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## NELSON Celebrates Houston Office Tenth Anniversary

By: James B. Lane, P.E.

It seems like only yesterday that the successful decision was made that NELSON should expand its capabilities to service its clients by opening an office in Houston, Texas. But indeed, ten years have passed since the first NELSON office lease was signed on February 1, 2000, marking this important milestone in our corporate history. Since a joint venture sales office had been opened in 1999, depending on who is counting, the anniversary may even be considered to be eleven years at this point.

Since its founding in 1945, NELSON had always existed with a single city office. With the relocation from New Orleans to Houston of a growing number

the company by diversifying both technically and geographically. The decision was made to transfer a number of existing NELSON management personnel from New Orleans to Houston so that the already established relationships with our newly departed clients could be maintained. This approach had the added benefit of allowing the new Houston office to transfer the NELSON project approach to newly hired employees in the Houston area.

In those days early in 2000, all five of the original managers spent the majority of their days calling on prospective clients. Today our staff of nearly 120 is actively engaged on projects which are the fruit of those initial efforts. Ten years of engineering design by the Houston office have witnessed some very interesting projects.

### Early Years (2000 - 2003)

On February 1, 2000, Waldemar S. Nelson and Company leased approximately 2,000 square feet in the 2323 Voss St. building (see photograph). The staff included General Manager Jim Lane, Manager of Engineering Dave Stewart, Civil/Structural Manager Bart Harris, and Electrical/Instrumentation

Manager Mike Harbison. These managers are all still in place today, with Kent Davis



Sam Houston Parkway Building



Voss Street Building

of energy companies, it became apparent in the late 1990's that a large sector of our core business was becoming underserved. In addition, it was determined that there would be a great long term advantage to

joining the team and becoming the Process/Mechanical Manager in 2003. After six months in the Voss building the office was relocated to North Houston, leasing 5,743 SF in a building at 507 N. Sam Houston Parkway (see photograph). By the end of 2003, office space in this building had expanded to 13,500 square feet, with an employment base of 45 personnel. This north side location allowed us to tap into the rich engineering talent on that side of town, as well as serving as a convenient location from which to access one of our large clients, ExxonMobil.

Due to the small initial size of the early Houston office, project work by our engineering staff necessarily centered around detailed designs on fairly small



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Typical Compressor Station

projects, or high level thinking for conceptual designs on large projects. These assignments lent themselves to a staff make up focused on engineers with a great deal of experience in the oil and gas industry. Efforts included innovative thinking on many world class projects, in addition to an important niche role working to develop master practices specifications and perform specifications gap analyses for projects with merged owner operators.

Typical early year projects included:

- Yoho and EAP Nigerian Field Development pre-FEED
- Frade Brazilian Field Development pre-FEED
- Kizomba, Sakhalin Island, Cepu, Yoho, East Area, and Bonny Island projects electrical oversight and support
- Structural Installation assistance for Brutus and Nakika projects
- Pipeline Metering Station Design
- Early Production System FPSO and Kizomba Design Audits
- Mechanical and Instrumentation engineering and PDMS piping design assistance for Medusa, Devils' Tower, Hibiscus, Ras Lafon and Frontrunner
- Atlantis Project Design Audits
- Reference Case High Pressure High Temperature, Deep Draft Caisson Vessel Conceptual Design
- Deepwater Facilities Cost/Weight

**Reduction Material Studies**

- Conceptual Structural Design For Wellhead Platform
- Onshore Production Facility Pilot Plant Design
- Offshore Platform Debottlenecking and Upgrade Project
- Pipeline Compressor Station Modifications And Relief Valve Studies
- Shipyard Facilities Cost Estimating
- Offshore Facility HAZOPS participation.
- Neptune Project Concept Development.
- PNG LNG Gas Project Concept Design.

**Growing Years (2004-2008)**

Due to the continuing growth of the Houston Office, and in an effort to obtain facilities that could enhance our expanding

project roles, an extensive search resulted in a new office space lease in a nine story building at 2 Northpoint Drive (see photograph). This location across the Beltway, and further west by less than a mile, continues to this day as our Houston Office. The initial lease of 14,000 square feet has grown to 47,000 square feet, encompassing 2 1/2 floors, making us the largest tenant in the building. Employee numbers during this period expanded to a peak of nearly 140 employees.

One added benefit of multiple office locations is the ability to share project design resources. The high speed ethernet networking of our two offices has enabled this advantage to be used on numerous occasions through the years. An employee sitting in New Orleans can access files on the Houston server with negligible delay, and vice versa. This ability makes the resources of the entire company available for projects designed primarily in one location.

**Compressor Stations**

One group of projects during the years 2005 through 2008 stands out as a large factor in our growth. NELSON assisted major pipeline companies in the addition of nearly 240,000 hp to their natural gas transmission systems which included the design of seven greenfield compressor stations and adding horsepower to seven existing compressor stations. The projects had a variety of compressor types including 1775 to 7800 hp reciprocating compressors, 6200 to 7800 hp turbine driven centrifugals, and 6,000 to 11,000 hp electric driven centrifugals.



Northpoint Office



## Power Generation

NELSON's presence in Houston has afforded us the opportunity to continue the company's experience in the power generation and distribution sector, providing professional engineering services for the design of two EPC power plants for Wärtsilä North America Corporation. Working as part of a design team with Wärtsilä's Finnish Engineering Contractor, Engineering Oy AB, NELSON has provided design engineering and construction phase services for two important power plant projects.

The Barrick Gold Mine Western 102 Power Plant located near Reno, Nevada was completed in the 4th Quarter of 2005. The installation includes 14 dual fuel Wärtsilä 20V34SG engine generator sets with a total rated plant capacity of 116 mW. The engine generator sets are installed in a Power House consisting of two separate engine halls housing seven generators each with a combined electrical switchgear room, control room and utility room located between the engine halls.

NELSON has also worked with Wärtsilä and Citec on the permitting, design and construction phase services for the Humboldt Bay Generating Station Power Plant located near Eureka, California. This power plant is currently under construction and will replace two existing gas fired steam turbines and two existing "mobile" diesel fired turbines for Pacific Gas and Electric Company (PG&E). This power plant is a load following plant that services the Humboldt Bay Area. The new plant consists of ten (10) dual fuel Wärtsilä 18V50DF engine generator sets with a total



Wärtsilä Barrick Gold Mine Western 102 Power Plant

rated capacity of 163 mW. This facility design includes separate low and high voltage electrical equipment buildings, control/administration buildings, workshop and miscellaneous ancillary equipment. NELSON has worked with Wärtsilä and PG&E since 2005 to assist with the permitting process required by the California Energy Commissioning. Construction on the plant commenced 1st Quarter of 2009 and expected completion is mid-2010.

## Unconventional Resources

Another important step in our technical and geographic diversification was taken when NELSON was engaged by Shell Exploration and Production Company to assist with their research and development of new technologies to enable them to produce hydrocarbons from oil shale deposits in Colorado and other locations. NELSON participated in a series of projects in Hous-

ton at a Shell R&D facility as well as a number of pilot plant designs in Rio Blanco County, Colorado. The largest of these projects was the Colorado Freeze Wall Test, which was a pilot project designed to demonstrate Shell's ability to construct an underground environmental containment system around an oil shale production site by circulating chilled refrigerant into a subsurface closed-loop system to form an impermeable ice barrier. Preliminary design work commenced in early 2005, and continued through detailed design and construction, culminating with start-up in April, 2007.

In addition to the R&D support we provided, NELSON was engaged to perform conceptual design and cost estimating services for a number of very large commercial-scale projects in Colorado, Wyoming, and Alberta, Canada. NELSON continues to support Shell in their Unconventional Resources projects, and looks forward to future opportunities in these areas.

## Chad Oil & Gas Facilities

The Nelson Houston Office began working for a major exploration and production company in Chad in the beginning of 2005 on their onshore oil and gas facilities in Africa. The work included detailed design and procurement services for a new oil and gas field/manifold along with a pipeline to the existing processing facilities. The new field consisted of 14-20 production wells, three water injection wells, a new manifold, electrical transmission line, distribution equipment and 2000HP water injection pump w/ variable frequency drive. Revisions to the existing processing facilities included a new 2 phase separator, two



Shell Colorado Freeze Wall Test Facility



Houston Office Personnel in 2002

gas compressors and an additional emulsion pump. Nelson's procurement services included purchasing, expediting, inspection and logistic support for \$30 million of equipment. Upon completion of that project, Nelson began a series of projects which include high pressure water injection with 7000hp VFD driven compressors and a pump relocation project.

Other important projects undertaken during this period include:

- Electrical/Instrumentation Team Support on Qatar Gas, Adriatic LNG, Sakhalin, QIT and others.
- Mechanical Support on EAP, Sakhalin Island, Marimba, Saxi Batuque, Bosi, Mondo and others.
- King Ranch Cooling Tower Replacement & Power System Upgrade
- Barnett Shale Compressor Station
- Integrity Critical Drawing Updates Project
- Steam Condensate & Gas Lift Modifications
- Subsea Engineering Support
- Caisson/ESP Test Facility Detailed Design
- Enhanced Oil Recovery Facility Design
- Mars Storm Damage & Expansion
- Kizomba C Design Verification & Site Inspections
- EAP Material Audits & Construction Phase Support
- OKGS PMT Structural Support
- Numerous Nakika Surveillance Projects
- LNG Permit & Pre-FEED Engineering
- Sulphur Terminal Upgrades

### Present Years and Beyond (2009 - -)

Moving to Houston has become a huge step in achieving geographic diversity, as service to the oil and gas industry has brought us around the world. In keeping with the international flavor

of the City of Houston, in just ten year's time, NELSON personnel have provided engineering services to projects which are located in over 19 different countries. While providing these services, Houston employees have traveled to such locations as Korea, Nigeria, Equatorial Guinea, Angola, the Netherlands, Russia, Indonesia,

- Abayak facility generator upgrades
- Unconventional Oil R&D projects at Gasmer
- Structural engineering support of numerous offshore projects
- South Texas production facility upgrades
- Isabela tie back to Nakika, FEED and detailed design
- Misc. Nakika surveillance support
- Papa Terra TLWP FEED and bid support
- Preliminary engineering and bid support for three Brazilian FPSO projects
- Pre-FEED study for BS-10 TLWP and FPSO
- Fractionation Tower addition at Snyder Gas Plant
- Conroe Field Electrical Additions
- Surveillance support for Neptune facilities



Houston Office Personnel In 2005

Norway, Germany, Canada, Singapore, Papua New Guinea, Australia, Brazil, Cameroon, Chad, Italy, Japan, Qatar, England and Monaco.

Project work in 2009 and forward occupying the Houston NELSON resources includes:

- Erha North Phase 2 FEED and ITT Development
- PNG LNG contract inspection services and IPR support
- Chad engineering, design and procurement services for numerous brownfield oil and gas facility projects

- Humboldt Bay Power Plant detailed design
- Engineering support for several power plant projects

While the current slow economy has temporarily leveled our growth, the business in our Houston Office continues to flourish. A ten year look back has brought into focus what an excellent decision this has been for the company. With the City of Houston serving as the Energy Capital of the World, it is easy to project a bright future for a company that has as extensive a resume in the oil and gas industry as that

possessed by NELSON. The expansion to Houston has certainly provided an additional step in our goal of achieving technical and geographic diversity.



**Passing of Harry E. Wilson  
February 5, 1923 - January 4, 2010**

It is with sadness that we report the loss of a long time employee of the firm after a lengthy illness. Harry was born in El Paso, Texas and grew up in Shreveport, Louisiana. He served in the Army Air Corps during World War II as a flight engineer, gunner and pilot.

Harry joined the firm September 18, 1951 and was a loyal and talented member of our Civil Engineering department. He carried a diverse workload and specialized in railroad and port projects. Following his retirement in late 2002, Harry and his wife, Pat, enjoyed country life in Pearlington, Mississippi. We send our condolences to Pat and their children, Mike and Beth.

## 2009 Recognition Dinner

On December 2nd, our annual recognition event was held in New Orleans at Ralph's on the Park, honoring those employees who have been with the firm for twenty years or more. The loyalty and longstanding service of our staff are the keys to our success in offering ongoing consistent, quality services to our clients. Our honorees also have been in the position to bring along incoming staff, to encourage and foster "the Nelson Way". (Do Quality Work; Stay on Schedule; Keep Within Budget; Uphold Honesty and Integrity, and Keep Doing it Right!)

For twenty years of service, we recognized Mike Harbison and Wayne Talley in Houston; Mark Benigno, Randal Rodrigue, and Lyndon Soileau in New Orleans. Cliff Snow (NO) was honored for thirty years with the firm. Our chief honoree, Bob Leaber (NO), was hailed for his thirty-five years of service. Unfortunately, Bob was unable to attend the party when a schedule change for a client meeting delayed his return from Houston. We appreciate the efforts of these outstanding members of our staff and extend to them congratulations and deep appreciation.



l to r: Randal Rodrigue, Mark Benigno, Wayne Talley, Lynda Leaber accepting for Bob Leaber, Lyndon Soileau, Mike Harbison, and Cliff Snow.

### Nelson Employees Celebrate the Holidays with Good Times and Giving



Houston Employees collected gifts for the Salvation Army Angel Tree Program. l to r; Slater Bass, Felicia Abu-Fannoun, Katie Davis & Gloria Schultz.



Rosalie & Rene Delaune

Keyla Parekh, Mike Daussin & Maggie Desai

Nathan & Carol Schmidt



Jennifer Buchholz and Calvin Garland

Lee Ann Anderson, Cindy Larsen, Sheila & Bill Rushing, Tom Ehrlicher, Penny Larsen, Zina Guidry and Charles Nelson

Holly Beaulieu & Justin Schuelke

*Holiday celebrations were held at the Loews Hotel in New Orleans and Hotel ZaZa in Houston on two consecutive weekends in December.*



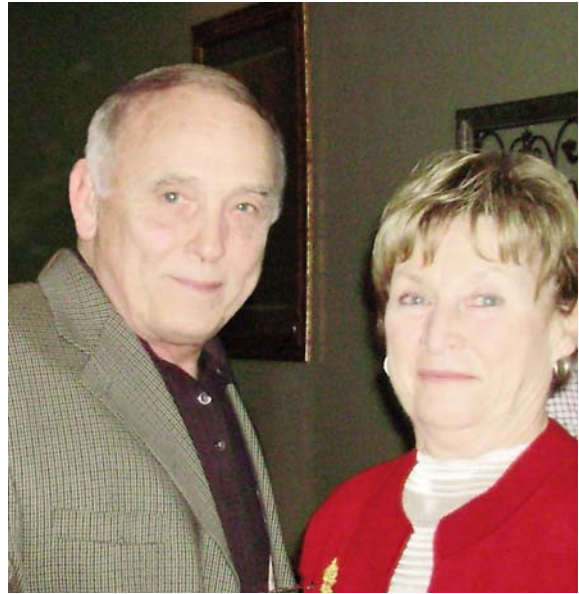
Laura Lane, David & Susan Stewart, Jim Lane



## Don Guidry Retires

Donald J. Guidry, Senior Vice President, retired October 15th, 2009, ending a long and productive career. Following his graduation from Louisiana State University in Electrical Engineering in 1967, Don was employed by the Boeing Company and worked on the S-IC Saturn Booster project. On April 1, 1970, he joined W. S. Nelson and Company and was credentialed as an "Engineer in Training" with the State Board. He soon attained his P.E. license and continued his strong dedication to his profession. A client letter of appreciation sums up Don's abilities, "Under Don's leadership and supervision, the project's success has far exceeded our expectations. His drive and determination coupled with his outstanding ability to anticipate potential complications minimized the numerous problems that normally would arise."

Mr. Guidry was promoted to Assistant Vice President in 1976, to Vice President in 1980, and to Senior Vice President and Manager of Operations in 1991. He also managed our Construction Management group. In 1997, Don was named Manager of Business Development. His diverse workload also included oversight of our work for P. T. Freeport Indonesia. In the trying days after Hurricane Katrina, Don saved the day by securing a generator which allowed the company to ramp back up before city power was restored. His positive "can do" attitude and enthusiasm will be missed, but he inspired others to carry on that tradition. For his nearly forty years of dedicated service, we salute him and wish him well in his retirement.



Don and Kathy Guidry

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