Supervisor Barbara Kinlaw.

Kimberly Diane Smith, daughter of Safety/Security Secretary Judy Smith, graduated from Stratford High School in Houston this past June. Kim participated in the career vocational program her junior and senior years and is now a dental assistant to her father, Dr. David Smith.

On Wednesday, May 25, the Research and Development group held a surprise going-away party for Vice President Ken Larner (center) prior to his leaving Western Geophysical for Colorado School of Mines.

Area Manager Finance and Administration Tim Briggs (left) receives his 15-year service pin from Vice President Joe G. Saltamachia.–Sally Humphreys

Senior Programmer Al Schwartzfisher celebrated 25 years with Western in January.
Celebrating Systems Program Manager Gerald Urbanek’s (right) 15th anniversary with Western are Vice President Jim Hornsby (center) and Manager, Computer Systems John Koonce.

Manager Juan Vallhonrat (right) congratulates Programming Supervisor Stan Goldberg on 15 years of service with Western Geophysical.

Supervisor Ronald D. Bakke’s 30th anniversary with Western Geophysical was celebrated at the Sea Galley Restaurant in Anchorage, Alaska. In attendance was President Neal Cramer (right), Ron (center), Vice President Herman Semelis (left), and not pictured Party Manager John Davis, retired Supervisor Roy Morris, and Shop Supervisor Oliver Krein.—Mike Roberts

In June, Marine Energy Services Supervisor Lonnie Parker (left) received his 20-year service pin from Senior Vice President Damir Skerl.
In the London office, four Western employees received 20-year service pins recently. From left to right, Purchasing/Shipping Manager Derek Massey, Senior Draftsman Nigel Mason, Payroll/Pension Supervisor Pam Brown, and at far right Marine Supervisor Russell Stanland pose with Vice President Joe G. Saltamachia (second from right).—Sally Humphreys

New U.S. citizens as of April 26 are Mila Musico (left), originally from the Philippines, and Vicki Wu from Taiwan. Mila works in marine data processing and Vicki works in keypunch in the Houston office.

David Gillard (left), senior geophysical analyst, receives his 15-year service pin from Manager, Computer Science department Juan Vallhonrat.

Receiving 15-year service pins from Vice President Joe Saltamachia (right) this past spring in London are (left to right) Position Processing Supervisor Phil Harris, Instrument Supervisor Roger Barrett, and Area Manager of Marine Operations Danny Stegall.—Sally Humphreys
They Serve

Service Anniversaries—March, April, May, June

40 YEARS
Coome, Robert
Dingman, Howard

39 YEARS
&Dick, Charles W.

37 YEARS
Bates, Grant
Sargent, Thomas G.

36 YEARS
Boyd, Victor C.
Denniston, James
Ross, William

35 YEARS
&Johnson, David
&Semeliss, Herman A.
Watts, Harold D.

34 YEARS
Blair, Jimmy D.
Clapsaddle, Darrel
Krein, Oliver A.
Mellette, Soule M., III

32 YEARS
Henry, James
Mathewson, John C.

31 YEARS
Pichiani, Ugo

30 YEARS
Iretun, Roy R.
Walz, William J.

28 YEARS
&Leonard, Fred O.
Zowie, Richard L.

27 YEARS
Dowdy, Lawrence
Merten, Fred A.

26 YEARS
Hamilton, Samuel
Kubik, James J.

24 YEARS
Chambers, R. E.
Sutcliffe, Donald

23 YEARS
Bishop, Edward J.
Bivin, David D.
Cole, Patrick J.
Goodman, David W.
Harrell, Roberta M.
Kolozs, Boyd
Richards, Allan
Roberts, Richard L.
Russ, Robert S.
Solliday, Jacob A.

22 YEARS
Dorsey, Richard W.
Farmer, Lela J.
Hadfield, Jeff
Hall, Cooper E.
Peters, Howard H.
Schulstad, John L.

21 YEARS
Blomer, Bernie
Durham, David P.
Goddard, Delbert B.
Kudrna, Anton J.
Massey, Derek L.
Swaroop, Brahma N.

20 YEARS
Bickham, Ronnie N.
Bly, Linda D.
Cope, Lois
Evans, John T.
Hellier, Paul John
Hughs, Robert S.
Kitchen, William A.
Parker, Marion L.
Stringer, J. Haynie

19 YEARS
&Baker, Christopher G.
&Bernal, George A.
Brettell, Murray W.
Brown, Kelvin, Sr.
Chegwin, Robert A.
Darwish-Ali, Roshanally
Knutt, David R.
Prandin, Paolo
Russell, John R.
Sng, James

18 YEARS
Ayres, Michael B.
Chua, Kim Siang
Gaines, Carroll M.
Gillespie, Mayor
Horn, Peter
Hughes, Raymond
Johnston, Otis A.
King, William F., Jr.
Manison, Ronald
Mertman, John
Meyer, Loetta Fay
Patrick, Jerry D.
Ward, William R.

17 YEARS
&Boyd, Andrew R.
Brown, David
Harler, John C.
Kauth, Kenneth K.
Little, Herbert A.
Nance, Allen W.
Roche, Evelyn
Schade, Roger D.
Scott, Grenville
Stegall, James D.
Taylor, Harper K.
Tinney, Jr., Floyd C.
Winnefeld, Carl H.

16 YEARS
Bernal, Steve H.
Briggs, William T.
Chaparro, Humberto
Choute, Joe B.
Clegg, Joseph F.
Denham, Scott S.
Grimes, Ray
Harris, Philip J.
Hill, William B.
Kerians, Bernard G.
Mason, Paul
Michener, Kenneth
Mickiewicz, Robert A.
Morgan, Paul M.
Norris, Michael W.
Swenson, Miles S.
Teran, Raul A.

15 YEARS
Fonteno, Huey P.
Gillard, David J.
Girouard, Kirk L.
Hanson, Ronald E.
Humphreys, Sally
Kinlaw, Barbara F.
Maricle, Ward R.
McIntosh, Keith D.
Mullens, John R.
Rodrigues, Robert
Tomkinson, John S.
White, Donna L.
Young, Novell L.

14 YEARS
Abma, Raymond L.
Ainsworth, Lowell T.
Barrie, Scott M.
Behrens, William H.
Bell, Elizabeth Edwards
Brown, Robert W.
Burch, Benny P.
Caliga, David E.
Clarke, Miles G.
Curtis, Richard P.
Divingazuela, Tongto
Findley, Lyndon C.
Gormley, Carol K.
Greenberg, Walter J.
Lamb, Alan E.
Landrum, Jr., Ralph A.
Malik, Ishfaqe H.
Martwick, Calvin T.
Mckinnon, Michael J.
Paquette, Claude R.
Pierce, Andrew C.
Posey, Dan R.
Pottor, Ben A.
Prince, Royce Wayne
Prior, Keith S.
Rock, Peter
Simi, Ruth H.
Siers, Stephen R.
Stafford, Larry G.
Stavlas, Teetsa
Thaves, William J.
Ware, Christine A.

13 YEARS
Benson, Marjorie J.

*Beringer, Jeffrey D.
*Bixby, Brent L.
*Brown, Brent R.
*De Jamaer, Sjoerd S.
*Farrow, Jr., Chester K.
Gutierrez, Julio J.
Kavia, Dhraj
Lim, Brenda
Nicholson, Frank
O'Brien, Thomas E.
O'Meara, Raul H.
Ross, Reva C.
*Saad, Mohamed A.
*Salazar, Joe H.

12 YEARS
*Aguirre, Juan D.
*Bauer, Clayton J.
Billips, David R.
Bryant, Virgie M.
*Caragolinis, Peter
Crow, David M.
Davis, John R.
Jeffre, Mike C.
Gaves, Paul M.
Kjos, Nickoli O.
McFarland, Jr., Richard A.
*Moers, Cheryl Ann
Nurre, Martin H.
*Padgett III, Louis H.
Rowland, Richard E.
*Villagran, Salvador C.

11 YEARS
*Alaniz, Lionel
Austin, Marcus E.
*Burks, Dale C.
*Dooley, Daniel
Eudy, Benny D.
*Exito, Fe Esperanza
Gatus, Trevor J.
Hill Harvey F.
Irvin, Timothy K.
Knowlton, John W.
Lemmerz, Frouzen N.
Luna, Andrew
Martinez, Roberto R.
Mathews, Allen E.
*Mayville, Jeffery N.
*McMinn, John L.
*McPeek, Michael J.
*McComber, Thomas R.
*Ortiz, Marcelo M.
NAMES IN THE NEWS

*Sklar, Nancy Lynn
Spoon, William E.
Steinbelski, William A.
Tamez III, Antonio
* Trevino, Rodolfo B.
Van Wagenen, Buddy L.

10 YEARS
Aaron, James
Albrecht III, Paul J.
* Aldrich, Reuben J.
* Andrews, Sibyl
* Blow, Michael R.
* Calip, Keith D.
* Chan, Bertie
* Dornstadter, Wade
* Friday, Gary
* Goode, Maggie Ann
* Hadadine, Ablekhmed
* Hatch, John
* Hewitt, Rickey W.
* Lahanyake, E. May
* Lane, Patricia A.
* Lein, Mark P.
* Leleaux, Gary
* Lewald, John
* Long, Guadalupe
* Mainu, Danny L.
* Mann, Rocky S.
* Martinez, Jr., Ismael
* McLendon, Charles D.
* Moreno, Robert L.
* Moritz, Sue R.
* Ng, David
* Norris, Bob R.
* O'Brien, Dorotta L.
* Ojeda, Jr., Rufino
* Reese, John D.
* Ritters, Daniel W.
* Seeley, Clayton R.
* Sims, Jr., Joe C.
* Skoog, Kurtis K.
* Smith, Chester D.
* Smith, Richard R.
* Smith, Thomas W.
* Stroich, Kevin
* * Tauzin, Jimmy W.
* * Thornton, Thomas E.
* Ward, Rod

9 YEARS
Alam, M. Aftab
Allman, Jeremy S.

8 YEARS
Alder, Christopher R.
Alphonse, Ashok
Bajo, Anthony
Barker, Charles R.
* Berghscheider, Carol A.
Bell, Cyndi S.
Bell, Geoffrey
* Bnun, James W.
Broussard III, Joseph A.
* Calhoon, John C.
Chang, Nai-Ching
Childers, Lori S.
* Christison, Jay P.
Colley, Stephen
* Coss, Jr., Elfdio
* Dabagian, Steven J.
Davis, Robert B.
de Buyl, Marc H.
Doddsworth, Godfrey W.
Doreck, Geneve B.
Dragoset, William H.
* Eadcock, James E.
* Faull, Stephen T.
* Feliz-Perez, Librado
Ferguson, John C.
* * Gonzales, Gilbert L.
* Greer, Arian
* Guerrero, Richard E.
Ha, Tiong Tong
* Harms, John V.
* Harper, David B.
* James, Patrick A.
* Jimenez, Raymundo D.
* Keefer, Craig A.
* Langston, Mark E.
* Ledezma, Erwin G.
* Liew, Tet Chi
* Madison, Jerry
* Mahoney, Thomas L.
* Nelson, Gail R.
* Sanderson, William H.
* Schatz, Andrew J.
* Shields, Richard
* Shorrock, Peter
* Smith, Brad
* Spencer, Robert
* Stark, Peter M.
* Straughan, David J.
* Torres, Frances
* Whites, James C.
* Winzeler, Marsha F.
* Work, Teresa L.

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* Christison, Jay P.
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* Harper, David B.
* James, Patrick A.
* Jimenez, Raymundo D.
* Keefer, Craig A.
* Langston, Mark E.
* Ledezma, Erwin G.
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* Mahoney, Thomas L.
* Nelson, Gail R.
* Sanderson, William H.
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* Shorrock, Peter
* Smith, Brad
* Spencer, Robert
* Stark, Peter M.
* Straughan, David J.
* Torres, Frances
* Whites, James C.
* Winzeler, Marsha F.
* Work, Teresa L.

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Alphonse, Ashok
Bajo, Anthony
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* Berghscheider, Carol A.
Bell, Cyndi S.
Bell, Geoffrey
* Bnun, James W.
Broussard III, Joseph A.
* Calhoon, John C.
Chang, Nai-Ching
Childers, Lori S.
* Christison, Jay P.
Colley, Stephen
* Coss, Jr., Elfdio
* Dabagian, Steven J.
Davis, Robert B.
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Doddsworth, Godfrey W.
Doreck, Geneve B.
Dragoset, William H.
* Eadcock, James E.
* Faull, Stephen T.
* Feliz-Perez, Librado
Ferguson, John C.
* * Gonzales, Gilbert L.
* Greer, Arian
* Guerrero, Richard E.
Ha, Tiong Tong
* Harms, John V.
* Harper, David B.
* James, Patrick A.
* Jimenez, Raymundo D.
* Keefer, Craig A.
* Langston, Mark E.
* Ledezma, Erwin G.
* Liew, Tet Chi
* Madison, Jerry
* Mahoney, Thomas L.
* Nelson, Gail R.
* Sanderson, William H.
* Schatz, Andrew J.
* Shields, Richard
* Shorrock, Peter
* Smith, Brad
* Spencer, Robert
* Stark, Peter M.
* Straughan, David J.
* Torres, Frances
* Whites, James C.
* Winzeler, Marsha F.
* Work, Teresa L.
Names in the News

Ellis, Steven L.
Esteves, Rui V.
*Ferris, Edward J.
* Fitzhugh, David R.
Gibson, Kenneth
Gascette, Robin L.
*Hanson, Charles
Harper, Paul
Harris, Stephen E.
Hastings, Patrick T.
*Helton, Jon J.
Henry, Anne M.
*Hocum, Jacqueline S.
Hooke, Michael A.
Hussong, Keith S.
Hutchison, Michael A.
Jaffe, Gema M.
Johnston, Richard C.
Joseph, Savannah
Junid, Rahmat B.
Kaplan, Barbara H.
Karj-Rudcliffe, Glen J.
*Keaton, James R.
*Kigore, Kenneth N.
Kozar, Kris S.
Kulkarni, Pramod H.
Lamb, Susan Parker
Lansky, Vera S.
Lasher, Thomas F.
Lee, Pauline
Lefik, Ann L.
Lin, Cecil C.
Llewellyn, Richard G.
Lloyd-Griffith, Gwyn
Lynch, Gordon S.
*MacDonald, Rory C.
*MacDonald, Scott R.
McCollum, Patrick H.
Melcher, Steven F.
* Meyer, Mark A.
* Millman, Karl O.
Milne, Graham N.
* Mitchell, Mark S.
* Moen, Gerald A.
Montgomery, Carolyn W.
Murray, Roger E.
*Musico, Milagros M.
*Nelson, Harold A.
* Newton, Jeff L.
Pankhana, Pragji
Parry, David
Pearson, Dean Lloyd
Phillips, Peter W.
Phillips, Robert E.
Poirier, Myrna
Primacio, Alvin
Pritchett, Christopher C.
Putnam, Patricia J.
*Quinn, Keith A.
* Robinson, Ted W.
* Robinson, William F.
*Roloson, Patricia
Roper, William B.
Savoie, Carolyn
*Savoie, Geraldine
Scheer, Jim A.
Schembri, George
Schreiner, Cathy
Schuman, Wendy R.
Scott, Daniel J.
Seary, Lowell D.
Seger, John F.
* Shumard, Tommy D.
Shute, Philip A.
Slipets, John
Smith, John R.
*Smith, Mark A.
Snyder, Mark S.
Stein, Maurice G.
* Steer, Gary J.
Summers, David O.
Sun, Low Hoo
Szollosy, Attila T.
Tan, Harry
Taptita-Franco, Manuel J.
*Templeton, Colin
Thorkelson, Mark A.
Thommer, Willie Mae
Tien, Dan Dieu
Tolles, Jr., Charles M.
Topham, Craig M.
Uechi, Alan J.
Vander Ploeg, Lynn E.
Van Der Smissen, Craig
Ware, John W.
Will, Robert A.
Willard, Nancy F.
Woods, Ella Rose
Yarath, Prameela D.
Yates, Carolyn

Booher, Lee C.
Brammells, Stephen
Briggs, Simon A.
* Calhoun, Austin C.
Campbell, Steven B.
* Cherry, Ronald W.
Clark, Sonya Y.
Coles, Debra T.
Cole, Thomas A.
Corcoran, Alfred F.
Coweles, Bonnie
Delaunay, Robert E.
Dickson, John G.
Downey, Jr., John C.
Dzirko, William
Eaton, Arild W.
* Elsdon, Derek
* Fields, Richard T.
* Foo, Chee Lek
* Fowler, Paul F.
* Franks, Jeffrey L.
Fraser, John C.
* Frazier, Don S.
* Frisneegger, David A.
Gangl, Gregory D.
Gardner, Dennis
Garrett, Jr., George L.
Geok, Yong
Gilbert, Mark
Goggin, W. Chris
Haavredt, Lynne
Hamill, William J.
*Hammer, Charles G.
* Haugen, Dalia
Ho, Alex
* Hoeller, William W.
* Hoo, Teck Choon
Hootman, Bruce W.
* Horton, Thomas F.
Hughes, Hugh D.
* Jachetta, Bill E.
Johnson, David A.
Jones, Angela
* Kite, Steven L.
Khoon, Chan Heok
LaVerne, Mary M.
Lee, Hee Soon
Leng, Ng Swee
Livingston, Billy L.
Loocke, Donald L.
* Machinski, Helen E.
* MacInnes, Iain
McFarlane, Scott

Milner, John
Moffet, Catherine R.
* Morales, Cynthia A.
Nalder, Brad
Neitz, Tim E.
Ng, Patrick Y.
Nickell, Ronald L.
Pelland, John F.
Peng, Phan Ying
Phillips, Samuel E.
Porter, Malcolm R.
Rabson, William T.
Reed, Gary W.
Roberts, Vicente C.
Roome, Terence J.
Rui, Margarita M.
Salazar, Chris
* Sarlits III, Edward C.
* Self, John J.
* Shaffer, David B.
Shepperd, Samuel A.
* Sheridan, Martha A.
Skobla, Doris
Slough, Claire N.
* Smith, Arthur E.
Smith, Jr., Major C.
Snyder, Spencer E.
* Soper, Alan L.
* St. Clair, Dean
* Steffen, Todd
Swalla, Dean
Tahseen, Muhammed
Tag, Kok Chin
* Urlaub, Randall C.
Vaca, Adolph L.
Vasick, Paul B.
* Wells, Kevin W.
* Wharton, Gary
* Wilson, Mark
Woodruff, Randall K.
Workman, Ricky L.

5 YEARS
Allen, David R.
Baeza, Octavio S.
* Baldwin, Timothy C.
* Brannon, Gregory J.
Burroughs, Lynn
Butler, Daniel O.
* Callender, Donald P.
Chong, Alison
* Cieslewicz, Richard M.
Closs, Samuel E.
Colburn, Steven W.
Davis, Michael W.
* De Boer, Lennert
Dischberger, Debra M.
Docherty, Dennis G.
Evens II, Robert L.
* Fretress, James R.
* Friesen, Daniel
Goh, Elaine
Gotshall, Wayne K.
* Hardy, Robert E.
Harger II, Robert D.
* Layton, Edward
Lozica, Dena
Moore, Craig A.
Parfitt, Christopher
Rathnakumar, Rajoo
Rowe, Gordon H.
* Schmidt, Synette R.
* Shah, Mary E.
* Sharpe, David J.
Shehorn, David A.
Thomsen, Axel F.
* Watts, David W.

*Interrupted Service

If you have any questions regarding your service date, please call Payroll at (713) 972-5803 to update your records.

6 YEARS
Alford, James P.
Altschauff, Syed Esa
Bankshead, John A.
* Belanger, Jr., Harry A.