

Volume 55

1st Quarter 2012

Nelson Shift In Management - 2012

By: Virginia Nelson Dodge



Front, l to r: Kenneth H. Nelson, Charles W. Nelson, James B. Lane,
Back, l to r: Wayne J. Hingle, David R. Stewart

It has been said that when one door closes, many doors open. That has certainly been true in recent years at our firm. As a number of our senior staff have retired, we have been blessed with an ongoing group of loyal and talented leaders who continue to step up to the plate as time marches on. As our matrix structure of management allows, the departure of even one individual leads to a ripple effect. Duties shift, people change offices – both literally and figuratively, and we are able to continue to meet the challenges of serving the needs of our clients.

We have often likened the managing of our company to running a ship. Just as a rising Captain learns the necessary

skills progressively over time, so it goes in passing on the knowledge and experience required to run a company of our size. Beginning this year, as Waldemar did many years ago, Charles Nelson – serving as President since 1986 and Chairman since 2003, has elected to pass the role of President to Kenneth Nelson. Charles will continue to serve as a Director and as Chairman. Ken will continue his role as a Director and assume more of the duties “at the helm” as President, which he has been easing into over the past couple of years. Jim Lane will take Ken’s place as Executive Vice President and also continue his role as a Director and as our Chief Financial Officer. Jim’s flexibility in trav-

eling between the home office in New Orleans and our Houston office on a weekly basis makes it convenient to address the many tasks required for smooth sailing.

With the retirement of Bob Leaber, the role of Manager of Engineering in the New Orleans office will go to Wayne Hingle, Senior Vice President and former Manager of our Mechanical Engineering Department in New Orleans. Wayne will also assume Bob’s role as a member of the Executive Committee. Stephen Pumilia, Vice President, will assume Wayne’s duties as Manager of Mechanical Engineering in the New Orleans office. Steve, who held the role of Manager of Project Services in New Orleans, will transfer those duties to Anthony Hoffman, Vice President.

We feel poised for continued success and congratulate all those assuming new roles of leadership.

More About Our Leaders:

Charles W. Nelson, P.E.

Charles graduated from Georgia Tech in 1970 in Civil Engineering and then received a Masters Degree in Coastal and Oceanographic Engineering from the



University of Florida in 1974. His pre-graduation work experience included summers here at Nelson and also at The Lummus Company. Following graduation, Charles worked with

Frederic R. Harris (Holland) BV in


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| | |
|---------------------------------|------------------------------------|
| Waldemar S. Nelson, P.E. | (1916-2005) |
| Charles W. Nelson, P.E. | Chairman |
| Kenneth H. Nelson, P.E. | President |
| James B. Lane, P.E. | Executive Vice President/Treasurer |
| Virginia N. Dodge | Secretary |
| Wayne J. Hingle, P.E. | Sr. Vice President |
| Arthur J. Smith, III, P.E. | Sr. Vice President |
| David R. Stewart, P.E. | Sr. Vice President |
| Thomas W. Wells, P.E. | Sr. Vice President |
| R. Kent Davis, P.E. | Vice President |
| Leanne M. Geohagan, P.E. | Vice President |
| Michael D. Harbison, P.E. | Vice President |
| Barton W. Harris, P.E. | Vice President |
| Anthony D. Hoffman, P.E. | Vice President |
| Stephen O. Johns, P.E. | Vice President |
| Lyle F. Kuhlmann, P.E. | Vice President |
| Joseph R. Lawton, III P.E., PMP | Vice President |
| Jack H. Neelis, II, P.E. | Vice President |
| A. Pierre Olivier, P.E. | Vice President |
| Stephen M. Pumilia, P.E. | Vice President |
| William E. Rushing Jr., P.E. | Vice President |
| Clifton A. Snow, Jr. P.E. | Vice President |
| William F. Berg, P.E. | Assistant Vice President |
| Louis W. Conner, P.E. | Assistant Vice President |
| Robert W. Griffin, P.E. | Assistant Vice President |
| Robert G. Olivier, A.I.A. | Assistant Vice President |
| Stephen E. Prados, P.E. | Assistant Vice President |
| R. Bradford Rogers, P.E. | Assistant Vice President |
| Wayne D. Talley, P.E. | Assistant Vice President |
| Ronald J. Villere, PMP | Assistant Vice President |

The Netherlands, and joined NELSON in the fall of 1978. His varied project experience served him well as he honed his skills in engineering as well as gained strength in overall company management. Charles was promoted to Assistant Vice President in 1980, Vice President in 1981 and took on the role of Assistant Treasurer in 1983. In 1985, he became a Senior Vice President, followed by a brief stint as Treasurer in 1986. That same year, Charles was promoted to President – a role he continued in for twenty-five challenging yet rewarding years. Named Chairman of the Board in 2003, he is to be saluted and congratulated for “staying the course” with expertise, style and humor.

Kenneth H. Nelson, P.E.

Ken graduated as a Civil Engineer from Georgia Tech in 1977 and began with NELSON in January of 1978. Having prior work experience during summer breaks at



both our firm and Freeport Minerals, he served as a survey crew field assistant, construction inspection team member, drafter and a computer programmer. Earning kudos for his meticulous record-keeping

and attention to detail in his engineering design, he was promoted to Assistant Vice President in 1992, to Vice President in

1996, and elected a Director in 2003. Ken was then promoted to Senior Vice President in 2006, and became Corporate Secretary in 2009. He assumed the role of Executive Vice President in January of 2011, and we are proud to announce Ken as our new President, effective January 1, 2012. His patience, practical and positive attitude, coupled with his integrity and willingness to take on new responsibilities will serve the company well as we move forward.

James B. Lane, P.E.

Jim, a New Orleans native, graduated from Tulane in 1974 in Civil Engineering where he was fourth in his class of one



hundred engineering students. Prior to graduation, he worked summers assisting in highway design projects. He continued his studies at Tulane attaining an M.B.A. in May of 1976. The following month, he began at NELSON as an Accountant. Later crossing over to engineering, he joined the massive support to the oil and gas industry which was booming in those years and continued on with a large variety of projects over the years. He made time to earn yet another degree at Tulane – a Masters in Petroleum Engineering completed in 1981. Jim was promoted to Assistant Vice President in 1985, to Vice President in 1992 and Senior Vice President in 1997. In 2000, Jim took a bold step for the firm, moving his family to Texas and spearheading the Houston office. Named Treasurer/CFO in January of 2009, he shifted duties from engineering only to a broader management role. Jim was elected a Director in January of 2011. Effective January of 2012, we are pleased to name Jim as Executive Vice President, a tribute to his professional dedication and skillful management. He will continue as CFO.

Wayne J. Hingle, P.E.

Wayne graduated from Louisiana Tech in Mechanical Engineering in 1973 and started with the company on October 3, 1983. With ten years' worth of widely varied prior experience, including chemical plant and international oil and gas design and construction, he brought valuable



knowledge to the NELSON mechanical department. At NELSON, he has worked on several major projects, in the Chemical, Oil and Gas, Pipeline, and Mining industries. Wayne was promoted to Assistant Vice President in 1993, Vice President in 2000 and to Senior Vice President in 2006. Wayne's experience has served him well to manage both projects and people; we appreciate his efforts and expect it will sustain him for the challenges ahead as Manager of Engineering in New Orleans.

Stephen M. Pumilia, P.E.

Steve began his career at the company right after graduating from Tulane in 1976 with a B.S. in Mechanical Engineering. His over 36 years of experience have spanned many clients, including a long term at One Shell Square. More recently,



he traveled to Australia and Kazakhstan in support of overseas projects. Steve was promoted to Assistant Vice President in 1993 and to Vice President in 2006. His role as Manager of Project Services honed his people skills, and we feel he is well positioned to assume his duties as Manager of the Mechanical Department in New Orleans.

Anthony D. Hoffman, P.E.

Tony joined our firm in November of 1990. A 1987 graduate of the University of



Wyoming, earning his B.S. in Electrical Engineering with a Computer Option, Tony began his career focused on computer programming. Relocating to New Orleans, his focus changed to

electrical engineering. He has been a key member of the NELSON team at One Shell Square. Tony was promoted to Assistant Vice President in 2006 and to Vice President November 1, 2011. His understanding of the technical and adminis-

trative support needed to bring our projects to completion will suit him well as Manager of Project Services in New Orleans.



Retirement of Robert J. Leaber, P.E.



Lynda and Bob Leaber

On February 29th, 2012, Bob Leaber, “leaped” into retirement. Having passed on his duties as Manager of Engineering at the first of the year, Bob remained with us for a time to wrap up duties, close out project files and assist in the transition of management. We anticipate his return from time to time to assist on certain projects close to home. After countless hours on airplanes and extended stays away from home, Bob has definitely earned a well-deserved rest from the intense demands of electrical engineering.

Following his graduation from LSU in 1969, Bob began his electrical engineering career at New Orleans Public Service, Inc. (NOPSI) After nine months there, he began two years of service in the United States Army during the Vietnam Conflict. He was assigned to a special group of scientific and engineering personnel for Communications Command. His duties included preparing cost estimates and specifications and providing criteria for design of power systems, as well as onsite surveys to recommend for the upgrade of power systems in Europe, the Mid East and Africa.

Following his military service, Bob returned to NOPSI for a three year stint up until joining our firm on December 23, 1974. Being recognized as a leader, he was



l to r: Jim Melancon, Kathy Guidry, Dottie Nelson, Arthur and Brenda Smith, Sandra Melancon.

promoted to Assistant Vice President in 1979. In September of 1984, he was named Vice President and Manager of Electrical Engineering. In March of 1991, he was promoted to Senior Vice President; and in January, 2009, Bob assumed the role of Manager of Engineering and continued his

star in our Mechanical Department, and his wife, Mary. The convivial friendships fostered through work continue on. We wish Bob the very best in his retirement and extend our heartfelt thanks for his dedication and service to the firm.



Kenny and Mary Leaber, Lynda and Bob Leaber

masterful leadership through the end of 2011. His contribution to the success of this company in meeting the project challenges and demands of multiple clients has been tremendous. His expertise in the balancing act of making certain those needs were met by the various disciplines was much appreciated.

In celebration of over thirty-seven years at NELSON, a dinner was held in Bob’s honor on March 7th. Senior members of our staff and several recent retirees gathered at Andrea’s to honor and congratulate both Bob and his wife, Lynda, on a long and successful career. Lynda was recognized for her patience and willingness to “hold down the fort” for the Leaber family during Bob’s many business trips. The group was joined by Kenny Leaber, a rising



Panama Canal Progress

Over a three day period in late March, Charles Nelson, Chairman of Waldemar S. Nelson & Co., Inc., travelled with about 100 engineering alumni from Georgia Tech to the Central American Republic of Panama to tour both the existing locks and the work in progress for the new locks scheduled for completion in 2014. The physical size of the \$5.2 billion project is amazing, and the scope and impact of the project could re-define the term 'world class' for engineers for generations to come.

History

A brief history of the Panama Canal would have to start in 1514, when Pedrarias Davila, the founding governor of what was to become Panama City, was charged by the Spanish crown with the task of finding a way to connect the Caribbean and Pacific oceans. He had to limit his connection to the Camino Real (Royal Road), which was used for 300 plus years to export goods conquered by the 'conquistadores' back to Spain. In the period 1852-1855, a cross-isthmus railroad was built to provide quicker, cheaper travel for Europeans and East Coast Americans headed for the California gold fields which had been discovered in 1849.

In 1878, a treaty between Colombia and France granted a 99 year concession to a French company formed to build a canal across the province of Panama. This effort was led by Ferdinand de Lesseps,

who had successfully built the Suez Canal connecting the Mediterranean with the Gulf of Suez and the Red Sea in Egypt. Despite his prior success, his drive, his ability to raise money and a personality adequate to accept the challenge, his fatal design flaw was to attempt a sea-level canal with a tidal lock on the Pacific side, where tides were known to range 20 feet. Suggestions by others familiar with the Panamanian landscape that a lock and lake system would work better were not heeded by de Lesseps, and his sea level canal was abandoned in 1903 after more than \$200,000,000 was spent and over 22,000 lives lost to the hostile swampland's multiple diseases.

Amid efforts to re-start the project, Panama declared its independence from Colombia on November 3rd, 1903. On November 18th of that year, a treaty was signed between Panama and the United States and plans were begun for the lock and lake system which was inaugurated on August 15th, 1914. That herculean accomplishment relied heavily on the leadership of President Teddy Roosevelt, the age of steam and the ingenuity of the best engineering talent available at the time. A resounding success, the original Panama Canal defined world shipping practices for 85 years.

Following revisions to the US-Panama treaty in 1935 and 1955, and due to growing tensions over issues surrounding canal operations (including demonstrations in 1964 which led to deaths on both sides), diplomatic moves were undertaken to plan a new future for the canal. Presidents Omar Torrijos of Panama and Jimmy Carter of the

U. S. signed a treaty in 1977 providing for a 22 year period of transition, wherein the canal became the responsibility of the Republic of Panama. Since December 31st of 1999, Panama has operated the canal built by the U. S., and soon thereafter began planning for the current expansion plans.

The New Locks

As with the original locks, it was realized that the secret to successful operation was a huge water management scheme putting to best use the 90 inches of annual rainfall on the Caribbean side and 120 inches of annual rain on the Pacific side of

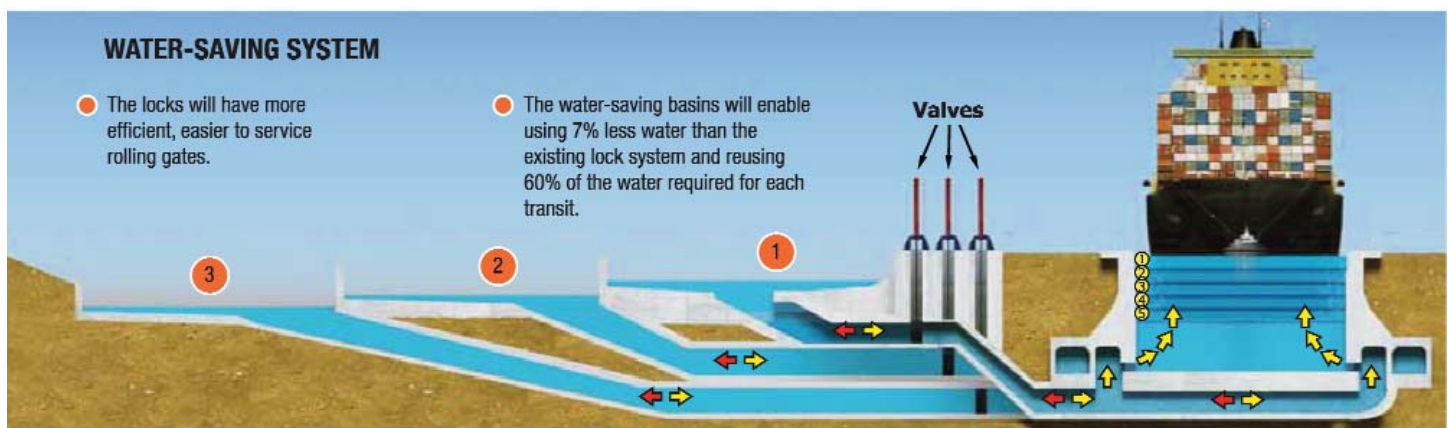


Dry Cut Near Miraflores

Panama. The gravity drainage, once-through system of the original locks has been modified to conserve water for the new, larger locks. Lake Gatun, which was created by the original project, is 85 feet above sea level. Lake Alajuela, further up in the mountains, provides additional water management capability. The new locks

POST-PANAMAX LOCKS

The new locks will have three chambers, three water-saving basins per chamber, a lateral filling and emptying system and rolling gates.



- ①, ② y ③: Moves by gravity to water-saving basins for use in the following lockage.
- ④ y ⑤: It equalizes and moves to the next chamber and eventually to sea.



Concrete Work

will also be all gravity fed, but a system of storage basins paralleling the new locks will allow conservation of 60% of the water passing through the new locks. Tour guides providing information on this aspect of the new locks said that environmental issues were also considered in the decision, due to the impact of surges of fresh water entering the saline estuaries at either end of the locks. It was stated that this system of parallel water storage basins had been used on earlier barge canals in Europe, due to the need to conserve water there.

Much detail can be found on the status of the Panama Canal on their website, www.pancanal.com, including real time webcam shots of ships using the existing canal and work on the new locks.

A comparison of the maximum vessel size for the original locks (Panamax vessels) and the increase in size for the New Panamax is shown on the following table. With the increased traffic, annual cargo tonnages are expected to go from 322 million tons in 2011 to 600 million tons for

the combined and expanded systems. Traffic management for certain sections of the system is now carried out to facilitate shipping patterns to maximize throughput, and will be modified when both small vessels, Panamax class and New Panamax class vessels are in transit in the canal and on Lake Gatun.

From the visitors' platforms overlooking the work in progress, one can see the ongoing activities of over 7,000 people working on the project. Numerous international contractors from around the world are mobilized on the four segments of the work: deepening the Pacific and Atlantic approach channels; enlarging shipping channels in Lake Gatun; constructing new locks on both oceans; and raising the level of Lake Gatun. Engineers conducting the tour said open cut excavation was costing \$5 per cubic meter, and dredging was being done at \$15 per cubic meter. Both dry and wet excavation requires serious blasting to break some formations prior to removal. Concrete placement was particularly interesting, as both

aggregate and fresh water for the mix design is chilled using ice and other means to lower the temperature of the placed concrete and thus accept the heat of hydration temperature rise as the concrete is cured. This has eliminated the need for cooling water pipe systems such as are often used in massive concrete structures.

| PERCENTAGE OF WORLD FLEET THAT CAN TRANSIT THROUGH THE EXISTING/EXPANDED PANAMA CANAL | | |
|---|-------------------|------------------|
| Criteria | 1914 Panamax | 2015 Panamax |
| Lock Length | 1000 ft. (305m) | 1,400 ft. (427m) |
| Lock Width | 110 ft. (33.5m) | 180 ft. (55m) |
| Lock Depth | 41.5 ft. (12.65m) | 60 ft (18.3m) |
| Ship Size (nominal) | | |
| Max Length | 965 ft. (294.1m) | 1,200 ft. (366m) |
| Max Beam | 106 ft. (32.3m) | 160.8 ft. (49m) |
| Max Draft | 39.5 ft. (12.04m) | 50 ft. (15.24m) |
| | Existing Canal | Expanded Canal |
| Full Container Ships | 84% | 98% |
| DryBulk Carriers | 83% | 90% |
| Crude Oil Tankers | 24% | 55% |
| Product Tankers | 90% | 99% |
| Chemical Carriers | 91% | 99% |
| LPG Carriers | 89% | 99% |
| LNGs | 6% | 81% |
| Car Carriers | 100% | 100% |
| Passenger Ships | 94% | 97% |

Panama Canal Authority

Plans for U. S. Ports in the New Panamax world

The anticipated completion of the new locks in Panama have spurred every East Coast and Gulf Coast port in the United States capable of serving ocean going ships to consider how they will adjust to the new locks at Panama. Bulk ships for grain, ore, crude oil, and refined petroleum products will all allow economies of scale which justify new investment. Container ships, cruise ships and special vessels such as car carriers capable of maximizing the capacity of the new system are already planned or under construction. Waldemar S. Nelson & Co., Inc. is pleased to be working on several projects for public and private clients on the Mississippi River and Gulf of Mexico ports which are anticipating the new commerce which will be available as a result of the new Panama Canal.



Flor Aguilar Is Sworn In As A United States Citizen

Flor was born in Toluca, Mexico. She graduated from ITESM Campus Monterrey, Mexico, with a degree in Chemical Engineering. Upon completion of her degree, she returned to Toluca and worked in a Chemical Plant, Panament S.A. de C.V. In May, 2004, Flor was offered a temporary position at Pan American Enterprise, Inc. in Brownsville Texas. After two months, she was offered a permanent position as a Process Engineer working with an L1-B visa. In April of 2006, she started her application for a scholarship to do her Master's Degree in Spain, but got a call from Fluor with a job offer. She decided to accept the position and moved to Houston. Flor began her employment with NELSON in February, 2011, received her Master's Degree from the University of Phoenix in July, 2011 and became a United States Citizen on March 21, 2012.

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