

PICO ENERGY Technologies LLC



T O D A Y

A subsidiary of PICO ENERGY GROUP

OTC



EDITORIAL

Top Restaurants in Houston

1)Chama Gaucha Brazillian Steakhouse
Brazilian Steakhouse
5865 Westheimer Rd, Houston, TX 77057
713-244-9500

Immersed in a heritage spanning back centuries, Chama, or “flame”, describes the passion our Gauchos have for their culture and tradition. At the end of the day, they gather around the churrasco to eat and share stories. Chama pays respect to the simplicity of slow cooking meats; always handpicking the finest cuts daily and seasoning to enhance the natural flavors.

2)Pappas Bros. Steakhouse
American Steakhouse
5839 Westheimer Rd, Houston, TX 77057
713-780-7352

Putting a mouthwatering steak on the plate starts with sourcing the best cuts of beef. We get all our beef from a single packer in the Midwest, allowing us to retain tight quality control. We use corn-fed beef, and USDA Prime graded cuts – the highest quality rating. Because we serve so much beef and take the time to dry age the meat in-house, we rely on efficient forecasting to ensure we never have shortages.

3)Uchi
Japanese, Sushi
904 Westheimer Rd, Houston, TX 77006
719-522-4808

Combining local seasonal ingredients with an infinite spectrum of seafood from around the globe is the basis for Uchi’s culinary philosophy. We maintain close relationships with local farmers and we fly in seafood every day from both Fukuoka and Tsukiji markets in Japan. At Uchi we prepare our dishes using innovative food combinations for the most unique dining experience in Houston.

4)Taste of Texas Restaurant
American Steakhouse
10505 Katy Fwy, Houston, TX 77024
713-932-6901

Serving only perfectly aged Certified Angus Beef, the finest steaks and prime rib available. Owners Nina and Edd Hendee opened the restaurant in 1977 which has become a Houston landmark steakhouse. The Taste of Texas is known for its great service and Texas hospitality. The restaurant’s award winning wine offerings complete both corporate and family gatherings and is a favorite for steak enthusiasts.

5)Pax-Americana
Modern American Fare
4319 Montrose Blvd, Houston, TX
713 239 0228

PAX-AM is a neighborhood restaurant & bar featuring modern american fare. We seek out the best local meat, fish and produce along with an innovative, well curated, cocktail, beer and wine program to provide the best possible ingredients for our guests. We feature an all-American, small producer wine list representing many European varietals cultivated to represent a sense of true terroir and showcase the diversity available in the U.S.

PICO Technologies:

a technology provider of sophisticated oil field equipment and tools specialized in open-hole wireline logging and progressing cavity pumps systems; as well as upstream services provide specialized in Surface Well testing.

Superior, differentiated, cost-effective; are all illustrative of what PICO Technologies offers to the market.

Founded in 2008, PICO Technologies started to serve as the research and development arm of PICO Group. PICO Technologies offers a complete portfolio of services including electronic and mechanical design, research and technology consultation, prototype development, commercialization, sales and marketing, product development, product management, and after sales support. This technology arm addresses the operating needs of the E&P industry by focusing on developing patented proprietary openhole wire line logging tools and production optimization controllers for progressive cavity pump systems. A relatively new addition to the PICO Energy family, PICO Technologies has worked to improve the functionality and operating efficiency of existing technology. PICO Technologies’ tools are based on Gearhart open hole tools but offer modern updates which facilitate efficient operation of the wireline logging equipment.

With a team of more than 20 employees and contractors, in the research and development center Houston-based PICO Technologies has successfully developed and patented a set of high quality open hole (Triple Combo) tools including Telemetry, Natural Gamma, Spectral Gamma, Neutron, Density and Array Induction. These cost efficient tools have been field tested and have shown results comparable to the majors and independent players in the market; with more intense field validation testing to be completed. PICO Technologies’ Triple Combo sets are on pilot production; meanwhile, developments are ongoing for Full-Wave Sonic, Imaging, and Pulse Neutron tools.

PICO Technologies is a humble member of PICO Group. PICO Group has an established Well Testing business unit that provides Surface Well Testing to high profile E&P clients across the globe in The Middle East and Mexico, now expanding in USA market under the umbrella of PICO Technologies, thus concentrating on South and West Texas market. PICO Technologies has the equipment, technology and personnel that provide a high quality job with the most competitive price to gain a remarkable access to the market and a bigger market share. This success is a hallmark of PICO Energy Group



companies, which offer upstream, marine, logistics, R&D and R&A services that meet the demands of high-profile national, regional and global clients in the Middle East and North America.

The Group is comprised of distinct, independent, integrated companies, including: PICO Petroleum Integrated Services, PICO Technologies, PICO Marine Services, PICO Logistics Services, and PICO Research & Analysis.

PICO Technologies success is derived from PICO’s partnership with Marvin Gearhart. PICO and Gearhart’s partnership was established in 1986 when Gearhart helped PICO become the first Egyptian company in the region to own and operate logging equipment. This partnership paved the way for partnerships with other majors and resulted in the addition of the E&P sector to the Energy Services Group. The technical expertise that has been established over the past 30 years has allowed PICO Technologies to branch from Open-hole wireline logging projects to others such as PCP artificial lift systems and allowing it to provide a high quality service to the Surface Well Testing.

PICO Technologies’ efficient and high standards business model has positioned the company to capture a slice of the market share in this highly competitive field.

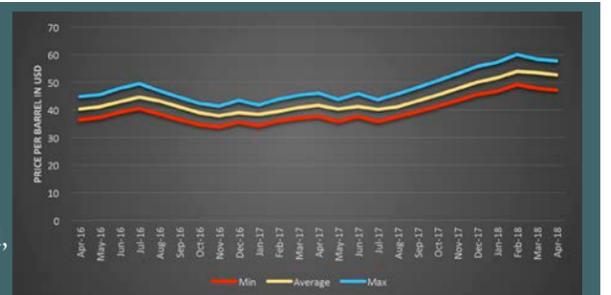
A number of buyers have shown interest in PICO Technologies’ products, and it seems it will only be a matter of time before the company’s efforts prove to be very valuable beyond the open hole logging market.

This company is one to keep an eye on.

Contact PICO Technologies:
PICO Technologies LLC
19407 Park Row
#130
Houston, TX 77084
Phone: (956) 688-8201
Website: www.picotechnologiesllc.com

Oil Forecast: The New Normal

Expect oil prices to remain around the \$50/barrel mark for the upcoming year. The US Energy Information Administration (EIA) models show that if OPEC keeps its production cuts in place through June 2017 as promised, supply and demand will be roughly in balance, and we could see supplies fall below consumption in the second half of the year. Expect the industry to remain within this “medium-low for longer” price level for some time, with the potential for continuous short-term cyclical fluctuation.



PICO Today



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PICO 4... Who Cares About Daily Rates?

PICO 4 offers turnkey offshore work-over projects with risk sharing models, starting from evaluation and planning, through to implementation; and all entirely at PICO's own risk.



PICO 4, a self-propelled Jack-Up-2 barge with offshore work-over service units:

- Dimensions: 176ft x 113ft x 13ft
- Three-legged; length 280ft (8'6" diameter); watertight; legs fitting at bottom
- Usable deck area: 11,000ft² (~1200m²)
- Environmental condition elevated in normal operations:
 - oMaximum water depth (incl. tides): 200ft
 - oWave height: 12ft
 - oWind velocity: 70 knots
 - oAir gap: 60ft
 - oLeg penetration: 10ft
 - oFuel storage tanks: 28,000 gallons

“ Our primary responsibility is to ensure having the highest calibers within our team to carry out our Strategy well into the future.”

Eng. Salah Diab,
Chairman of PICO Corp



“ The factory of the future will have only two employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment.”

Warren G. Bennis



“ The real problem is not whether machines think but whether men do.”

B. F. Skinner



“ Should you find yourself in a chronically leaking boat, energy devoted to changing vessels is likely to be more productive than energy devoted to patching leaks.”

Warren Buffett



“ Almost every way we make electricity today, except for the emerging renewables and nuclear, puts out CO₂. And so, what we're going to have to do at a global scale, is create a new system. And so, we need energy miracles.”

Bill Gates

PICO Today



- oFuel day tanks: 15,000 gallons
- oFresh water tanks: 29,200 gallons
- Deck Load
 - oDesign main deck load (ABS standard): 525lb/ ft²
 - oVariable deck load: 1,000 kips
 - oAccommodation: 64 person (upgradable)
- oGenerators
 - Ship service generators
 - 2 Caterpillar marine generator sets, each rated at 500cKW at 1800 RPM, 480V
- oEmergency generator:
 - 1 Caterpillar marine emergency generator rated at 250cKW at 1800 RPM, 480V
- oMain engines:
 - 2 Caterpillar marine propulsion engines, each operating at 1910 BHP at 1600 RPM
- oJacking system
 - Speed: ~6ft/min
 - 2 Caterpillar marine power at 916 HP at 1800 RPM



M.V. "NEPTUNE" Anchor Handling/ FiFi-1/System/Supply Boat

Vessel Main Characteristics

Flag: Egyptian
 Built In: ND
 Port of Registry: Port Said
 Class: ABC Ocean going + A1 (E) + AMS Tug Supply
Principal Dimensions
 LOA: 56.55m
 BOA: 13.50m
 Max Draught: 5.06m
 Dead Weight: 1123
 GRT: 1171.88 tons
 NRT: 366 tons
Speed
 Max: 13.7 Knots
 Fuel Consumptions in Tons/Day:
 7Kn @ 2.4 T - 8Kn @ 3.2 T 9Kn @ 4.1 T - 10Kn @ 5.2 T
 Rudders: Two Independent operated type rudders
 Miscellaneous: Sewage plant. 1

fuel oil separator, halon fire fighting equipment in engine room
 Fire Fighting: FI-FI Class 1/Spray System
 System: Two pumps of 3280 m³/h at 14 bar -2x1640 m³/hr for two remotely controlled monitors connected with foam system
 Range: Throw 120m Height 50m
Cargo Capacities
 Dead Weight: 900 Tons at 4.48m (14' 9") draught, 1258 tons at 5.06m (16.17") Draught
 Deck Cargo: 600 tons -Total Area 342 m²
 Diesel Fuel: 394m³ (583.9m³ max)
 Liquid mud: 386.5 m³ (491.2 m³ max)
 Deck Strength: 5 tons/ m²
 Drill Water: 314.4m³ (631.1m³ max)

max)
 Potable Water: 301.9 m³ (366.3 m³ max)
Anti Pollution System
 Dispersant tank capacity 12m³ - Two arms Length of each 6m
Navigation Equipment
 Auto Pilot: Anschutz Nauto pilot (+ Naut)
 Magnetic Compass: Crassness & Plath
 Gyro Compass: Anschutz - stand



PICO Energy Group Exciting Highlights

•PICO Energy Group was awarded the construction of Platform C for Amal Petroleum Corporation.



Amal offshore field is located in the southwest area of the Gulf of Suez, currently the field is producing 5,500 BOPD of about 37 API gravity crude associated with about 68 MMSCFD of gas. AMAL offshore facilities consist of two platforms; PFM-A and PFM-B (1.3 km apart) and about 16.5 km away from onshore GOSP at Ras Dib area.

PFM-A is a 9 legged production platform (originally was 4 legs jacketed platform), accommodating a total of 12 well slots, production/test manifolds, test separator, WHCP, diesel power generator, microwave system, helideck & boat landing, crane & chemical injection, etc.

PFM-B is accommodating 7 well slots and its production is flowing to PFM-A through 8"X1.3 km sea line, where the mixed oil and gas production from both platforms flows to the onshore

production facility through a 24"X16.5 km sea line, PFM-B is a 7 legged structure (where each leg is utilized as production conductor).

Project Objectives

PICO awarded an EPCCS project where in which; AMAPETCO is requesting to build and install new offshore platform "PFM-C" in Gulf of Suez in a water depth of 23 m, adjacent to the existing platform PFM-B. In addition to lay a 10" * 1.3 km Pipeline from the new platform to the existing platform "Amal-A" (water depths vary from 16m to 26m). Other required related topside modifications on both existing platforms A & B are included in the project scope.

Project Description

Platform-C
 The new PFM-C is planned to be installed as close as possible to PFM-B with an interconnecting bridge.
 The new PFM-C shall be designed to accommodate & handle the following requirements:

- 6 well slots.
- Subsea structure and Decks
- Production / utilities decks
- Production and Test manifolds, with piping connections to manifolds on PFM-B
- Gas Lift and Water Injection headers
- Test Separator
- Boat landing
- Helideck
- Top side facilities
- Crane to reach/serve the facilities of PFM-B & C.

Market Welcomes Mud Service Provider

Drilling Fuels Technology (DFT) offers lump-sum oil- and water-based mud services based on careful study of well and local costs — no need to count or worry

Drilling Fuels Technology (DFT) is a division of PICO Petroleum Integrated Services offering a full range of oil-based (OBM) and water-based (WBM) mud chemicals and drilling fluids.

A leading provider of high-quality reliable and customized engineering services, DFT is fully committed to providing world-class services for its customers and has been licensed to operate (beginning in Egypt) since 2007.

DFT works in partnership with international research and development centers on drilling and well intervention fluid additives in order to meet and exceed the customers' needs and expectations of service quality, as well as environmental and safety regulations. These partnerships reflect DFT's strategy in delivering cost-effective, quality services.

The DFT team includes some of the most experienced drilling fluid

specialists in the Oil & Gas sector. Our team deals with a large number of operators in and has been exposed to various mud systems over the years. The DFT team's outstanding knowledge of the market — both locally and internationally — is a key element in the evaluation of our customers' requirements, and guarantees we can deliver premium services to our clients, whatever the challenges. Drilling Fluids Technology (DFT) offers a range of commercial structures, including the lump-sum deal per well or per foot drilled using oil- and/or water-based mud services based on careful study of well and local costs — no need to count or worry

Stimulation & Pumping Services

The Stimulation & Pumping (S&P) team provides stimulation treatments to maintain and improve the original permeability of the pay zone.

Coiled tubing in particular plays a significant role here. Other services such as drilling with coiled tubing, OH/CH logging, artificial lifting, well cleaning from scales and sand, perforation, and fishing with coiled tubing, are also provided. Different sizes of coiled tubing ensure we achieve the maximum capacity to meet our clients requirements.

Testing & slick line

Our Testing & slick line team provides a comprehensive range of surface well testing and slick line tools and services to help our client understand the well/reservoir behavior and select the appropriate next steps for exploratory, development and work-over wells.

Supported by more than thirty years of experience in the oil industry in the most demanding of onshore and offshore climates — where PICO has achieved substantial and superior

quality control systems with the utmost reliable performance, fully meeting clients' expectations — our testing team is committed to providing the best value services for well surface evaluation and bottom hole testing analysis.

Integrated services

Our team of experts can provide you with a turnkey well drilling or work over program and execution. This model can be built around your needs, regardless of the size of the company we will deliver the solution/package that matches our clients needs.

With more than 40 wells drilled and more than 75 wells repaired under the same Integrated Services concept in Egypt, Romania, & Mexico, our team is sure to deliver our client with the commercial and operational solution needed.



“ Today, the number one oil and gas producer in the world is no longer Russia or Saudi Arabia; it's America.”

President Barack Obama



“ If supply stays where it is, and demand remains weak, you better believe it is gonna go down more. But if some supply is taken off the market, and there's some growth in demand, prices may go up. But I'm sure we're never going to see \$100 anymore. I said a year ago, the price of oil above \$100 is artificial. It's not correct.”

Alwaleed Bin Talal



“ Two thousand scientists, in a hundred countries, engaged in the most elaborate, well organized scientific collaboration in the history of humankind, have produced long-since a consensus that we will face a string of terrible catastrophes unless we act to prepare ourselves and deal with the underlying causes of global warming.”

Al Gore



“ I have not seen Al Gore's movie.”

Dick Cheney

picocompanies.com/companies/pico-energy-services-group/

DFT

Drilling Fluids Technology A Successful Start

- Implement best drilling fluids practices
- Deliver best customer service
- Provide best solutions tailored to suit your actual needs
- We are your partner

PICO Logistics BOSLA Subsidiary of PICO Energy Group



Logistics Services and solutions

- Inland transportation and distribution
- Rig moves
- Worldwide freight forwarding using multi-modal transportation
- Dangerous goods handling
- Flexitanks
- Customs clearance
- Free zone management
- Warehousing
- Expat removals
- Pick and pack
- Fairs and exhibitions
- Spares logistics
- Hand-carry
- E-Logistics
- Catering

- Well head control and safety panel.
- Navigation aids and safety equipment.
- Bridge connecting new PFM-C to PFM-B.
- Chemical injection system.
- Diesel generation package.
- Equipment and Emergency Personal modules

- Platform-A
 The scope of work of PFM-A will be as follows:
- Design, fabricate and install deck extension to accommodate the new P/L receiver.
 - Tie-in point of the new pipeline from PFM-C to the existing 24" production header.
 - Tie-in point of drain line from (RP-7080)
 - Tie-in point of vent line from (RP-7080) to existing vent header.

Platform-B
 The following items shall be considered as part of PFM-B modifications:

- Production & test headers
- Water injection & gas lift headers, each header will be provided with provision of 4 future tie-ins.
- Tie-in of the new production header with existing production pig launcher (LP-5020)

Offshore pipeline
 A new 10"X1.3 km shall be laid between PFM-C to PFM-A including risers and pigging facilities.



PICO Today



EDITORIAL

Oil price slump costs Texas 65,000 energy jobs – and 250,000 overall

Robert T. Garrett
Published: March 29, 2016

Declining oil prices have slowed the sprinting Texas economy to a very deliberate walk, according to a report issued Tuesday.

This year, the state will increase total jobs by 1 percent, says the analysis by the business-backed Texas Taxpayers and Research Association. But that's a lot fewer than Texas has been creating. For the past eight years, recession notwithstanding, Texas has posted average job growth of 2 percent a year.

That compares with just 0.5 percent a year growth nationally, says the association's new report, "Miracle on Ice? What Low Oil Prices Mean for Texas."

"The 'Texas Miracle,' as our state's nation-leading economic engine has been dubbed, is currently on ice," said the group's president, Dale Craymer, who wrote the report.

"Much of Texas' growth has been fueled by oil and gas, and the recent price drop has taken its toll," he said. "Texas is no longer the nation's most robust job creator. Although the state continues to add jobs, for the first time in 12 years our job engine has been lagging the rest of the nation."

Craymer's case, by the numbers:

- The loss of 65,000 oil and gas jobs has so far cost the overall Texas economy roughly 250,000 jobs.

- The loss of more than 600 rigs equates to a drop in Texas investment of more than \$40 billion.

- Texas itself is part of the reason for the oversupply of oil on the market and the corresponding price drop.

- Unlike in many previous "busts," Texas state finances remain sound today for several reasons. Last year, lawmakers left \$4.2 billion of general-purpose state revenue unspent in their two-year budget, Craymer noted. And the state's "rainy day fund" holds about \$10 billion. In the 1980s oil bust, state budget writers didn't enjoy such cushions, he said. Also, although the diversification of the state economy has been overstated, because of a 1992 change in a federal industry-classification system, Craymer said lawmakers in the late 1980s and thereafter made the state revenue system less reliant on energy-production severance taxes. They raised taxes on sales, fuel and business, he explained.

- While lower oil and gas prices have and will continue to hurt the industry and related sectors, Texas also has a large energy-consuming economy that benefits from low energy prices.

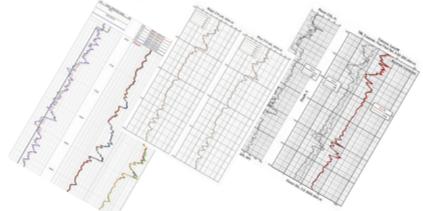
Last month, while on its way to eking out a net gain of just 2,100 jobs, the state lost 6,600 mining and logging (energy) jobs, according to the Texas Workforce Commission. The construction industry also slumped, losing 5,300 jobs in February.

Still, gains in service industries and continued robust economic growth in Dallas and Austin kept the state from falling back, as my colleague Jill Cowan reported in this story Friday.



Case Study—Open Hole Wireline Triple Combo Logging Tools:

PICO Technologies field-testing strategy focuses on evaluating PT's prototype tools in challenging formations that have been characterized extensively by industry standard tools from various service companies. Tests so far have taken place in the Gulf Coast, South Texas and Oklahoma high contrast regions. Outputs Logs are compared to Major and independent Service companies showing a very impressive results.



PROJECTS UNDER DEVELOPMENT *More Open Hole Wireline Tools

PICO Technologies is currently developing more wireline logging tools to add to their arsenal. Ongoing projects include the Borehole Compensated Sonic Tool (BCST), the Advanced Borehole Imager Tool (ABIT), and the Pulsed Neutron Reservoir Saturation Tool (PNRST). These tools feature state-of-the-art electronic components which are rated to handle the harsh downhole environment.

BCST pulses acoustic energy into the formation in the form of compressional, shear and stony waves. By measuring the slowness of the wave the sonic tool can be used to determine different formation properties such as porosity and lithology.

UPSTREAM SERVICE PROVIDER *Specialized in Surface Well Testing in the USA

PICO Energy Group "STAT" is a market leader in the well testing operations providing services to high profile E&P clients across the globe in The Middle East and Mexico, now expanding in USA market under the umbrella of PICO Technologies, concentrating on South and West Texas market. STAT aims to provide a variable selection of surface well testing services in all major hydrocarbon reservoirs. STAT stands for "Surface Testing And Technology"; our capabilities cover all needs, from short-term flow back to permanent early production facilities. STAT provides well monitoring either remotely "Wireless" on location or through GSM connection to be monitored from the head office. STAT provides surface well testing campaigns to production fields using our TMU's, (Trailer Mounted Units) which facilitate monitoring each well production and help tracking the response of each producing well.

Using our diversified capabilities in sand management, Our well testing operations aim to assist in removing Solids, damaged drilling fluids, completion fluids and during cleaning the well in its initial well production phase up to attaching the well to permanent production facilities.

PICO Technologies: Technology Arm of PICO Group

Three U.S. Patents



BIT uses a transmitter and various arrays of electrodes mounted on 6 independent arms to measure micro resistivity changes on the borehole wall. ABIT will deliver a high resolution image of the borehole wall along with information on the formation's fault, fracture and dip.

PNRST provides water, oil and gas saturations, formation porosity, formation density, elemental concentrations and lithology information in slim hole environments. This is accomplished using a 3 detector, 14MeV pulse neutron.

Well Testing activities are all those with focus on the following:

- Disturbing a static reservoir by flowing the fluids
- Observing reservoir response by metering the flow while measuring associated pressures & temperatures
- Obtaining representative reservoir fluid samples for PVT analysis
- Gathering & using the well test data in predicting reservoir performance & improving its development/ management

Our quality and maintenance safety system allows full traceability of equipment. Complete preventive maintenance is achieved to all equipment periodically to assure the equipment delivered to location in perfect condition.

Our equipment is built to NACE standards to ensure our equipment can safely operate in sour environments (if requested).

Our dedication to deliver a complete system that satisfies the client needs is our first priority.

PetroHuasteca: Service Arm of PICO Group

PetroHuasteca (PH) is a company member of PICO Energy Group that is operating in Mexico offering a portfolio of petroleum services to our clients.

PH was founded in Mexico in 2012, backed by a research and manufacturing center in the Houston, Texas we are committed to delivering oilfield services to our clients guarantying a very competitive cost and always exceeding customer requirements.

- Our PH-DFT Drilling Fluids Technology department provides drilling fluids products and services to the oil and gas operators in onshore and offshore, to help them maximize the productivity and cost-efficiency of their drilling operations.

PH-DFT combine creative thinking with advanced engineering, to provide innovative products and drilling solutions. That has been proved through our under-balance drilling program that occurs yearly in Altamira, Tamaulipas field. Through our logistics network that manages fields of Oil production operation, we ensure our drilling products perform to the highest standards and optimize operational efficiency for customers.

- Our PH-SWT Surface Well Testing department, provides Surface testing services with DNV certified equipment that helps ...

- 1.Observing reservoir response by metering the flow while measuring associated pressures & temperatures.
- 2.Disturbing a static reservoir by flowing the fluids.

- 3.Obtaining representative reservoir fluid samples for PVT (Pressure, Volume, Temperature) analysis.
- 4.Gathering & using the well testing data in predicting reservoir performance & improving its development and management.

- PH also represents PICO Technologies in Mexico. PH delivers, installs, operates, and maintains the SPCP Surface Progressing Cavity Pumps. A system that can be operated and monitored remotely. The surface control unit is equipped with a data transmission system that transfers all data from the field to the base unit all day long. This feature enables the operator to monitor and control the units in areas that are difficult to access and reduces the risk of daily travels to each well, this system improves operator efficiency as it reduces field monitoring costs and travel and improves pump performance.

Quality is standard in all PH services, and this is supported by commitment to safety operation with care for the environment. We are passionate about employing the best people in the business and to their ongoing development within a culture of teamwork and collaboration.

Our success is due to our dedication to customer support, and finding a practical solution to our clients. Working in partnership with our customers adds value to their operations and provide solutions that wont just meet their needs, but exceed their requirements.

Production optimization control systems for Progressive Cavity Pump systems: (CPOP)

PICO Technologies Customized Production Optimization Panel (CPOP) control system is designed primarily for heavy oil applications with the goal of optimizing production, improving efficiency and extending run life of the pump. The system collects data from artificial lift operations and provides the critical information required to increase production and minimize down time. CPOP provides data gathering and online monitoring on everything from power quality to well performance degradation so that manpower can be spent managing problems rather than identifying them. The online capabilities allow the operating personnel to control the system remotely, should the field be inaccessible. The system's flexibility

allows the scalable control of driveheads of power ratings from 0.5– 30 (from ABB manual) horsepower using PICO Drive head technology, also compatible with major manufacturers such as KUDU, NOV, and others.



Case Study—Production optimization control systems for Progressive Cavity Pump systems: (CPOP)

The first prototype CPOP for Progressive Cavity Pump system prototype was deployed in the field for Compania Petrolera de Altamira under the service company Petrohuasteca located in Tampico, Mexico. The system was placed on well 1083D on September 2014. The well is producing an average of 50bpd.

The Second CPOP PCP system prototypes were deployed in the field in wells 1029H and 1019H. The wells are producing an average of 50bpd, and 25bpd respectively, due to higher viscosity of the crude extracted. The consumption of liquid propane gas was reduced by 30 liters/day compared to the first prototype.

The third iterations of prototypes were deployed in wells 1027 and 1044. The wells are producing an average of 35bpd and 68bpd respectively. The consumption is on par with the second prototypes, reducing the overall fuel consumption and cost of operation. The first order of 12 units was completed in fall 2015, with 6 units currently deployed in the field, as of December 2015, in wells 1011, 1002, 1050, 1061, 1021 and 1037. The wells range from 20bpd to 65bpd, this due to the difference in viscosity of the crude present. These units are currently providing online information,

both in real time as well as logged parameters. These units have also been paired with the first iteration of PICO Drive head, providing the same level of performance as the major manufacturers already proven in the field. Eleven Units are already in the field, including the first 5 prototypes which are still in operation, in Altamira Concession in Mexico showing high performance and satisfaction. We are always adding more improvements and features to each new product.

Control & Automated Systems Integration

PICO is a specialist Rockwell Automation systems integrator well-placed to respond to today's automation requirements by providing fast-track technology and skilled integration services and supplies to demanding markets.

We cover a wide spectrum of sectors ranging from oil and gas to utilities, from the chemical and petrochemical industries to electricity players.

Our spectrum of end-to-end services spans:

System Integration

We have the capability and know-how to integrate and build control and monitoring systems according to the latest international codes and standards. This includes:

- Design, configure and build Human-Machine Interface and data acquisition systems.
- Design and integrate control systems clients' existing panels.
- Design and build data acquisition and remove control systems.
- Design and integrate ESD systems, monitoring and control systems.

Engineering Services

We are acknowledged experts in the design and execution of engineering for modernization / upgrade / retrofit projects including front-end engineering design (FEED), which encompasses:

- Study and verify project feasibility.
- Prepare general control philosophy and strategy.
- Prepare the entire instrument and control specifications, data sheets and preliminary drawings.
- Prepare all MRQs for the above activities.

Detailed Engineering Services

We also engage in detailed engineering, which includes the following activities:

- Detailed instrument design (JB's, cable routing, trays, trenching, wiring).
- Complete control system design, including logic diagrams, cause and effects, architecture, etc.
- Detailed calculation and drawings of the control system electrical supplies.
- Detailed interface schedules and requirements.



Website: cheironpetroleum.com

1974 1985 1991 1995 2006 2007 2008 2008 2009 2011 2012 2014

PICO Petroleum Projects Logging Service PICO Oil PICO Oil PICO Energy PICO Integrated Services PICO Renewables PICO Technologies PICO Mexico PICO Marine Services Cheiron Holding Ltd. Petro Hausteca

First Egyptian company to provide marketing and research services for the oil and gas sector, solicited by Haliburton, Weatherford, Baker Hughes and Tuboscope Vetco

First Egyptian company in the region to own and operate logging equipment with Gearhart

First Egyptian company to own oil concession fields

First Egyptian company to own and operate Oil & Gas concession fields

First Egyptian holding company dedicated to investing in the Egyptian and regional energy sectors

Providing total drilling management services for the Oil & Gas sector including: Drilling Fluids Technologies, Well Testing and Coiled Tubing & Stimulation

Signings of MOUs and sanctioning the feasibility with NREA for study of two wind farms with 350 MW and 250 MW capacities

Technology provider of sophisticated oil field equipment and tools specialized in open-hole wireline logging and progressive cavity pumps systems; as well as extending the upstream services provider specialized in Surface Well testing and flow back to the USA Market

First Egyptian company to build liftboat PICO 4 and to operate in Mexico Latin America providing services for offshore clients in the Northern region of Mexico

PICO Marine Services lands Pemex contract for Cantarell Field

Altamira, an SPV of Cheiron Holdings, wins the Altamira part of the Pemex's 2012 bid round.

Services arm of the Group, located in Mexico. The Company performs; well testing , coil tubing services, DFT, PCP pumps, crude transportation services



PICO LiftBoats: Game Changers in Mature Fields

PICO 4 Liftboat offers major personnel safety advantages over rigs and fixed platforms—and has proven its ability to weather the Gulf of Mexico

PICO 4 is a self-propelled jack-up barge including offshore work-over service units. Also known as a Liftboat, PICO 4 is presently deployed to the Gulf of Mexico, having proven itself resilient to the region's severe weather patterns.

PICO 4 has the ability to travel in winds of up to 25-30 knots and at a wave height of 5 feet. Its fast jacking capabilities—it is able to self-elevate at a rate of 6-8ft per minute—and its travel speed of 7-8 knots allow it to mobilize very quickly even during very short weather windows.

Ideal for complicated work-over operations, PICO 4 offers major personnel safety advantages over both rigs and fixed platforms.



ACSPT

Established in 2008 PPIS subsidiary ACSPT provides a variety of advanced coiled tubing Stimulation & Pumping technologies. ACSPT team members have a leading edge driven by their ability to provide superior technology and best service quality. More importantly they also possess the competitive skills and ability to design and render legible stimulation solutions to improve reservoir economics and enhance the original permeability of the pay zone. Coiled Tubing is available in 1 1/4", 1 1/2" and 3/4" sizes for low pressure and high pressure reservoirs as well as standard and H2S reservoir conditions.

For vertical, horizontal and deviated wells, both on land and offshore, the company offers:

- Drilling
- Logging
- Milling
- Stimulation
- Fluid displacement
- Sand control
- CT conveyed perforating
- Wellbore cleanout
- Remedial cementing
- Permanent installations
- Water shutoff
- CT as flow line
- Fishing
- Removal of wax, hydro carbon or hydrate plugs
- Flow control of horizontal and deviated completions
- Setting and retrieving bridge plugs and packers



Who Needs Twenty Contractors to Drill One Well?

PICO Petroleum Integrated Services offers the full spectrum of services required by Egypt's Oil & Gas companies

Oil companies in Egypt are currently faced with a number of challenges such as resource scarcity, competing interests and administrative and contractual hassles. As a turnkey solutions provider PICO Petroleum Integrated Services (PPIS) is now well positioned to address these market needs. By making tools, equipment and human resources available at a fixed cost on a lump sum basis, Oil & Gas operators do not need to go through the administrative and contractual hassles that arise when dealing with multiple suppliers.

One of PPIS's primary goals is to change the mindset of the oil and gas market in seeking integrated solutions and high quality products and services. Having one contract that includes a full bouquet of downhole drilling services, logistical support and the supply and maintenance of all associated equipment improves productivity and allows the client to meet production plans and budgets.

With over 30 years experience in the industry, PPIS is a leading integrated drilling services contractor. Through its well-developed network of subsidiary companies, PPIS offers the full spectrum of services required by oil and gas companies in Egypt.

The company has grown to become more than just the preferred supplier of hydro-mechanical and fully hydraulic jars on the Egyptian market. Today the PPIS service menu includes well planning and design, testing and completion services as well as total project management.

Integrated Services is our experienced team of drilling engineers providing customized drilling programs with risk mitigation scenarios. The team is able to apply years

of engineering experience and innovative designs, aided by a sophisticated engineering database management, to deliver optimal quality drilling solutions based on materials selection, service applications and carefully formulated performance criteria. PPIS uses a value-based approach with customized financial and risk models, fully aligning the interests of service providers and customers.

Solutions that improve overall economics and Health, Safety and Environment (HSE) programs ensure optimal well performance with reliable, durable production.

Our state-of-the-art machine shops are staffed by highly qualified machinists with more than 25 years experience in the Egyptian Oil & Gas sector which allows them to offer comprehensive manufacturing and repair facilities. With three strategic locations in the Amreya Free Zone (Alexandria), Ras Shukeir (Gulf of Suez), and Abu Rudeis (Sinai) all our machine shops utilize specialty machines to repair and manufacture drilling equipment as well as milling and fishing equipment. PICO's API and ISO certified oilfield machine shops are also capable of repairing and re-threading API threads on all downhole equipment including tubing, casing, subs, drill pipes and drill collars.

Website: picocompanies.com/our-companies/pico-petroleum.com

PICO Marine Services: Meeting the Highest International Standards



Al Zahraa Barge Gulf of Suez

Mobile offshore working platform in Egypt's Gulf of Suez.

Characteristics:

- Deck Length x Width = 33.5 m x 33.5 m.
- Barge Thickness (Hull) = 4.27 m.
- Length of Legs = 71 m & diameter of 3 m.
- Main Deck Free Space = 400 m².
- Maximum Deck Load = 450 tons.
- Legs are jacked up by two hydraulic pistons.
- Jacking Speed = 1 ft/min.
- 2 tugboats are needed to move Zahraa at a speed of 2 m/s or 7km/h

PICO 4 Liftboat Gulf of Mexico

PICO Mexico is the first subsidiary of an Egyptian company to perform services for Pemex in the Gulf of Mexico. PICO 4 offers major personnel safety advantages over rigs or fixed platforms and is dedicated for complicated workover operations. PICO 4 has a jacking speed of 8 ft/min.

Characteristics:

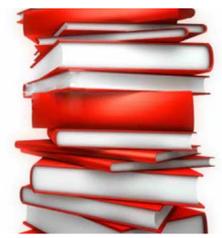
- Independent leg applies maximum pressure on the seabed to achieve the highest stability.
- Jacking speed = 8 ft/min.
- Seatrax Cranes based on proven and perfected designs to withstand most adverse operating conditions.
- DP system (ABS classified).
- Lifeboats and life rafts installed on PICO 4.



PICO Marine Services is the First Subsidiary of an Egyptian Company to Perform Services for PEMEX in Cantarell Field

Objective of contract: Design and perform integrated workover in the wells of the Northeast Marine Region of Pemex using a self propel self elevator platform fully equipped.

Volume of work: 36 major & minor workovers.
Bonus/Malice: First contract as per New Pemex law to apply bonus system for work completed before planned days.



PICO Energy Research & Analysis

PICO Energy Research & Analysis is a management consulting house for the energy sector, working in collaboration with its broad range of clients in order to deliver value and enhance the effectiveness and efficiency of client performance. Our mission is to enable our clients to make decisions that will create sustainable value for their own stakeholders.

To this end, we have developed a comprehensive strategy based on our "Informed Decision-Making Initiative." The tools that we have set up to implement this strategy dynamically revolve around reliable consultancy services and advanced industry training services.

Capitalizing on our in-depth knowledge of the industry and our "insider's perspective," we are capable of identifying and analyzing the new trends that shape the energy market. Combining our spectrum of services, publications, consultancy and training, we provide our clients with the tools which enable them to make strategic decisions for optimizing their product and market portfolios.



Mexico: Delivering on Potential

Mexico is the world's seventh-largest oil producer, and Petróleos Mexicanos (Pemex) is Mexico's sole producer of crude oil, natural gas and refined products. As such, it is the fourth-largest crude oil producer in the world. The company is investing heavily in infrastructure that will see it increase production and take on a number of strategic projects in the near future. These projects represent major opportunities for oil service providers, such as PICO Energy Group and its portfolio of companies.

Liberalizing policies

For more than 80 years, Pemex has held a monopoly of Mexico's Oil & Gas industry — a status that recent energy reforms have changed. Recently, operating under newly transparent and investor-friendly rules, Pemex awarded its first incentive-based oil contract to private operators of mature oil fields.

A prominent example of a specialist player to have won a bid round under the new rules is Cheiron Holdings Ltd. (CHL); an affiliate of PICO International Petroleum, the leading Egypt-based independent E&P company with proven expertise in unlocking value at mature fields.

The company specializes in revitalizing and optimizing production at small and medium-sized mature fields, where its interests span the range of oil and gas up-stream activity — from near field exploration, to full field development planning and operations.

Altamira

In June 2012, Pemex underscored its belief in CHL as the right choice to get the most out of at least one maturing field when it chose CHL's bid in a competitive process for the Altamira asset portion of Pemex's 2012 bid round.



EDITORIAL

Time to find alternatives to oil and gas

It's time for the region to get serious about diversifying its economy.

Yes, we have had good news about multi-million dollar investments made by a few companies that are using hydraulic fracturing and horizontal drilling to extract oil from the Mancos Shale Formation. And we have heard some good reports about the productivity of those wells.

But, as time goes by, the region's oil and gas economy's vulnerability to world events becomes increasingly clear. And energy-based economies — which already are subject to boom and bust — are becoming even more unpredictable.

An analysis by Daniel Fine, associate director of New Mexico Tech's New Mexico Energy Policy Center, (available on The Daily Times' website) contains some very bad news for our region. Saudi Arabia is working to scuttle the U.S. shale-oil boom by creating a "world oversupply of crude oil," he writes.

That oversupply also takes pressure off officials who might consider lifting the U.S. ban on crude oil, Fine points out. Ultimately, although the price of a barrel of oil is lower, Saudi Arabia protects its market share, he says.

It is unlikely this will cause any great outcry from the American public as the most visible indicator of the plan's success is a drop in gasoline prices. As the Saudis open the spigot — flooding world markets and depressing oil prices to a level that retards investment — it is the marginal U.S. operations that will be the first to suffer.

And Fine points out that the San Juan Basin has significant problems.

"The timing of the Saudi action has hit the Southwest U.S. unconventional oil producers when they are already vulnerable to a massive infrastructure bottleneck," Fine writes. "Producers have confronted a discount price of as much as \$15 per barrel because there is not sufficient pipeline take-away capacity from the Permian and San Juan basins to refineries on the Gulf of Mexico coast or anywhere. This is the result of unanticipated high oil production without investment in transport to get it to markets or process it here in New Mexico."

Fine goes on to say that, "American shale oil and gas, the revolution of hydraulic fracturing and horizontal drilling, now faces a period of consolidation, capital discipline and new project capital planning postponement."

An official with one of the local producers told The Daily Times that their operation is profitable and will remain so even with a drop in oil prices. Fine writes about businesses that have created cash-flow hedges by selling in the futures market, but he warns that the Saudis have deep pockets and can continue the strategy for years.

"This effectively limits the 10-year-old shale oil technology play and consequent 'energy revolution,'" Fine writes.

We have heard discussion about bringing in manufacturing and using the region's plentiful natural gas supply as feedstock. A connection to the major east-west rail system would eliminate the bottleneck and allow a larger product volume to be shipped at a lower cost without destroying the area's roads. If anyone has a better idea, we'd like to hear it. Otherwise, it's time to get serious about alternatives to oil and gas.

Houston's Real Estate Market Feeling The Effects Of Oil's Price Drop

Don't be fooled by claims of economic diversification—the city still runs on oil.

They said it'd be different this time, but it appears that Houston real estate is at a tipping point. The oil price crash is just beginning to be felt in the market, which has until recently proven inexplicably resistant to a severe and increasingly prolonged downturn in the city's primary economic driver. Housing costs are at or close to all-time highs, so much so that a study from Rice University's Shell Center for Sustainability found that Houston has crossed the line from affordable to unaffordable in the past year. Despite the fact that a barrel of crude—Houston's lifeblood—is now going for about \$45 a barrel.

As a man who spent his formative years growing up in Houston in the eighties oil bust, these high real estate prices seemed like magical thinking at work. Detroit real estate did not boom when GM went bust, nor did Pittsburgh or Cleveland's markets when the American steel industry cratered. As for Houston, you keep reading that it will be "different this time," that the Energy Capital of the World's economy has "diversified," as locals have been reassured ad nauseam since crude went into its spiral.

But many of the rumors concerning Houston's diversification have been greatly exaggerated—the economy is little more diversified than it was in the days of Ronald Reagan, Max Headroom, and Duran Duran. The diversification claim is typically made as if its reality were simply obvious, as if area booms in construction, shipping, retail, real estate, and the hotel and restaurant biz did not all trickle down from a booming petrochemical industry.

When defenders of Houston's diversification do bother to state exactly how our portfolio is varied, they invariably cite the growth of the Texas Medical Center. Nope. Houston remains the "Petro Metro," as it was once called in a (thankfully) failed grassroots (gas-roots?) branding campaign. According to a March report by Auction.com, the Mighty Med Center's expansion is dwarfed by that of good ol' O&G.

Back in 1985, in some of the darkest days of the worst oil bust in living memory, healthcare's share of Houston's total economic earnings was 5.3 percent. Oil's was ten. By 2013, healthcare had risen to 6.7 percent, but O&G had risen even more, to 13.9 percent. That's right. Oil's share of the local economy is even greater and proportionately higher than medicine's than it was in the oil bust. And of the 25 Fortune 500 companies based in Houston, only three are not in energy-related.

And now news about the real estate market is starting to fall into line behind the bad reports from the oil patch and the Louisiana Street boardrooms.

"Housing market shows further weakening," reports the Houston Chronicle:

John Byerly has been selling real estate for more than four decades and he knows that when a house sits on the market for any length of time people often assume there's something wrong with it and will pass it by.

He also knows it can take a little longer to sell a house in the

fall after school has started.

And he's well aware that in Houston, as goes the price of oil, so goes the housing market. "As long as (oil) stays at \$100 a barrel, no problem. People are just spending money like there's no tomorrow," Byerly said. "When it gets down to \$35, \$40 dollars a barrel, welcome back to the real world."

With crude prices now in that range, Byerly and others like him are dealing with what increasingly seems to be a new reality for Houston real estate. The far northern 'burbs were supposed to explode in the wake of Exxon's huge new corporate campus going in near the Woodlands. It hasn't happened:

"The Exxon Effect is slower than expected," said Lawrence Dean, senior advisor with Metrostudy Corp.'s Houston office, a housing research firm. "It's caught a lot of developers and builders by surprise."

Instead of immediately buying homes in the north Houston suburbs, new Houston energy transplants are signing nine- and 10-month apartment leases. These new residents want to learn their new city and figure out where to settle down, Dean said. They have a great many apartments to pick from, as a spokesman for the Greater Houston Partnership fretted openly about Houston's new abundance of luxury, upscale apartment complexes and other things:

"I'm very concerned about the overbuilding in apartments," said Patrick Jankowski, senior vice president of research at the Greater Houston Partnership. "I'm very concerned about the overbuilding in office space. I'm concerned that the dollar will continue to strengthen."

News radio station KTRH reported along similar lines: While earlier reports suggested Houston's real estate market was withstanding the oil decline, the effects are now starting to show. "I'm seeing not only new construction not being bought up, but I'm seeing a slowdown in the resale market," says Michael Weaster, realtor with Xcel Properties in Houston. "There are more houses coming on the market, and I see prices either stabilizing or coming down...I'm having trouble getting some of my listings sold."

Weaster says it was only matter of time before all of the recent layoffs in the energy industry brought on by the drop in oil prices started to trickle down to housing. "It's got to mean something when Chevron announces all these layoffs, Shell announces all these layoffs in the energy business—these jobs are not replaceable." And with the price of oil showing no indication of a significant increase anytime soon, Weaster predicts home sales and prices will continue to decline in Houston for the near future. "They say Houston isn't tied to oil as much as it was in the 80s, but that just isn't true in my opinion," he says.

Houston old-timers promised God that if they were given one more oil boom, they wouldn't screw it up the next time. He gave us one, but it's looking like we screwed it up again.

Among our valued clients



PICO Energy Services Group companies operate in Egypt, Romania, the United States and Mexico, serving major domestic and international clients

◀ In August 2012, CHL announced the signing of a service contract for the Altamira asset, with an effective start date to the contract of 1 October 2012.

Altamira is a service contract for Pemex as field owner; the field's current 2P reserves are estimated at c. 10 million barrels of oil with substantial upside potential.

CHL currently developing the field as per the development plan, which includes a major drilling program as well as several technological improvement pilots that, showing strong impact on the daily production levels.

Cheiron has operating office in Tampico from which it plans to expand its operations in Mexico.

Romania: Another Potential

Another Exciting news through year 2013, Cheiron Holding Limited, FORA Oil and Gas, an SPV of Cheiron owns Five Concessions in Romania. The potential expansion—work in progress, PICO Energy Group to establish and expand through a Service Company in Romania.

To learn more, contact us at
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Cheiron Holdings Ltd.
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or visit www.cheironpetroleum.com



PICO Today

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