

Volume 56

# 4th Quarter 2013

# **NELSON Adds Second Houston Office Location on West Side**

By: James B. Lane, P.E.

Most of the following article was first published in the CON-SULTANT, 4th Quarter 2009. It is updated here to reflect our continued Houston Office growth.

With the current boom in oil & gas, we are poised again to take another step function in growth of our Houston Office. Effective January 1, 2014, we have leased nearly 19,000 sf of office space in the Westchase District of west Houston at 10375 Richmond Avenue. This office is in addition to our existing Northpoint Office and will function as a satellite office. Strategically situated at the corner of Beltway 8 and Richmond Avenue, this location is in the heart of the District and adjacent to Houston's Energy Corridor. This should prove to be an effective tool in expansion of business from clients on the west side of Houston. as well as providing an attractive base for employees residing nearby.

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, nearly fourteen 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



## **10375 Richmond Avenue**

on who is counting, the anniversary may even be considered to be fifteen years at this point. Other than short term project offices, since its founding in 1945, NELSON had always existed with a single city office. With the relocation from New Orleans to Houston of a large number 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 the company by diversifying both technically and geographically. The decision was made to transfer a number of existing NEL-SON 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 those newly hired employees in the Houston area.

Since those days early in 2000 when all four of the original managers spent the majority of their days calling on prospective clients, the staff of nearly 125 today is actively engaged on projects which are the fruit of those efforts. Fourteen 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 Street building. The staff included General Manager Jim Lane, Page 2 4th Quarter, **2013** 



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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 joining the team and becoming the Process/Mechanical Manager in 2003, and Robert Griffin becoming the Electrical/Control Systems Manager when Mike took on the role of Project Management Manager. 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. 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 largest 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 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 high level and 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.

## **Growing Years (2004-2012)**

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,



West Houston Office Location

and further west by less than a mile, continues to this day as our primary Houston Office.

The initial lease of 14,000 square feet has grown to 52,000 square feet, encompassing 2 1/2 floors, making us the largest tenant in the building. Employee numbers during this period showed an increase in size to nearly 140 employees.

#### **Compressor Stations**

One group of projects during these years stands out as a large factor in our growth. NELSON assisted Kinder Morgan in the addition of nearly 240,000 hp to their natural gas transmission system, which included the design of seven green-



2 Northpoint Drive

field 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.

#### **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, Citec Engineering Oy AB, NEL-SON has provided design engineering and construction phase services for these 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 replaces 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, completed in 2010, consists of ten (10) dual fuel Wärtsilä 18V50DF engine generator sets with a total rated capacity of 163 MW. This facility design included separate low and high voltage electrical equipment buildings, control/administration buildings, workshop, fuel and chemical storage areas, and miscellaneous ancillary equipment.

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Richmond Office Conference Room

NELSON continues to support Wärtsilä and Citec in providing power to North American clients through engineering services related to ancillary structure and equipment design for "equipment supply" contracts. NELSON has provided engineering services for such projects in Texas, Oregon, Alaska, Minnesota, British Columbia, Alberta and Mexico.

#### **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 Houston 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 closedloop system to form an impermeable ice barrier. Preliminary design work was commenced in early 2005, and continthrough ued detailed design and construction, culminating with

start-up in April, 2007. More recently, we've completed work on another pilot plant in Colorado to help demonstrate the viability of Shell's proprietary technology in oil shale, and we are currently engaged in the detailed design of a similar facility in the Middle Eastern country of Jordan.

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, Alberta, and Canada. Wyoming, Additional opportunities continue to become available as work in North American shale discoveries proliferates. NELSON has provided engineering and design services in several of these areas in recent years, including the West Texas Permian Basin, the Eagle Ford shale plays in South Texas, and the Mississippi Lime discoveries in Kansas. We are confident that these unconventional oil and gas discoveries will continue to provide engineering and design project opportunities to us in the future.

### **Chad Oil & Gas Facilities**

The Nelson Houston Office began





working for Esso Exploration Production Chad, Inc in 2005 on their onshore oil and gas facilities in Chad, Africa. The original project consisted of production and water injection wells, a new manifold, transmission line, pipeline design and a 2000HP VFD driven water injection pump. Revisions to the existing processing facilities included a new 2 phase separator, two gas compressors and an additional emulsion pump. NELSON has enjoyed continuous project work with EEPCI since that time including two high pressure water injection facilities with 7000hp VFD driven pumps, numerous production manifold projects, water injection wells, studies to enhance production at the treating facilities and we are currently involved with a Turbine Crude Oil Firing project. All of these projects involve detailed engineering design, procurement services including purchasing materials, expediting and source inspection.

#### Present Years and Beyond (2013 - -)

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 fourteen years' time, NELSON personnel have provided engineering services to projects which are located in over 20 different countries. While providing these services, Houston employees have traveled to such locations as Korea, Nigeria, Equatorial Guinea, Angola, the Netherlands, Finland, Russia, Indonesia, Norway, Germany, Canada, Singapore, Papua New Guinea, Australia, Brazil, Cameroon, Chad, Italy, Japan, Qatar, England, Mexico and Monaco.

Business in our Houston Office has continued to flourish. A fourteen 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, and now the opening of an additional office, has certainly provided an additional step in our goal to technical and geographic diversity.

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