## America's Offshore Energy Industry

# It's *amazing* what America's offshore energy industry can do.

NATIONAL OCEAN INDUSTRIES ASSOCIATION

# IT'S AMAZING WHAT AMERICAN OFFSHORE ENERGY CAN DO

### **KEEPS THE ECONOMY GROWING**

**95%** 

Of operational spending and capital investment stays in America.

\$32 BILLION

Total industry contributed to America's gross domestic product in 2011.



Total industry contributed in revenues to federal government from 2005 – 2014.

### **PUTS AMERICANS TO WORK**

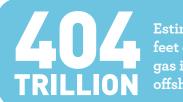


Total Americans employed in jobs directly or indirectly related to the offshore energy industry in 2010.



Total estimated new American jobs supported by 2035 if government opens access to more offshore energy resources.

### **SECURES A RELIABLE ENERGY FUTURE**



Estimated cubic feet of natural gas in federal offshore areas.



Estimated barrels of oil in federal offshore areas.

# **OFFSHORE 101**

#### **TIMELINE FOR FEDERAL PERMITTING**

For a deep water project it takes roughly 10-15 years for a company to navigate the many regulatory phases of offshore oil and gas development. Each phase includes robust environmental analysis, state review, and public input.

## PREPARE THE 5-YEAR PLAN

OCSLA requires the Secretary of the Interior to establish 5-year leasing plans and schedule lease auctions for offshore areas. All areas, unless prohibited by law or moratorium, are available for consideration to be included in a plan. Preparing and finalizing the 5-year plan typically takes 24-36 months.

# PLAN FOR INDIVIDUAL

**EXPLORATION** PLAN APPROVAL

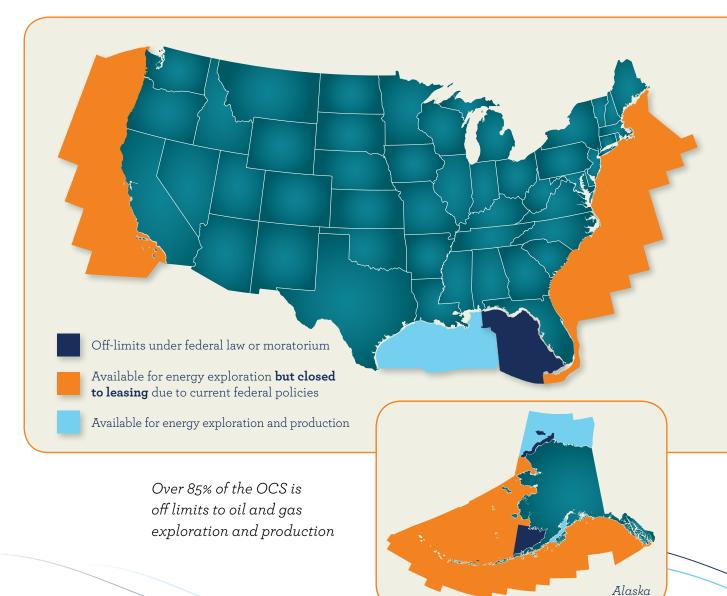
**DEVELOPMENT** PLAN APPROVAL Area is identified, environmental impacts analyzed, public comments gathered and states consulted. Planning for individual lease sales typically takes 6-12 months. Lease is awarded to highest qualified bidder and terms are based on the amount of time a company would be expected to develop the lease: 5 years for shallow water, 8 years for deepwater, and 10 years for ultra-deepwater.

After a qualified company has been awarded a lease through the bidding process, a few years of analytical work are necessary before submitting an exploration plan (EP) to the federal government. The EP is subject to extensive environmental review and is usually approved within a year. Companies then conduct additional geophysical work and contract for necessary equipment, which can take a few more years, before beginning exploratory drilling.

If commercial quantities of oil and/or natural gas are discovered, development and production plans are submitted following additional analysis. Development plan approval is subject to extensive environmental review by the federal government. Production platforms can't begin moving into place until the development and production plans are approved and all appropriate permits received. This phase of the process typically takes several years. *Throughout the plan approval process, industry applies for at least 15 major permits and meets more than 90 federal regulations.* 

### IT'S AMAZING WHAT AMERICAN OFFSHORE ENERGY *COULD* DO

If more areas were open to exploration and development.

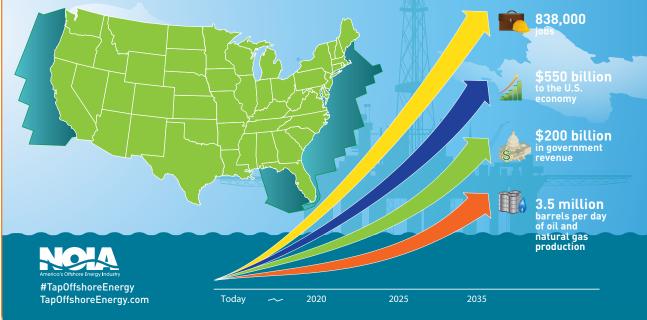


## IT'S AMAZING WHAT OFFSHORE ENERGY COULD DO FOR THE UNITED STATES

**OVER 85**<sup>%</sup> of our nation's federal offshore acreage, including the Atlantic, Pacific and Eastern Gulf of Mexico (EGOM), is off limits to oil and natural gas development. A report from Quest Offshore Resources shows that providing

access to these areas for oil and natural gas development could spur a flurry of investment and economic activity that could put hundreds of thousands of Americans to work, provide billions of dollars for federal and state treasuries, and further strengthen our energy security.

Providing access to the Atlantic, Pacific and EGOM offshore oil and gas resources could deliver by 2035:



Sources: The Economic Benefits of Increasing U.S. Access to Offshore Oil and Natural Gas Resources in the Atlantic, Eastern Gulf of Mexico and Pacific, Quest Offshore Resources, Inc., December 2013, November 2014

# **SEISMIC SURVEYING 101**

#### **HOW IT WORKS**

The use of modern seismic surveying technology is similar to ultrasound technology, which is commonly used in the medical profession for imaging the human body.

#### **SEISMIC SURVEYING IS SAFE**

Four decades of experience shows no evidence that serious harm can occur from exposure to seismic air pulses. Seismic activities, tourism, fishing, fisheries and marine mammals can and do coexist successfully. Operations stop if a marine mammal enters an "exclusion zone" around the operation and are not restarted until the zone is all-clear for at least 30 minutes. When starting a seismic survey, operators use a ramp-up procedure that gradually increases the sound level being produced, allowing animals to leave the area.

#### SEISMIC SURVEYING IS INFORMATIVE

The last surveys of the Atlantic Outer Continental Shelf (OCS) were conducted 30 years ago. Due to technological advances, existing estimates of the available energy are out-of-date.

#### SEISMIC SURVEYING HAS MANY PURPOSES

Seismic technology is used to cite offshore wind facilities, for salvage and recovery missions, and for academic research. Government funded seismic surveying routinely occurs in OCS waters.

Photo courtesy of CGG.



To date, there has been no documented scientific evidence of noise from air guns used in geological and geophysical (G&G) seismic activities adversely affecting marine animal populations or coastal communities. This technology has been used for more than 30 years around the world. It is still used in U.S. waters off of the Gulf of Mexico with no known detrimental impact to marine animal populations or to commercial fishing.

> William Y. Brown, Chief Environmental Officer, Bureau of Ocean Energy Management, August 2014

## WORKING HAND-IN-HAND WITH COASTAL COMMUNITIES AND INDUSTRIES

Whether energy development, tourism, boating, fishing, diving, maritime, or military training, ocean industries have thrived alongside each other. Working hand-in-hand with relevant regulating authorities and coastal communities, ocean and coastal industries have a strong history of working and playing together.

Gulf of Mexico beaches are some of the most beautiful in the world. Gulf Coast communities host tens of millions of visitors each year and *support a \$20 billion tourism industry*. For example, in 2013 in Baldwin County, Alabama, which is home to world-famous white sand beaches, *visitors spent over \$3 billion,* more than a quarter of the state's entire tourism industry, *employing over 45,000* individuals.



In Louisiana, the most productive fisheries outside Alaska are found here, where one-third of the fish caught in the lower 48 are landed.

Along the entire Gulf Coast, the recreational fishing industry **employs about 150,000** people and **contributes over \$7 billion** to states and local economies. In 2012, more than 3 million anglers took 23 million fishing trips in the Gulf region. And all of this happens in the area that also produces nearly a quarter of our domestically produced oil and natural gas.

# IT'S AMAZING WHAT AMERICAN OFFSHORE ENERGY CAN DO

Stimulate American Economy Create American Jobs Generate Federal and State Revenue Ensure a Culture of Safety

## WISE DECISIONS TODAY PROVIDE ENERGY RELIABILITY TOMORROW

Energy demand is on the rise. Over the next 25 years, we can expect an estimated 20% increase in consumption in the United States. Renewable energy and conservation alone can't meet the demand. Decisions made today will determine whether or not our children will have access to reliable, affordable energy tomorrow.

#### **OPENING ACCESS TO NEW OFFSHORE AREAS**

The U.S. produces an estimated 600 million barrels of oil and 4.5 trillion cubic feet of natural gas annually from roughly 3% of the Outer Continental Shelf. Opening additional access to the OCS means relying less on foreign countries and more on the United States for energy security. It also means putting more Americans to work – an estimated 838,000 industry supported jobs by 2035.

#### **REGULATORY CERTAINTY**

Regulatory uncertainty stifles hiring and slows investments. Sensible and consistent offshore energy regulations would enable NOIA members to make key decisions today that will accelerate U.S. economic growth tomorrow.

#### ADVANCING TECHNOLOGY, SAFETY AND ENVIRONMENTAL PERFORMANCE

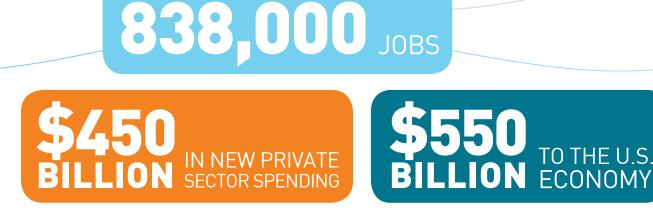
The oil and natural gas industry as a whole has *invested more than \$194 billion since 1990* toward improving the environmental performance of its products, facilities and operations. NOIA members help drive this investing by developing new technologies to protect habitats, safeguard workers and optimize operations while producing the very energy that keeps America strong.

# STIMULATE THE AMERICAN ECONOMY

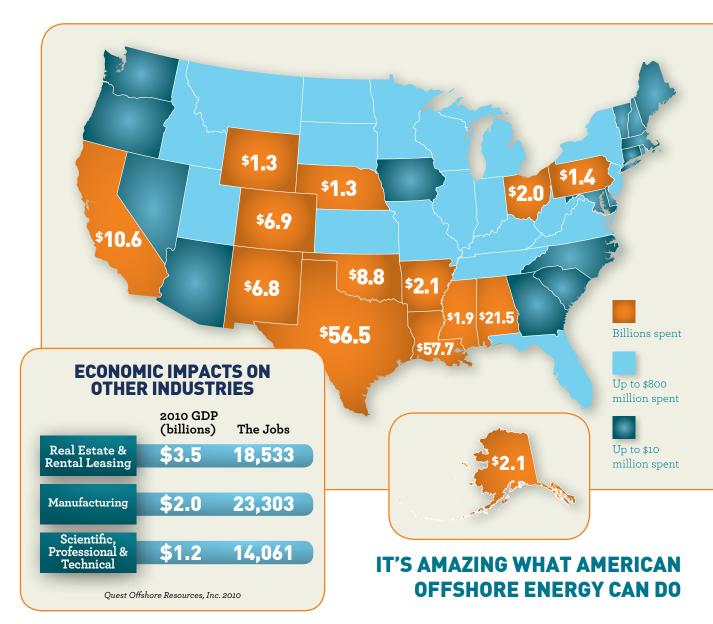
From cosmetic and boot manufacturers to heart valve developers, oil rig workers and pipeline repairmen, America's offshore energy industry generates economic development in the most obvious and sometimes surprising places throughout the United States.

NOIA members are prime contributors to elevating the standard of living and the country's economic health. It's estimated that by 2035, America's offshore energy industry could create more than 838,000 jobs and contribute more than \$550 billion to the U.S. economy. This is over and beyond the hundreds of thousands of jobs the industry already supports.

#### BY OPENING MORE OF AMERICA'S OCS FOR ENERGY DEVELOPMENT, IT'S AMAZING THE BENEFITS OUR NATION WOULD SEE



## AMERICAN OFFSHORE ENERGY SPENDING IS NOT LIMITED TO THE GULF OF MEXICO



# CREATE AMERICAN JOBS

America's offshore energy industry supports *more than 242,000 jobs across the country.* Imagine if Outer Continental Shelf access were expanded to include more than 85% of our offshore areas closed to development. *Americans could expect more than 838,000 desirable industry supported jobs by 2035.* 

In 2008 and 2009, oil and natural gas industry salaries in the exploration and production sectors were *more than double the national average for all U.S. jobs.* That's amazing.

There are many examples of jobs indirectly created due to the offshore energy industry. Take recreational fishing and diving.

Production platforms in the Gulf of Mexico provide vertical reef systems – habitat where multitudes of fish grow and thrive. The economic output in fishing and diving is estimated at \$324 million with employment estimated at 5,560 full time equivalents.



Historically, American energy is the **2<sup>nd</sup> largest contributor** to the U.S. Treasury. More than **2,400 companies** from at least 47 states **provide equipment** and/or services to America's offshore energy industry.

### **AMERICA'S OFFSHORE ENERGY INDUSTRY CREATES JOBS FOR ALL** SKILLS, SALARIES AND STATES

#### **GULF STATES - DIRECT & INDIRECT JOBS** 2010 2013 140,213 79,274 **TEXAS** LOUISIANA 70,473 129,108 25,821 48,793 ALABAMA MISSISSIPPI 2,060 3,359

#### **ACROSS THE COUNTRY - DIRECT & INDIRECT JOBS**

	2010	2013				2010	2013
CALIFORNIA	13,888	22,216		I	LLINOIS	1,354	2,842
OKLAHOMA	12,459	20,000			KANSAS	1,588	2,559
COLORADO	9,109	14,582		W	OMING	1,260	2,010
NEW MEXICO	7,978	12,842			UTAH	984	1,570
OHIO	3,415	6,150		WEST V	IRGINIA	975	1,555
ARKANSAS	2,688	4,355		KENTUCKY		873	1,522
PENNSYLVANIA	1,856	3,911		FLORIDA		609	1,340
ALASKA	1,959	3,116		WISCONSIN		626	1,272
	OTHER STATES			3,068	5,892		

Estimated Employment by State Associated with GoM Oil and Natural Gas Operations

#### IT'S AMAZING WHAT AMERICAN **OFFSHORE ENERGY CAN DO**

# GENERATE FEDERAL AND STATE REVENUE



### 10 YEAR IMPACT: 2005-2014

Offshore exploration and production generated more than \$80 billion in federal revenue through lease sales, rental payments, and royalties.



#### FIRST 6 YEARS OF GOMESA: 2009–2014

Gulf of Mexico states participating in revenue sharing as authorized by the Gulf of Mexico Energy Security Act (GOMESA) received approximately \$34 million in the first six years of the program. That money goes directly back to the states.



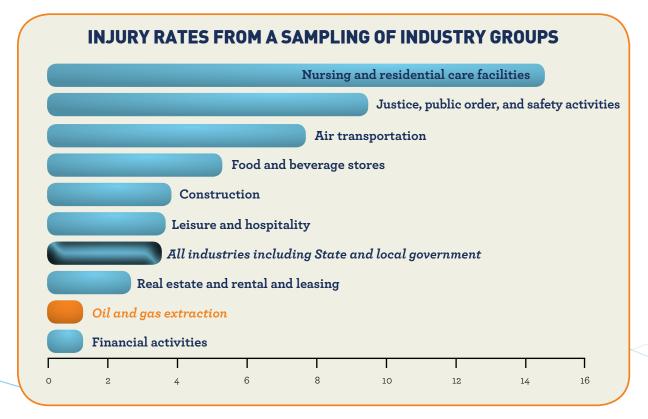
### **PROJECTED NEW REVENUE: 2017-2035**

By opening new areas of the OCS, federal and state governments are projected to see a windfall of \$200 billion in new revenue over the 2017-2035 period. Not only could that reduce federal deficits, these new revenues could help support local infrastructure, schools, and other important community services.

### IT'S AMAZING WHAT AMERICAN OFFSHORE ENERGY CAN DO

# ENSURE A CULTURE OF SAFETY

NOIA members are committed to ensuring offshore energy development is conducted safely and that oil and gas extraction remains one of the safest sectors for workers.



The incidence rates represent the number of injuries per 100 full-time workers

# NOIA SAFETY IN SEAS AWARDS

## RECOGNIZING WORKER SAFETY & ENVIRONMENTAL STEWARDSHIP

*Since 1978,* NOIA has recognized excellence among those who have contributed to improving the safety of workers and the natural habitat offshore. These are some of the recent Safety in Seas Awards winners.

#### **2014** DANOS

Culture of Safety Award

Noble Corporation PLC Safety Practice Award

- **2013** Stone Energy Corporation
- **2012 ATP Oil & Gas Corporation** ATP Titan
- **2011 Bristow** Target Zero
- 2010 Shell Perdido Project

#### **2009** Global Industries, Ltd.

- 2008 Chevron Corporation Gulf of Mexico Hurricane Restoration Project
- 2007 Shell Exploration & Production Company Mars Platform Recovery after Hurricanes Katrina / Rita
- 2006 MI-SWACO CleanCut™ Technology
- **2005 Noble Corporation** Noble Way Management System

# IT'S AMAZING HOW AMERICA'S OFFSHORE ENERGY INDUSTRY RESPONDS

While America's offshore energy industry holds one of the best safety incident rates, the tragic Macondo well accident is a stark reminder that producing energy is not without risk.

NOIA and its member companies responded quickly. Joint Industry Task Forces formed immediately and the industry focused its efforts on oil spill response, subsea well control, containment, clean-up and improved response capabilities. Lessons learned from the event were implemented to strengthen industry safety practices.

Today the industry continues to learn from this event and maintains a strict culture of safety. The following pages highlight how the industry is united in its commitment to offshore safety and environmental protection.

# SWIFT INDUSTRY ACTION

### **JOINT INDUSTRY TASK FORCES**

The U.S. oil and natural gas industry united its efforts and launched a comprehensive review of offshore energy safety by assembling four Joint Industry Task Forces, which focused on: operating procedures; equipment; subsea well control and containment; and oil spill preparedness and response. Because of the swift industry response, reviews took place immediately and recommendations to improve worker safety and the environment were implemented quickly.

### **CENTER FOR OFFSHORE SAFETY**

The Center for Offshore Safety (COS) is an industry sponsored organization focused exclusively on offshore safety on the OCS. COS serves the U.S. offshore oil & gas industry with the purpose of adopting standards of excellence to ensure continuous

improvement in safety and offshore operational integrity. Membership is open to all companies that operate, drill and/or complete wells or provide support services to offshore drilling, completions, and operations on the U.S. Outer Continental Shelf.

#### **COS Objectives:**

- Enhance and continuously improve the industry's safety and environmental performance
- Gain and sustain public confidence and trust in the oil and gas industry
- Increase public awareness of the industry's safety and environmental performance
- Stimulate cooperation within industry to share best practices and learn from each other
- Provide a platform for collaboration between industry, the government, and other stakeholders

#### **COS MISSION:**

Promote the highest level of safety for offshore drilling, completions, and operations through leadership and effective management systems addressing communication, teamwork, and independent third-party auditing and certification.



# RESPONSE AND CONTAINMENT SYSTEMS

The offshore energy industry responded quickly by taking the lessons learned from Macondo and applying them to the development of enhanced surface response capability and the new development of subsurface containment.

The fleet of available surface offshore recovery vessels was increased substantially in the Gulf of Mexico. These vessels are effective spill response tools since they provide systems – including dedicated storage, ocean boom, high efficiency skimmers, and command and control that includes low visibility response tools. Expansions in dispersant capability and in situ burn resources mean that responders have all the tools, should they be needed.



To complement the surface response, industry has invested in two deepwater containment systems. The Marine Well Containment Company (MWCC) system is available for use in water depths up to 10,000 feet, can cap or cap and flow an incident well, and has the capacity to process up to 100,000 barrels of liquid per day and up to 200 million cubic feet of gas per day. The Helix Well Control Group's containment system can cap and contain a well at depths up to 10,000 feet and capture and process 130,000 barrels of oil per day and 220 million cubic feet of gas per day. These equipment resources stand ready to respond today.

Sources: http://www.marinewellcontainment.com/ http://www.hwcg.org/

## IT'S AMAZING WHAT AMERICA'S OFFSHORE ENERGY INDUSTRY CAN PROTECT

#### **SMALLER FOOTPRINT**

Advancements in technology allow NOIA members to operate more efficiently, which means smaller footprints and greater compatibility with the environment.

#### **RIGS TO REEFS**

Over 420 decommissioned platforms in the Gulf of Mexico have been converted to artificial reefs. Thirty percent of the 15 million fish caught by recreational fishermen annually off the coasts of Texas and Louisiana are caught near platforms.

#### FISH AND MARINE MAMMAL PROTECTION

Exploration and production activity

must comply with environmental statutes, regulations and executive orders that include National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA) and Clean Water Act (CWA) to name a few.



# IT'S AMAZING WHERE AMERICA'S OFFSHORE ENERGY INDUSTRY CAN GO

#### **IMPROVED EXPLORATION**

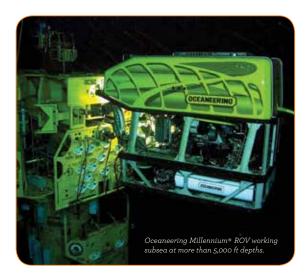
Improved geological and geophysical data with advances in seismic modeling means accuracy in locating hydrocarbon resources. According to the Energy Information Administration, the rate of success for exploratory wells *has climbed 50% since 1970*.

### **DEEPWATER FRONTIER**

From 2006 to 2009, annual world deepwater discoveries accounted for 42% to 54% of all discoveries – onshore and offshore. In 2008, deepwater discoveries added 13.7 billion barrels of oil equivalent to global reserves. New technology will open the door to exploration in even greater depths.

#### WIND GENERATION

In 2013, President Obama challenged the Department of the Interior to permit 20 gigawatts of clean energy on public lands by 2020. Offshore wind development could play a critical role in achieving that goal, given that offshore wind in the United States could produce over 4,000 gigawatts of energy. DOI has issued commercial and research wind energy leases off the Atlantic Coast. OCS wind generation could spur manufacturing, job creation, assembly and transport activity in coastal regions.





# NOIA: AMERICA'S OFFSHORE ENERGY INDUSTRY

*Twenty-four hours a day and seven days a week,* our country's ocean-based energy resources provide heat, manufacturing needs and transportation to citizens across America.

Whether you are fueling your car, feeding your family or working as a pipeline engineer, **NOIA** is part of the energy that touches you.

With over 300 diverse companies operating on the nation's Outer Continental Shelf (OCS), NOIA is the **only** national trade association representing **all** segments of the offshore energy industry. NOIA members are diverse in size, structure and specialties and are united in their commitment to safely produce the very energy that keeps the American economy growing, people working, the environment protected and our country secure.



Our members look to us to communicate to the public and advocate to lawmakers on their behalf to secure reliable access and a fair regulatory and economic environment.

## NOIA ADVOCATES A SOUND AND BALANCED OFFSHORE ENERGY POLICY

### **NOIA MISSION:**

To secure **reliable access** and a **fair regulatory and economic environment** for the companies that develop the nation's valuable offshore resources in an **environmentally responsible** manner.



#### NOIA MEMBERS GENERATE THE VERY ENERGY THAT KEEPS AMERICA GROWING, WORKING AND PROTECTED

TELECOMMUNICATIONS, ENGINEERING AND CONSULTING, INVESTMENT FIRMS, TRANSPORTATION, WAREHOUSING AND LOGISTICS, OIL AND NATURAL GAS EXPLORATION AND PRODUCTION, OFFSHORE RENEWABLE AND ALTERNATIVE ENERGY, DIVING, HELICOPTER SERVICES, PROFESSIONAL SERVICES, START-UP COMPANIES, CONSTRUCTION, SATELLITE COMMUNICATIONS, OFFSHORE DRILLING, CABLE INSTALLATION, MANUFACTURING, PIPE INSTALLATION, TECHNOLOGY, GEOPHYSICAL, ENVIRONMENTAL SERVICES, COMMUNICATIONS, VESSEL CONSTRUCTION, GEOLOGICAL, TOOL MAKING, REMOTELY OPERATED VEHICLES, MOORING, SHIP BUILDING, SOFTWARE DEVELOPERS, INSURANCE UNDERWRITERS,

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