

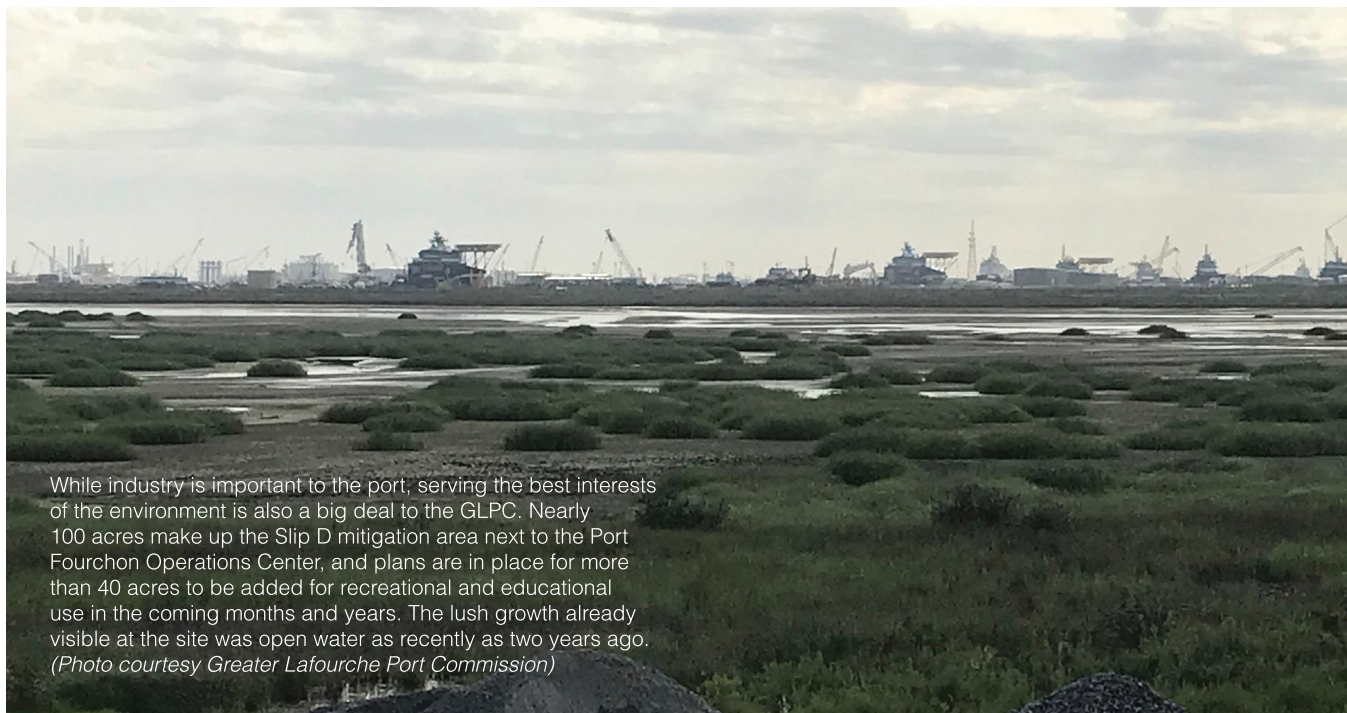
April 2019

Offshore®

**PORT FOURCHON:
GATEWAY TO THE
DEEPWATER
GULF OF MEXICO**



Courtesy of Greater Lafourche Port Commission



While industry is important to the port, serving the best interests of the environment is also a big deal to the GLPC. Nearly 100 acres make up the Slip D mitigation area next to the Port Fourchon Operations Center, and plans are in place for more than 40 acres to be added for recreational and educational use in the coming months and years. The lush growth already visible at the site was open water as recently as two years ago. (Photo courtesy Greater Lafourche Port Commission)

Port Fourchon investment promotes energy and the environment

Holistic approach to management improves vital services and restores endangered wetlands

JUDY MURRAY, SPECIAL CORRESPONDENT

ACCORDING TO Greater Lafourche Port Commission Executive Director Chett Chiasson, the efficiencies that exist at Port Fourchon, which services more than 90% of deepwater offshore energy production in the Gulf of Mexico (GoM), exist nowhere else in the world. There is an enormous volume of commodities supplied – liquid mud, pipe, cement, heavy water, and equipment – and a broad range of services.

“If you combine all the other ports in the entire Gulf of Mexico and their capacity to service the oil and gas industry, they are capable of doing about 25% of what Port Fourchon can deliver,” Chiasson said.

Even in challenging market conditions, the port has steadfastly supported exploration and production activities in the GoM.

WEATHERING THE DOWNTURN

The drop in oil prices took its toll on Port Fourchon just as it did in other areas of the world where offshore operations generate the majority of demand for services and supplies. Unlike in other areas of the world, however, tenants in Port Fourchon had a partner that understood how burdensome it was for many of them to pay rent.

“Originally, rent prices were tied to the barrel price, but at \$60/bbl, it became apparent that the barrel price shouldn’t be the indicator,” Chiasson explained. That realization led to the Port Commission determining rental rates by using the number of assets working in the GoM as the primary consideration, reasoning that it is these drilling rigs that need the commodities provided through the port. “At the peak, there were about 55 rigs working in the Gulf. In January of 2019, there were only about 20,” he said.

The business dynamics are changing, and the “new normal” is particularly impacting vessel operators – many of which call Lafourche Parish home. Utilization rates are low, and these companies are struggling. With oil companies reducing costs, there are fewer vessels under contract, and that is not likely to change very much, Chiasson said.

In April 2015, the Port Commission made the decision to lower rental rates by 20%, and according to Chiasson, rates have stayed low since then. “It is a different way to operate, but we need to make adjustments to support our tenants.”

Although the lower rates impact the bottom line of the port, the reciprocal loyalty between the port and its tenants is too important

to compromise, according to Chiasson. “Historically, consolidation takes place during a shutdown, and more often than not, our tenants have chosen to consolidate in Port Fourchon.”

While a few tenants have relinquished leases for areas that were being used for nonessential services, the port did not lose any tenants. “Every waterfront facility is still under lease,” Chiasson reported. “We have really good customers, and we are thankful for them every day. We’re excited about the future and what is coming.”

EXPANDING LNG

LNG facilities constitute one of the newer investments coming to Port Fourchon. The role of LNG in offshore operations is changing, Chiasson explained, and this has led to local investment by companies like Energy World, which is investing in the area with the construction of what Chiasson describes as a small- to medium-scale LNG conversion terminal that will be called Fourchon LNG. “The FERC prefilling process is under way, and they are getting close to having all relevant information for full approval to file,” he reported.

“This project is not competing with big players like Chenier,” Chiasson said, “but the project will create 100-150 permanent jobs in addition to the jobs that will go to workers who will be employed for the construction phase. This will be an \$800-\$900 million investment, which will take a couple of years.”

The conversion terminal, which will have a maximum capacity for 2 million tons per year (mtpa), is expected to create feedstock for power generation plants in other areas of the world like The Philippines.

With expansion under way at the port, the terminal could be increased to 5 mtpa when the draft in Belle Pass is increased to 15 m (50 ft), he said, which is appealing because it increases LNG capacity locally and enhances the capability and versatility of the port. The lease on the Port Fourchon property will generate revenue and create jobs, both of which are positive for the community.

FLYING HIGHER

In addition to activities at the port, the Greater Lafourche Port Commission (GLPC) is tasked with continued development of the South Lafourche Leonard Miller Jr. Airport. “We are a landlord port,” Chiasson explained, “and like any government entity, we provide basic infrastructure; build roads, put in water lines, dredge channels, build up bulkheads, and build up the land so the area can be developed.” Just as in Port Fourchon, the GLPC is developing the airport as an aviation and industrial hub for the oil and gas industry, service providers, and other air support.

Much of the traffic in and out of Lafourche Parish, especially the southern half, is due to the airport and Port Fourchon. “From majors to independents, just about all of the operators in the Gulf are working in Port Fourchon,” he said. That is one of the reasons why the airport has grown so much in the last several years. “With the notable exception of Chevron Aviation, which is the largest tenant in terms of footprint and airport investment, practically everyone leases crew change services, and many of those crew changes are done out of our airport.”

The amount of traffic in and out of the airport taxes the current



“Expansion here at Port Fourchon is not being done to compete with other yards. We are expanding to increase US capability.” — Chett Chiasson, Greater Lafourche Port Commission Executive Director

road system. In 2018, 139,000 people used the airport, and 197,000 vehicles transited the roads leading in and out of the facility. “It is critically important that we improve access to the airport,” Chiasson said, which is why the decision has been made to invest in expanding it.

At the end of 2018, the Port Commission secured a \$16.4 million Better Utilizing Investments to Leverage Development (BUILD) Grant from the US Department of Transportation that will be used for the airport corridor project to improve access. The BUILD Grant will make up a little less than half of the \$35 million needed to complete the project, which includes the construction of a bridge across Bayou Lafourche and an access road linking the bridge on the Louisiana Highway 1 (LA1) side to LA 3235, which is a back road. According to Chiasson, the balance of the money needed for the project will come from the state coffers, the Port Commission, and Lafourche Parish.

LAYING THE FOUNDATION

Meanwhile, expansion is continuing at the port. Today, there is more than 75,000 linear feet of water front in Port Fourchon, the biggest for oil and gas services in the US, with about 762 m (2,500 ft) of bulkhead waterfront available for lease. But even with this much real estate, the port cannot meet all the needs of operators in the GoM. There are no vessel fabrication facilities, and service is restricted to shallow-water assets that can enter the port via channels that have an average depth of 8.2 m (27 ft).

“We know from the research we’ve done that the US doesn’t have enough capacity to service the rigs in the Gulf of Mexico,” Chiasson said. To become a deepwater rig repair and refurbishment facility for large assets like semisubmersibles and drillships, the port needs to have channels with a deeper draft.

There is a need to increase the country’s capacity to service deepwater assets, Chiasson explained. “Expansion here at Port Fourchon is not being done to compete with other yards. We are expanding to increase US capability.”

In January, the Port Commission submitted a 2,700-page feasibility study to the Corps of Engineers in Washington DC for a proposed expansion that includes purpose-built decommissioning, repair, and refurbishment capability. The report presents both the environmental and economic feasibility of building a 15-m (50-ft) draft channel that will extend 8.8 to 9.6 km (5.5 to 6 mi) into the GoM.

“Ultimately, we believe what sets this project apart is that it is both economic and environmental,” Chiasson said, noting that the environmental aspect is particularly compelling for Fourchon, which is one of the most sediment starved areas of the Louisiana

LA1, the road to prosperity

While the Port Commission is working to enhance offerings in Port Fourchon and improve access to the airport, the LA1 Coalition, headed by Executive Director Henri Boulet, is improving the road system.

According to the LA1 Coalition, this critical, two-lane highway is the only roadway supporting the Louisiana Offshore Oil Port (LOOP), Grand Isle, and Port Fourchon, America's busiest inter-modal energy port. Combined, these locations service more than 16% of the country's crude oil production and 4% of natural gas production. The highway also supports 20% of the nation's seafood production and provides access to eco-tourism destinations like Grand Isle, Louisiana's only inhabited barrier island.

The LA1 Coalition maintains that completing the LA 1 Improvement Project is critical to mitigating lost revenue – which amounts to GDP losses of \$22 million/hour – and preserving safe, long-term access to the US energy supply, abundant seafood production, and vital coastal restoration projects.

At present, 18 km (11 mi) of elevated LA 1 have been completed, from Port Fourchon northward to Leeville, including the new fixed-span Leeville Bridge crossing Bayou Lafourche with its access ramps, at a cost of \$370 million. The LA 1 Coalition is amassing support to fund the remaining 13.4 km (8.3 mi) that needs to be built from Golden Meadow to Leeville. The project's Segment E, which is currently under construction, will widen the existing elevated bridge two-lane structure in Leeville at the 90-degree curve by 533 m (1,750 ft) and extend the elevated roadway northward by 119 m (390 ft) toward Golden Meadow to allow for the tie-in of the next highway segment from the north. That segment's construction represents a \$13.24 million investment. Local industry has partnered in a cost share agreement with the State of Louisiana to build this stretch of road.

Improvements will make travel into and out of Port Fourchon much easier, but there are humanitarian reasons for the expansion as well. The new roadway will not only provide access during weather conditions that historically have flooded the present road system but also will facilitate hurricane evacuation and improve emergency response times for Port Fourchon and Grand Isle.



Port Fourchon services more than 90% of deepwater offshore energy production in the GoM. (Photo courtesy Greater Lafourche Port Commission)

The foundational precept for this program is that industry and the environment are not mutually exclusive. “We live this in Louisiana, and we need to change the mindset of others,” Chiasson said, citing Port Fourchon as a microcosm of industry and environment working together. “We can coexist, providing the energy needs for our country and doing really good things for the environment.”

He pointed as an example to the development in Slip D, where work is already under way to rebuild the marsh. When it is completed, this area will be an interactive mitigation area with integrated land use. Slip D will accommodate new tenants for the port, but it also will provide access to 90 acres of newly created mitigation area that is viewable from the road.

“At the end of the day, there is going to be a tidal creek for kayaks and pirogues that will be full of birds and wildlife,” Chiasson said. “The material that is being pumped in is nutrient rich and will attract animals and birds to an area that will be covered quickly by grasses and plants.”

The Port Commission is working with Barataria-Terrebonne National Estuary, using data to identify the best plants to grow to

create a bird habitat, which Chiasson envisages as a sort of park that will be open to school-age children, who will be able to visit a pavilion and use viewfinders at lookout stations to identify the flora and fauna of a lush marsh, teeming with wildlife.

“We use the expression, ‘holistic resiliency’ when we talk about restoring wetlands with reclaimed material from dredging. With this program, we won’t just be tossing around this phrase, we will be creating an industrial facility with a beautiful marsh that shows what holistic resiliency looks like. That is what we’re trying to accomplish. We know it will work,” he said.

coast.

Initial dredging will create 15.3 million cu m of material, 9.2 million cu m of which will be used to build up land for facilities. The remaining 6.1 million cu m of dredged material will be available for rebuilding the coast. Over 50 years, the expansion project will produce 50.5 million cu m more, totaling 65.8 million cu m that will allow 4,000 acres of new marshland to be established.

“In a sediment starved area, we are creating material that we can utilize to meet the goals of the Louisiana Coastal Master Plan – rebuilding the coast to protect ourselves,” Chiasson said.

“We’re not just taking the material and putting it somewhere,” he explained. “As members of the Partnership for our Working Coast, we are working with the Water Institute of the Gulf, using environmental science to determine placement of material for the best asset protection and greatest benefit to people.”

CONTINUING TO LEAD

Expanding Port Fourchon to serve the deepwater industry is of critical importance, but it is essential that the pace of development and the type of expansion align with demand. By tracking the ebb and flow of industry needs, the Port Commission will determine the pace and the scope of development.

Regardless of the challenges presented by changing conditions, there is a commitment to expanding capabilities at Port Fourchon to enhance service for the GoM and to fulfill the obligation to environmental stewardship with the simultaneous improvement of the coastal marshlands.

“We are continuing development,” Chiasson said. “We are ready to meet demand today, and we are taking the steps now to be able to meet demand tomorrow.” ●

A High-Pressure, Solids-Free Completion Fluid Solution for Environmentally Sensitive Wells

Starts With TETRA CS Neptune® Fluids

Our innovative high-density TETRA CS Neptune completion fluids are free of priority pollutants. Our fluids help address the environmental challenges facing offshore oil producers seeking an alternative to zinc brines. Costing significantly less than alternative completion fluid chemistries, they can also be used as the basis for low solids reservoir drill-in fluids or in other applications where a high density, environmentally acceptable fluid is required.

Visit TETRAtec.com/Neptune to learn more or contact us at Completion-Fluids@TETRAtec.com for more information.

TETRA Completion Fluids and Additives

Zinc-Free, Formate-Free System • Clear Brine Fluids • Dry Salts •
Fluid Loss Control and Bridging Agents • Breaker Technology •
Corrosion Control • Formation Protection • Iron Control • Oil Control •
Hydrate Inhibition • Foam and Friction Reducers pH Control and Buffering Agents •
Rheological and Filtrate Control • Laboratory Services

04/19 © TETRA Technologies, Inc. All Rights Reserved.



Systems deliver safe, secure service

Rethinking processes and focusing on people deliver top-flight efficiencies

BRISTOW GROUP has a long history of service in the aviation industry. Established in 1955 as Bristow Helicopters Ltd. in the UK, it sold a stake in the organization to Offshore Logistics in 1996, and in 2006, was rebranded as Bristow Group Inc.

Over the decades, the roots Bristow sank in the UK reached around the globe. Now headquartered in Houston, the company serves most of the offshore oil and gas producing regions of the world – including Australia, Brazil, Canada, Russia, and Trinidad – with major operations in the North Sea, Nigeria, and the US Gulf of Mexico (GoM). Providing industrial aviation services that include helicopter transportation, search and rescue and aircraft support for both government and civil organizations, Bristow is the top company in this sector and is the busiest provider of critical logistics and safety services in Port Fourchon, Louisiana, serving its GoM customers from multiple area locations.

KEEPING THE GOM WORKING

Managing crew transportation and making sure workers arrive safely are central to ensuring continuing operations on the offshore rigs working in the GoM. The majority of drilling contractors and operating companies hire out this service, and once they have done so, they expect transfers to happen like clockwork so drilling and production can progress as planned. Dependable logistics services are critical because shift changes that do not happen as they should can disrupt operational continuity, and risky or unreliable service can jeopardize the safety of offshore workers.

According to Tony Hermans, Base Manager at the Bristow facility in Galliano, Louisiana, the way to ensure reliable service is to establish and adhere to systems that streamline operations and leave as little room as possible for mistakes.

“Our mission is to provide the safest and most efficient helicopter services and aviation support worldwide,” Hermans said, “and the way to make that happen is to



Bristow is the busiest provider of critical logistics and safety services in Port Fourchon, Louisiana, serving the GoM. (Photo courtesy Bristow Group Inc.)

continuously evaluate how our services are set up and carried out and figure out where improvements can be made.”

STREAMLINING SERVICE

One of the first things Hermans did when he arrived in Galliano a few years ago was look at the layout of the Bristow facility and observe offshore crews as they went through the check-in process.

“I watched people come into the waiting area, where they filled out their preflight forms and stored their gear while they waited to be assigned to a flight,” Hermans said, “and I could see from the start the orientation of the room made the process required to check workers in more complicated than it needed to be.” To make things go more smoothly, Hermans sat down with his team to rethink the layout of the waiting area.

The changes were significant. Not only were the check-in counters, baggage storage and waiting area reorganized to make the process more fluid, the entire check-in system was upgraded to use computerized equipment to improve accuracy, simplify tracking, and decrease processing time.

“People used to come in and sign in on a paper form and hand it to our dispatchers to record it,” Hermans said. “Now, we have kiosks for sign-in. Instead of recording everything by hand and trying to keep track of who is here, how many bags they brought, and how much the people and bags weigh, we have them check in at a kiosk where all that information is recorded.”

A worker who is checking in stands on scales at the kiosk and scans an identification card. After weighing in, he or she indicates the number of bags that will go onboard and places the bags on the scale so they can be weighed. The information appears on the computer terminals manned by dispatchers, who can immediately see who has checked in, the



WWW.C-INNOVATION.COM



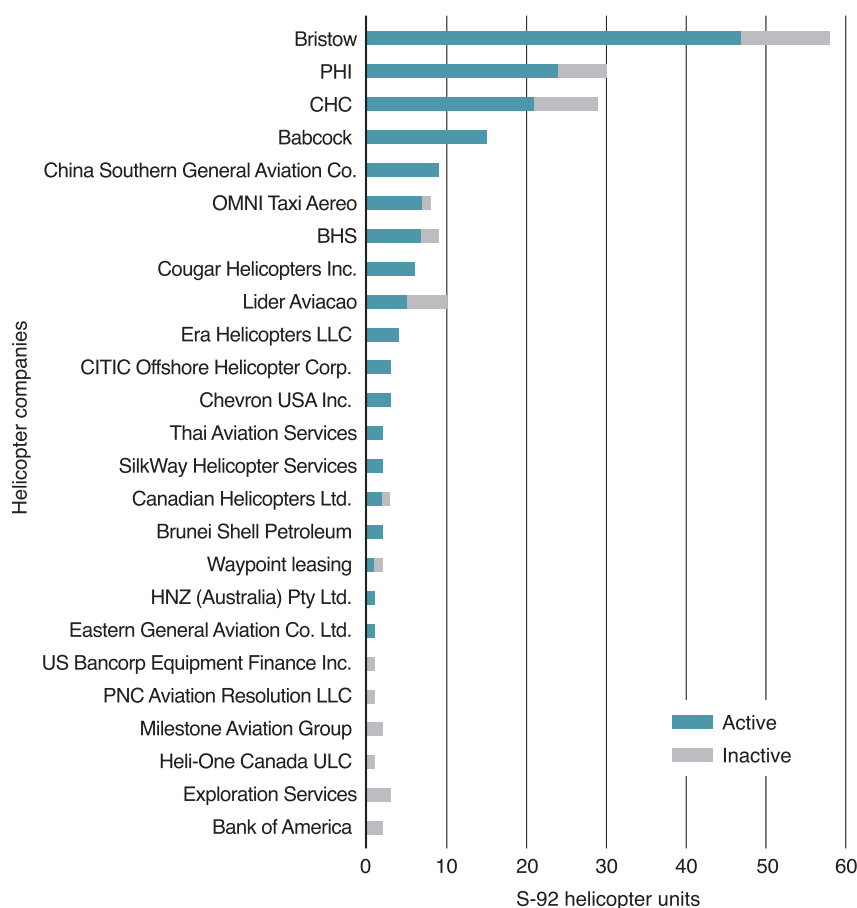
SINGLE SOURCE **FOR** SUBSEA SOLUTIONS

C-Innovation (C-I) is an integrated marine services company specializing in advanced subsea solutions. C-I operates in a worldwide arena with core services and products evolving around remotely operated vehicle (ROV) services and subsea construction. Our primary focus is engineering, project management and operations of subsea field development in the oil and gas sector.

E | SUBSEASERVICES@C-INNOVATION.COM

P | 985.612.1700

Active S-92 Units by Operator (Grouped)



Source: "World Offshore Helicopter Report," Westwood Global Energy Group

company the person is with, the person's weight and the number and weight of the bags.

"It takes about a minute the first time," Hermans said. "After someone has checked in once, the process is faster; so the next check-in takes about 20 seconds."

Making the waiting area more user friendly was also on Hermans' list.

"I looked around and realized there was nothing for people to do while they waited," he said, "and sometimes, people are sitting here waiting for hours before their flight leaves."

Seeking to get better value from what otherwise was wasted time, Hermans began thinking about what kind of information would be helpful for offshore workers while they waited. That led to installing screens on what previously was a blank wall. Today, as passengers await their flights, they see multiple screens that are scrolling site safety rules and guidelines, displaying live weather coverage, and tracking Bristow aircraft moving across the Gulf dropping off and picking up passengers and supplies.

IMPROVING THE PROCESS

As the time nears for the next flight to go out, each passenger assigned to the flight is called by name and logged in. As the crew member stands in front of the dispatcher's desk, sensors on calibrated scales in the floor verify his or her weight and the weight of the luggage that will accompany the worker to the offshore job site. "This is unique to Bristow," Hermans said, "and it really improves our accuracy."

Once the person passes the dispatchers, the next step is to go through a metal detector. In addition to personnel, every package that enters the facility is scanned. After the scanning process, the next step is the safety briefing room, where smart screens display a safety

message that lasts between five and eight minutes. Then it's on to a holding room that opens out to the back of the building, where trams take workers to the aircraft.

"We've made the whole process seamless," Hermans said. "It's poetry in motion."

Activity in and around the building is captured on closed-circuit televisions (CCT), which means Bristow has a record of every person who passes through the facility from sign-in to departure. Hermans and his team continuously review CCT recordings to identify areas of inefficiency and activities that could be made safer.

While the cost of these upgrades was not insignificant, Hermans said, it has allowed Bristow to create a process that is faster, smoother, and safer.

STEPPING UP SAFETY

Safety, after all, is really what Bristow is selling, Hermans explained. "It's by delivering safety that Bristow earns the confidence of its customers every day."

Achieving safety excellence is the goal of the company's safety program, Target Zero, which has created a culture of safety at every level of the organization. "We address safety issues on the spot, and every single employee understands he or she has stop work authority," Hermans said. "We understand that we aren't just a logistics company. We are selling safety and service."

Firm rules dictate how processes are performed. "We load people, cargo, and fuel, and no two are ever done at the same time," Hermans said. Entry and egress are always controlled, and passengers always get on and off one side of the aircraft.

"Streamlining activities and having a specific way of doing things eliminates distractions and minimizes the likelihood of an accident," Hermans said. "We set expectations for what is required. We do what we say we're going to do. And we constantly communicate."

"The most important thing is safety," Hermans said. "If you have safety as the foundation, you can build on it to deliver better service. By delivering safety and continuously improving our safety programs we take the argument away for using another provider." ●



SOUTH LAFOURCHE LEONARD MILLER JR AIRPORT

HOW THE GULF GETS TO WORK

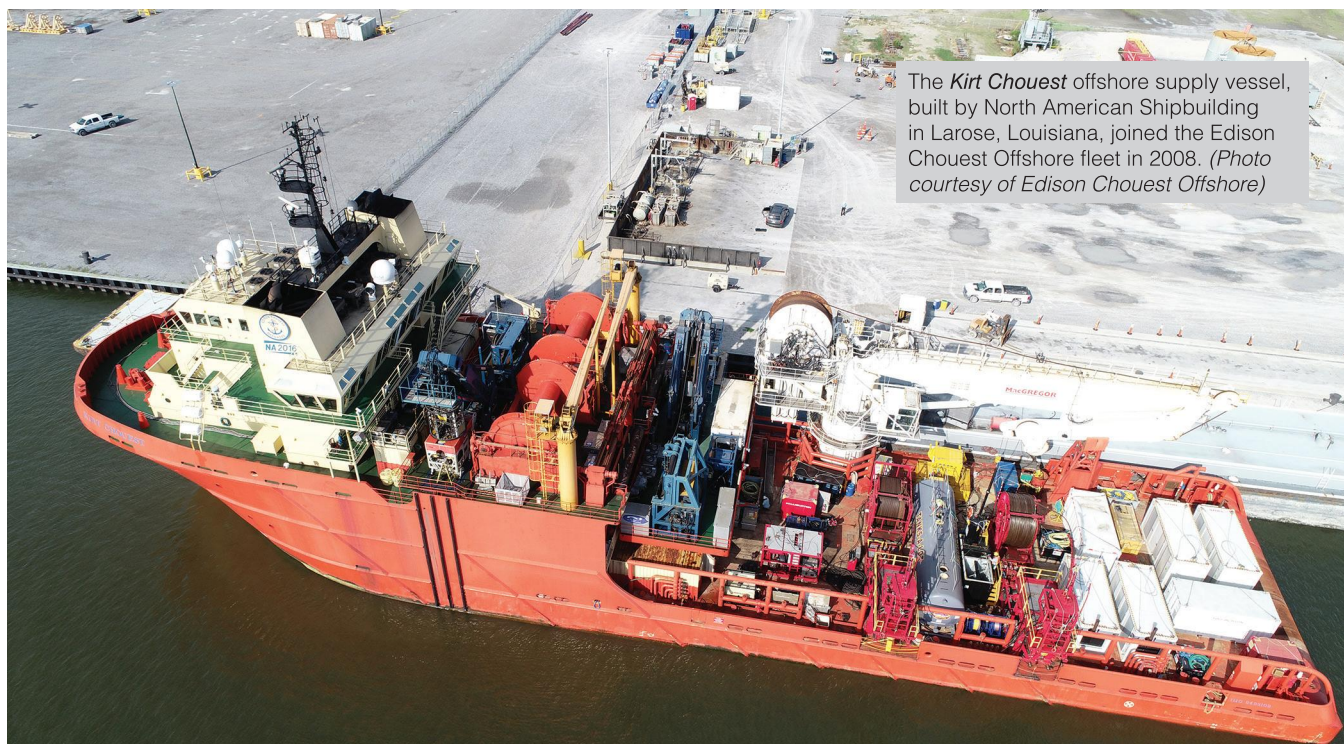
SOUTH LAFOURCHE AIRPORT

- The South Lafourche Airport (GAO), located along Bayou Lafourche in close proximity to Port Fourchon and the Gulf of Mexico, is the ideal jumping off point for aviation logistics to service and support the Deepwater oil industry.
- GAO has become the fastest-growing airport in Louisiana by offering round-the-clock service for both tenants and visitors. We pride ourselves on offering fuel at competitive prices as well as providing self-serve fueling capabilities 24/7. Our 6,500 ft. runway and full instrument landing system (ILS), located inside the protection of two levee systems, allow us to handle nearly any aircraft.
- Whether for work or for play, GAO is perfect for your travel needs throughout South Louisiana and right across the Oil Patch.



**GREATER
LAFOURCHE
PORT COMMISSION**

**flygaoairport.com
985.475.6701**



Leveraging location for exceptional support

Premier positioning enables efficiencies for delivering outstanding service

C-INNOVATION (C-I), an affiliate of Edison Chouest Offshore (ECO) and its family of companies, is an integrated marine services organization that specializes in advanced subsea solutions, with core offerings centered around subsea construction and remotely operated vehicle (ROV) services.

The company is headquartered in Mandeville, Louisiana, with the C-I Project team based in Houston. It is a global organization that extends its reach and the breadth of its offering through an affiliation with the diverse family of companies within the ECO group. According to David Sheetz, manager of the company's Subsea Division, "C-I provides fully integrated subsea solutions for complex projects, delivering novel solutions developed by a team that is knowledgeable in every aspect of subsea field engineering and design."

The company's bread and butter is developing innovative engineering solutions and providing project management expertise for subsea field developments. As a turnkey subsea projects group, C-I has built up its technical capabilities to take on the most challenging subsea projects, and it is leveraging access to ECO's fleet of specialized high-end vessels to deliver flexibility in project execution.

"C-Innovation's greatest asset is our people," Sheetz explained, "and with access to the ECO fleet of vessels, port facilities, ROVs and other assets, the C-I project group can leverage extensive internal resources to deliver cost-effective solutions."

Being able to combine its expertise with these assets gives C-I an edge over other subsea solutions providers, Sheetz said, but its recent decision to open a new dock facility in Port Fourchon, Louisiana, expands the capabilities of the subsea services group even more.

Delivering efficiencies is critical in a market where the oil price is down, and operating costs are high, Sheetz explained. "The dynamic within the industry has changed; so finding ways to deliver services more quickly and efficiently is not just desirable, it's indispensable if we want to be able to compete."

SETTING UP SHOP

Leasing space in Port Fourchon presented a way to differentiate itself, and the company gave considerable thought to what it wanted before picking out its spot at the port.

One of the considerations for the facility was that it would need to accommodate the sizable vessels in the ECO fleet, which includes a newbuild, Hull #298, being completed at the ECO Tampa Shipyard. The yet-to-be-named vessel is based on a 95-m (312-ft) design. Set to launch in the summer of 2019, the newbuild will be outfitted with a 150-metric ton crane and two ROVs. According to Sheetz, plans are in place for a second newbuild to be added to the fleet in 2020, a 110-m (360-ft) construction vessel with two work class ROVs and a 300-metric-ton crane, which he says will be the largest on a Jones Act

Visit us during OTC at Booth 2639

TAKING B2B MEDIA TO NEW HEIGHTS

Oil & Gas Journal and Offshore magazine
are now part of Endeavor Business Media

Learn more at EndeavorBusinessMedia.com



**OIL & GAS
JOURNAL**

Offshore



C-I provides fully integrated subsea services from Port Fourchon, with core offerings centered around subsea construction and ROV services. (Photo courtesy Edison Chouest Offshore)

vessel in the GoM.

“We knew we needed to have our own slip close to the open waters of the Gulf so we can load out these bigger boats and get them back to work quickly,” Sheetz said. “Our location is ideal because we are closest to vessels coming out of the Gulf.”

With more than 168 m (550 ft) of open quayside and nearly 5 acres of gated storage, Bayou Lafourche is the main entrance into the ECO facility, which is supplied with a Manitowoc 777 crane and forklifts for rapid mobilizations of the company’s subsea construction and inspection, maintenance and repair fleet. “We understand that time is money,” he said, “and that was top of mind when we set up our dock area to deliver as many efficiencies as possible.”

One of the distinguishing characteristics of the facility is the amount of storage available. “Having covered storage on site means we don’t have truck drivers all over Fourchon. The extent of the storage area enables us to stage materials and equipment for multiple jobs in separate areas. We have gone into the facility and designated bays A, B, and C as staging areas and have set them up for maximum efficiency.”

The extent of the spares kept in the Port Fourchon facility

is impressive. In addition to standard supplies and materials, third-party equipment like coiled tubing can be stored on site. “I don’t know of another location with enough storage space to do that,” Sheetz said.

There is considerable savings to be captured on both sides. “We have very close relationships with service providers who have agreements in place to store materials on site so it’s available when needed.” What that means in concrete terms is less time and energy spent moving things around, Sheetz explained, providing coiled tubing reels as an example. “It costs about \$30,000 to move big reels offsite to another facility and back, but we don’t have to do that. The only time we send reels back is when a new piece of coiled tubing needs to be strung on the reel, and that can be scheduled so it doesn’t interfere with our other operations.”

When it comes time to load out vessels, prestaging allows a reduction in time that enables boats to get in and out quickly. “We have reduced large project mobilizations from a typical five to six days to two to three days,” Sheetz said. “That is two to three days of real savings to the client.” It is all about gaining efficiencies, he said. “When mobilization is scheduled to begin, it can happen quickly because we don’t have trucks sitting in the area waiting to offload. Instead of managing the logistics of vehicle traffic, we can put a crane to work immediately to begin loading out a vessel.”

Other features designed into this facility not only improve basic functionality, but also improve conditions for onsite workers. The building is outfitted with offices for clients and conference rooms with full streaming connectivity, and there is designated parking for offshore crews as well as onsite housing for up to 20 workers in several bunkhouses that feature full laundry services, kitchens, and lounge areas.

“In a lot of ways, staying on our site is more comfortable than a hotel,” he said. “Another plus for crew members that use these facilities is that they are closer to the work site so they don’t have to travel back and forth, which translates into more downtime.”

The dock facility, which will be manned 24 hours a day, will be the base for C-I’s Fourchon operations. The value of this arrangement is not lost on the industry. According to Sheetz, C-I has already secured two major awards for long-term well intervention programs from major operators that previously contracted services from other companies.

“This new facility supports our mission of serving as the single source for subsea solutions,” Sheetz said. “By having our own dedicated dock facility, we can immediately respond to customers and instantly mobilize resources. The ability to store critical components locally in Fourchon instead of mobilizing from our main base in Mandeville will allow us to reduce operating expenditure.”

The goal from the outset was to lay out a facility that is easy to access, can quickly outfit work vessels, and that provides C-I’s industry partners with cost-saving services. “By achieving that objective, we have improved efficiencies and decreased costs for our customers,” Sheetz said. ●



Month After Month. Year After Year.

Only the committed and information-hungry have gained the experience to help you survive over 60 years of cyclical storms in the marine/offshore industry.

ESTABLISHED IN 1954

Offshore – The first choice for readers, the right choice for advertisers.

Technological expertise, dedication, and a wealth of knowledge gained in over 60 years makes *Offshore* magazine *the* information source for the marine /offshore oil & gas industry.

Many publications are claiming to be a reliable provider of industry information. Yet to be a stable information source, a publication must be willing to weather *all* of the storms in order to consistently present credible editorial content.

For over 60 years, *Offshore* magazine has never wavered from being *the* information source for the marine/offshore industry, in both the good times . . . and the bad.

Offshore magazine provides more coverage of the world's major offshore oil and gas producing regions than any other competitive publication. Timely updates are always accessible through print and digital magazines, global events, eNewsletters, maps, posters and online. For reliable, informative industry trends, analysis and insight into the evolving nature of the industry itself, there is still only *one* choice . . .

Offshore®
World Trends and Technology for Offshore Oil and Gas Operations

1455 West Loop South • Suite 400
Houston, Texas USA 77027
Phone: 713 621 9720
www.offshore-mag.com



TETRA has deep roots in Port Fourchon and has expanded its presence six times since the company set up its first facility 35 years ago. (Photo courtesy of TETRA Technologies, Inc.)

Making the most of location to provision offshore operations

Leading-edge completion fluids from Port Fourchon enable deepwater development in the GoM

DRILLING AND COMPLETION can make up as much as 50% of field development costs for deepwater wells. Completion fluids, typically brines made of halides (chlorides and bromides), formates and nitrates, facilitate the final steps that transform a drilled well into a producer. Smoothly making the transition to production – and profitability – relies in great part on using the best completion fluids.

Formulating completion fluids is big business, and it constitutes one of three business divisions of TETRA Technologies, Inc., a geographically diversified oil and gas services company. The TETRA Completion Fluids & Products Division manufactures clear brine fluids, additives, and associated products and provides completion services around the world.

The company focuses on providing specialized solutions that improve quality, safety, and productivity while meeting

relevant regulatory requirements. Experienced chemists are at work in a global network of laboratories to develop leading products that include high-density fluids, enhanced brine additives and mud displacement systems.

SERVING THE GOM

Headquartered in The Woodlands, Texas, TETRA has four facilities in Louisiana, including one in Port Fourchon that specializes in completion fluid services. According to Barry Barrett, Operations Service Quality Manager, having a facility of this size with a range of capabilities enables the company to provide a breadth of services for drilling and completions contractors and operators in the Gulf of Mexico (GoM).

The 23,226-sq m (250,000-sq ft) facility has 348.4 sq m (3,750 sq ft) warehouse capacity and sits on 259 m (850 ft) of

waterfront bulkhead with 6.7 m (22 ft) water depth. There is a 185 cu ft/min air compressor on site as well as a 150-ton crane and two forklifts rated for 4 tons and 18 tons. Material can be loaded simultaneously on two boats using 6-in. load lines flowing at 31.25 b/min and 4-in. load lines flowing at 12.5 b/min.

The onsite clear brine fluid (CBF) plant houses two covered 265-bbl CBF mix pits, three 500-bbl covered mix pits, 62,000 bbl of fixed asset storage capacity and 9,000-bbl CBF staging tanks for pre-blending orders.

TETRA delivers clear brine fluids, chemical additives, lube oils, drill water, potable water and diesel fuel from the Port Fourchon location and provides complete crane services as well as filtration and fluid reclamation services to the GoM. Accommodations on site provide housing for workers, who staff the facility on seven-day shifts.

Having these capabilities in Port Fourchon is important, Barrett said, because it allows the company to provide a broad range of services to its customers in the GoM.

PROVIDING LEADING SOLUTIONS

Being able to load vessels and move products around the facility is essential in the bigger picture of servicing the GoM, Barrett said, but the most critical thing is to be able to provide the completion fluids operators need offshore.

There are a lot of factors to consider when formulating completion fluids, said Barrett, and as drilling conditions change, the composition of completion fluids has to keep pace.

“As drilling advanced into deeper water, the conditions encountered – cold temperatures and high pressure – exceeded the parameters of traditional fluids. When completion fluids get colder and pressure is increased, the risk of crystallization increases, which means that solid salts can precipitate, and they can certainly lock up the well,” he explained. “When the industry moved into deeper water, where temperatures are lower and pressures are higher, there was a clear need for new completion fluids that could work under these more demanding conditions.”

Replacement formulations were developed to fill the void. Some used zinc – an element that has since been classified in the US as a marine pollutant and has been banned in the North Sea. Others used cesium formates. These do not present environmental risks, but unfortunately, they are very expensive.

TETRA looked at the industry need and set a goal to develop a completion fluid that was safe for the environment and would not introduce additional health hazards to workers involved in mixing it or handling it. This was an admirable objective, but environmental responsibility was not the only driver. The company also wanted to address supply continuity concerns. Not only is cesium expensive, but availability is constrained. TETRA was determined to develop a completion fluid that used renewable products, could be formulated at a reasonable cost, and required no special mixing, handling, or storage equipment at the rig site.

The result is a family of reusable products that can be formulated as a low-solids, reservoir drill-in fluid as well as a completion fluid.

“Our TETRA CS Neptune fluids deliver a higher density with a low crystallization point,” Barrett said. “The fluids have a neutral pH, so they pose lower health and safety risks to workers in the field, and because they are zinc-free, there is no need for a zero-discharge system. A big plus is that the fluids can be reclaimed using standard technology and recycled in our plants for reuse.”

Barrett is proud of the success of these products, and he is looking forward to the next generation of fluids, which he said will be able to deal with even more exacting environments.

He also is glad to be able to offer the company’s products from the facility in Port Fourchon.

“We are fortunate that we not only have a great product but a fantastic location for serving our clients in the Gulf,” he said.

WORKING FROM THE PORT

TETRA has been a tenant in Port Fourchon for 35 years.

“We’ve been on the same dock since day one,” Barrett said. “It’s been an ideal spot for us for years and years.”

At one time, being “ideal” meant workers could hunt ducks during off hours. Today, it means an established presence in a location that allows the company to provide quality service to its GoM clients.


“It’s been a premium spot for us for a long time,” he said. “Off Port Fourchon, the shelf does not extend as far out into the Gulf, which makes it easier to access deepwater from this location,” he explained. “Morgan City used to be a big service location, but vessels had to travel up the Atchafalaya River to get there. Similar transit challenges apply to Venice and Cameron. Our location just makes things easier for us and for our customers.”

TETRA has deep roots in Port Fourchon and has expanded its presence at the port six times since the company first set up shop there.

“If we are not the largest in the world, we certainly are one of the world’s biggest completion fluids plants in terms of capacity,” Barrett said.

While location is a clear advantage, Barrett said, the partnership with the Port Commission is just as important. “They provide protection for all the companies that work here. They communicate with us all the time to keep us informed of hurricanes, flooding, and road closures. And they advocate for improvements to the coastal environment, which is something all of us value.”

The role Port Fourchon plays in helping TETRA and the other tenants provide services for the GoM is important, Barrett said, but the bigger role of the port reaches far beyond the region.

“Port Fourchon is important to the entire United States, not just the state of Louisiana,” he said. 

READY TODAY. READY FOR TOMORROW.

PROGRESS HAPPENS AT PORT FOURCHON

Centrally located on the Gulf of Mexico in southeast Louisiana, Port Fourchon, the Gulf's Energy Connection, is an established service hub with a world-class reputation for efficiency. The port acts as one concentrated market for high-quality and cost-effective energy industry supplies and services from a variety of equipment, service, and logistics companies.

Port Fourchon has a history of safe, responsible, and resilient property development, with each new site tailored for both business and environment, permitted and shovel-ready.

We're working to keep Louisiana's "economic engine" running by developing and improving port properties, supporting businesses that provide jobs, and expanding to meet the needs of our tenant companies now and into the future.



**GREATER
LAFORCHE
PORT COMMISSION**

**portfourchon.com
985.632.6701**