



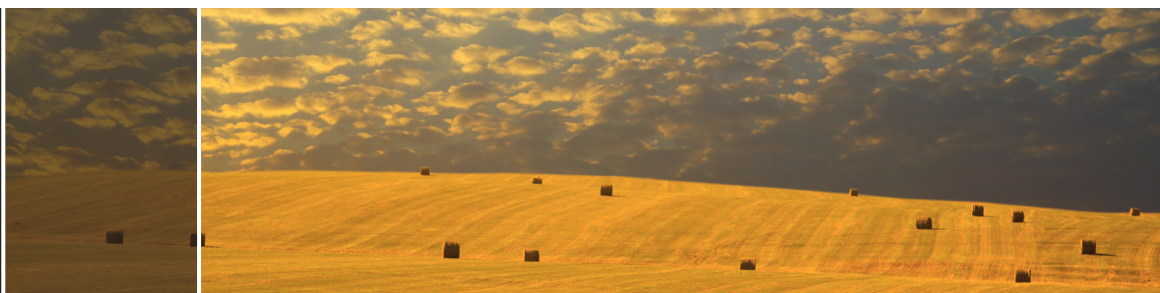
# LUCA TECHNOLOGIES MEDIA KIT

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**Luca Technologies Inc.**

500 Corporate Circle, Suite C  
Golden, Colorado 80401

**Website:** [www.lucatechnologies.com](http://www.lucatechnologies.com)

**Telephone:** (303) 534-4344

**Chief Executive Officer:** Bob Cavnar

**E-mail:** [Bob.Cavnar@lucatechnologies.com](mailto:Bob.Cavnar@lucatechnologies.com)

**Company Founded:** 2003

**Description:**

Luca Technologies uses biotechnology to create and sustainably produce natural gas. The Company's proprietary technology stimulates native microorganisms that reside in subsurface hydrocarbon deposits, such as coal, oil, and organic-rich shales, to accelerate the bioconversion of such resources into methane, the principal component of natural gas, which Luca produces and sells using existing infrastructure. Luca believes that its business represents a transformative and disruptive innovation in natural gas creation and production, integrating sophisticated biotechnology with the traditional natural gas business.

**Market:**

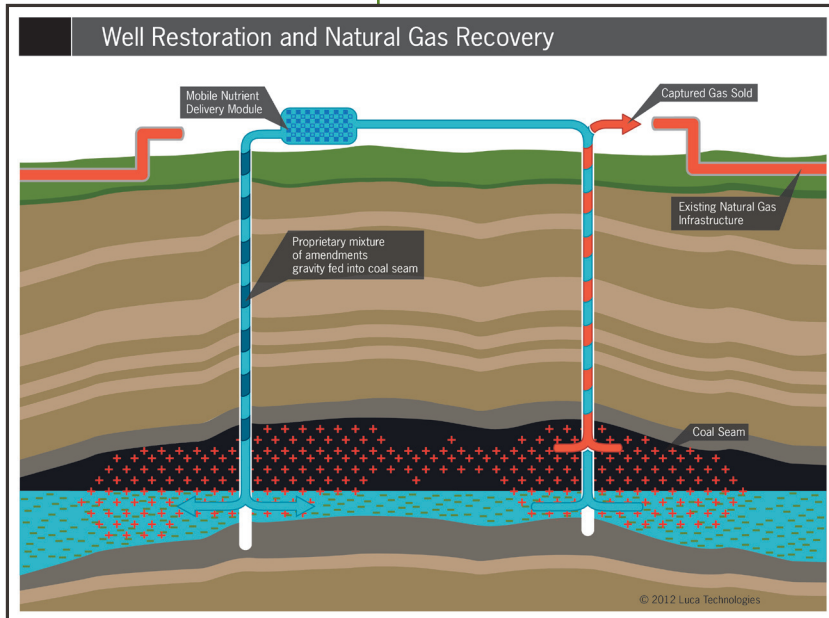
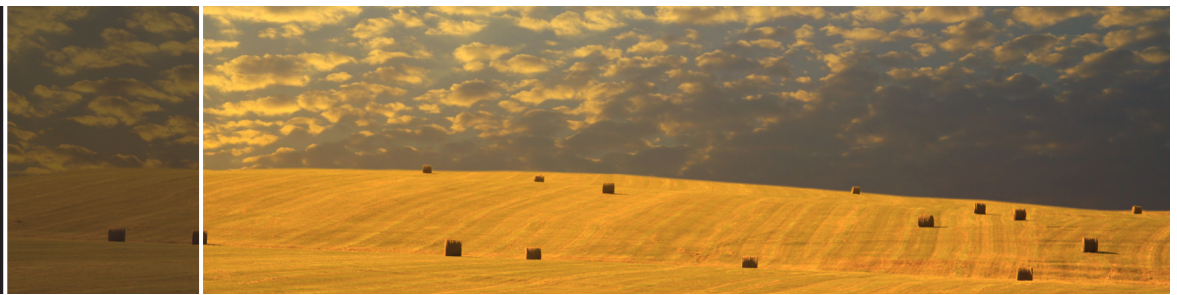
Natural gas produced by Luca Technologies is readily deployed into existing pipeline infrastructure. There are many existing wells whose production through traditional extraction has peaked and is in decline. Many of these resources have the potential to provide long-term, dependable natural gas production through the application of Luca's restoration process. Luca has performed extensive lab and field testing over the past eight years, including the deployment of over 500 field level applications of its technology, which Luca believes have proved the efficacy of its technology to economically and sustainably create new methane gas from wells treated with Luca's technology.

**Management:**

Founded in 2003, Luca Technologies is led by a diverse team with expertise in developing gas and oil resources, molecular microbial ecology, biogeochemistry, engineering, hydrogeological, geophysical and project management. Luca is acquiring assets in new basins with resources that can be restored using its technology and through the application of Luca's Restoration Process offer significant production growth potential. Luca's core assets include over 1,350 wells in the Powder River Basin of Wyoming, where it is working to improve its sustainable well restoration technology to increase output and enhance profitability.

**Financing:**

The Company has raised \$100 million to date from leading strategic investors including BASF, Kleiner, Perkins, Caufield & Byers (KPCB), One Equity Partners, and Oxford Bioscience Partners.



## WELL RESTORATION AND NATURAL GAS RECOVERY

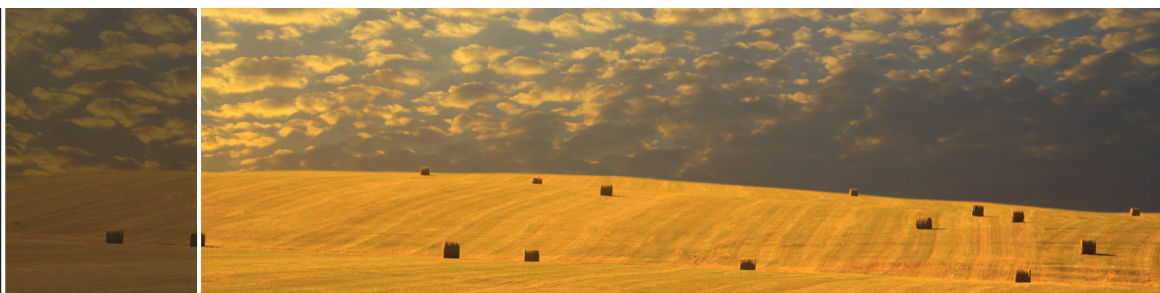
Luca uses biotechnology to create and sustainably produce natural gas. Luca's proprietary technology stimulates native microorganisms that reside in subsurface hydrocarbon deposits, such as coal, oil, and organic-rich shales, to accelerate the bioconversion of such resources into methane, the principal component of natural gas, which Luca produces and sells using existing infrastructure. Luca believes that its business represents a transformative and disruptive innovation in natural gas creation and production, integrating sophisticated biotechnology with the traditional natural gas business. Luca has performed extensive lab and field testing over the past eight years, including the deployment of over 500 field level applications of its technology, which Luca believes have proved the efficacy of its technology to economically and sustainably create new methane gas from wells treated with Luca's technology, demonstrated

that additional value can be created from using existing natural gas wells and pipeline infrastructure, potentially extending the economic lives of thousands of wells, confirmed that water should be conserved and re-used whenever feasible, as it is integral to the biogenic creation of new methane gas and demonstrated through extensive testing that the technology is safe to the public and the environment.

Luca leverages the ability of naturally occurring microorganisms to convert subsurface hydrocarbon deposits, such as coal, to methane gas. This complex process is susceptible to interruption by various chemical and biological conditions, including traditional coalbed methane development, which involves removing water from the coal seam to reduce pressure and allow previously adsorbed natural gas to flow up a well. As a result, the natural and ongoing biogenic creation of methane gas slows or ceases, with a large mass of unutilized hydrocarbon deposit remaining in place underground. To accelerate biogenic methane gas production rates, Luca uses its proprietary Restoration Process to deliver customized nutrient formulations and water to restore coal reservoir habitats to conditions that may enable native microbial communities to be enhanced to create commercial volumes of natural gas on a real-time basis. Luca produce this newly created natural gas and deliver it to market using existing wells, pipelines and natural gas infrastructure.

Luca's Restoration Process is designed to sustain the life processes of naturally occurring microbial communities. Microbes are already present in coalbed water and are responsible for biogenic methane gas creation.

Oil and natural gas resources developed and produced by the traditional E&P industry often exhibit production rates that peak early in the lives of wells, and then steeply decline as stored hydrocarbons are depleted and pressure is reduced. In contrast, wells producing newly created methane gas using Luca's Restoration Process are more akin to "gas farms," producing natural gas at lower, but constant or slightly increasing rates for extended periods of time.



## MANAGEMENT TEAM

### **Bob Cavnar**

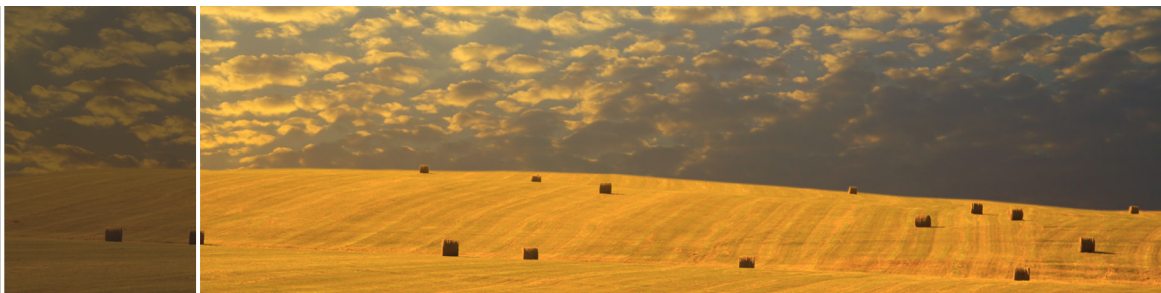
Chief Executive Officer

Robert L. Cavnar has served as Luca Technologies' President and Chief Executive Officer and as a director since 2010. He is responsible for Luca's vision, strategy, growth initiatives and clean energy policy. Prior to joining Luca, from 2005 to 2009, Mr. Cavnar served as President and Chief Executive Officer of Milagro Exploration, a privately held oil and gas exploration company based in Houston, Texas with operations along the Texas, Louisiana and Mississippi Gulf Coast and offshore Gulf of Mexico. Prior to Milagro, from 2002 to 2005, he served as Chairman, President and Chief Executive Officer of Mission Resources where he led the recovery of the company's financial strength through balance-sheet restructuring and realignment of producing properties. Prior to Mission, Mr. Cavnar held executive positions at El Paso Corporation and led several business unit restructurings. Previously, he was Executive Vice President and Chief Financial Officer of Cornerstone Natural Gas. Mr. Cavnar is a 30 plus year industry veteran with deep experience in operations and management of both public and private energy companies who began his career working on drilling rigs and in field operations, spending 10 years in the field managing multiple rig drilling programs, as well as construction of gas processing facilities. Mr. Cavnar is author of Disaster on the Horizon: High Stakes, High Risks, and the Story Behind the Deepwater Well Blowout. He holds a M.B.A. from the Cox School of Business at Southern Methodist University and a B.S. from Eastern Michigan University, and completed the Program for Management Development at the Harvard Business School. He is Senior Chairman of the board of the Houston Grand Opera, and serves on the board of the Center for National Policy in Washington, D.C. Luca believes that Mr. Cavnar's qualifications to serve on the board of directors include his experience as Chief Executive Officer of energy companies and as a business leader as well as his extensive management experience in the energy industry.

### **Brian J. Cree**

Chief Operating Officer and Chief Financial Officer

Brian J. Cree has served as Luca Technologies Chief Operating Officer since November 2010, where he oversees the operational, financial, administrative and regulatory aspects of the company. He has also served as Luca's Chief Financial Officer since June 2007. Mr. Cree has spent 17 years in the oil and gas industry but also held roles with companies in other industries. Prior to joining Luca, Mr. Cree served as Vice President of Finance and Chief Financial Officer of ZettaCore, Inc., a start-up molecular memory company, from 2002 to 2007. Before ZettaCore, from 1999 to 2000, Mr. Cree served as Chief Financial Officer and Chief Operating Officer of Wellogix, Inc., an oil and gas software company. Previously, he served as Chief Operating Officer, Executive Vice President and was a director of Patina Oil & Gas Corporation, overseeing its day to day operations and public financial reporting. Mr. Cree helped form Patina in 1996, when it merged with Gerrity Oil & Gas Corporation, where he held several executive positions including Chief Operating Officer, Senior Vice President of Operations, and Chief Accounting Officer, and was also a director. Prior to Gerrity, Mr. Cree was employed by the accounting firm of Deloitte & Touche in Denver, Colorado. He served as Vice Chairman of the Colorado Oil and Gas Conservation Commission, a position appointed by the Governor, from 1999 until 2007. Mr. Cree has a B.S. in Accounting from the University of Northern Iowa.



#### **William Mahaffey, Ph.D.**

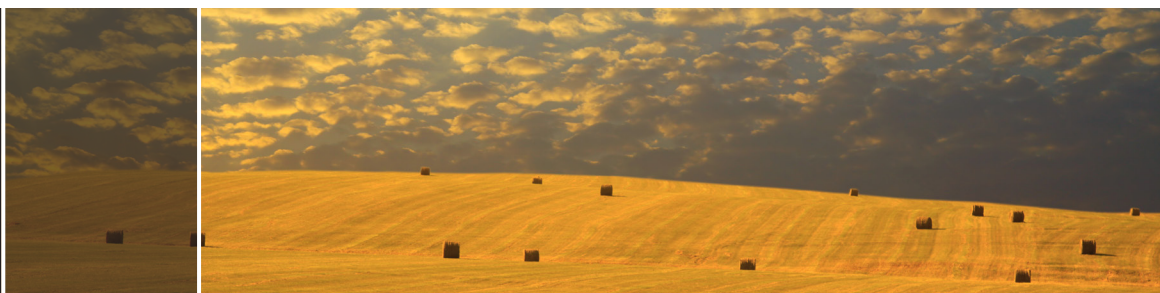
Chief Technology Officer

William R. Mahaffey has served as Luca Technologies Chief Technology Officer since 2009, overseeing scientific research and technology field transfer. From 1995 to 2009, Dr. Mahaffey was the President (Founder) and Chief Technology Officer of Pelorus Environmental and Biotechnology Corporation. Prior to Pelorus, Dr. Mahaffey was Vice President of Research and Biotechnology Applications of Ecova Corporation. As a microbiologist and biochemist, he has 25 years of international experience related to biodegradation and remediation of organic pollutants in the environment. Dr. Mahaffey has served on governmental and industry advisory boards as a recognized expert in the field of bioremediation, chemical oxidation and the in situ application of these technologies for restoration of groundwater. He was an on-scene advisor to the EPA during the Exxon Valdez crisis and consulted with the National Environmental Technologies Application Center at the University of Pittsburgh on development of bioremediation technology screening protocols for post spill response. Dr. Mahaffey has served as an international consultant on in situ bioremediation initiatives for the Swedish National Oil Stockpile Agency, Japan Research Institute, and Japan Environmental Agency. Dr. Mahaffey served as a Technical Advisor to Sandia National Laboratories coordinating the first field scale application of Enhanced In Situ Anaerobic Bioremediation. Throughout his career Dr. Mahaffey has managed major technology research, development and demonstration programs in bioremediation and technology transfer for such entities as Amoco, Condea Vista, Union Pacific Rail Road, Chevron, Unocal, Phillips Petroleum, Gates Rubber, Texaco, Toyota, Ebara and Organo. Dr. Mahaffey received a B.S. and M.S. from the State University of New York, and a Ph.D. in Microbial Biochemistry from The University of Texas.

#### **David Austgen, Ph.D.**

Chief Development Officer

David M. Austgen has served as Luca Technologies' Chief Development Officer since February 2011. With over 23 years of experience in energy and petrochemicals, Mr. Austgen focuses on Luca's mission to create sustainable, long-term gas production resources by establishing strategic partnerships and transactions that will accelerate our growth. Prior to joining Luca, Mr. Austgen held a variety of positions from 1989 to 2011 at Shell. In his role as Senior Business and JV Manager at Shell Biofuels, Mr. Austgen led teams in commercializing advanced biofuel technologies being developed through partnerships with Iogen Corporation, Virent Energy Systems, and Codexis, among others. He was also responsible for business development in South America. In his prior assignment he was Global Manager, Technology and Operations of Shell Hydrogen. In this assignment, Mr. Austgen represented Shell as a board member in a number of Shell Hydrogen's joint ventures. Previously, Mr. Austgen led Shell Chemicals' Strategic Innovation Program, served as an internal strategy consultant for Shell Oil Products US, and managed product development teams in the R&D organization. Mr. Austgen was a Lecturer and Adjunct Professor of Management from 1997 to 2004 at the Jones Graduate School of Management at Rice University, where he taught courses on the Strategic Management of Innovation and Technology. During 2010, Mr. Austgen served as a consultant to KiOR and American Process Inc., both advanced biofuel companies. He is currently a member of the advisory committees for American Process Inc. and CoolPlanetBiofuels. Mr. Austgen has a B.S. in Chemical Engineering from the University of Notre Dame, and a Ph.D. in Chemical Engineering and a M.B.A., both from The University of Texas.



### **Michael Sabol**

Chief Accounting Officer

Michael Sabol has served as Luca Technologies' Chief Accounting Officer since May 2011, where he oversees accounting, financial reporting, information technology and risk management aspects of the company. From 2008 to 2011, he was Chief Financial Officer of Range Fuels Inc., a biofuels company based in Colorado developing commercial scale cellulosic biofuels technology. Prior to Range Fuels, Mr. Sabol held various leadership roles in the finance group of multinational telecommunications companies Qwest Communications and Bell Atlantic from 1995 to 2008. From 1993 to 1995, he was the Assistant Controller of Remington Arms Company, a firearms and ammunition company. Prior to Remington, Mr. Sabol was an audit manager at the accounting firm of Price Waterhouse in Philadelphia, Pennsylvania. Mr. Sabol has a B.S. in Accounting and English from King's College.

### **Matt Micheli**

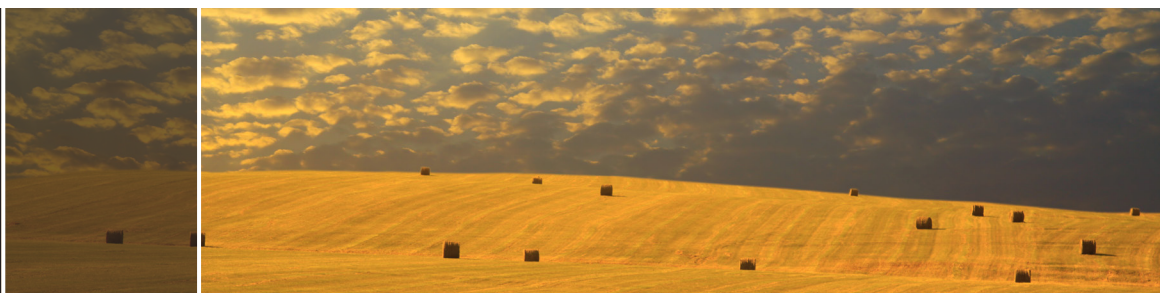
Corporate Counsel

Matthew J. Micheli has served as Luca Technologies' Corporate Counsel since January 2011 and Secretary since May 2011, where he leads Luca's legal, land, and regulatory efforts. From 2004 to 2011, Mr. Micheli first served as an Associate and then as a Partner of Holland & Hart LLP, a law firm delivering integrated legal solutions, with a focus on trial and dispute resolution and an emphasis on disputes arising from mineral extraction. At Holland & Hart, Mr. Micheli advised oil and gas clients in all areas of mineral extraction and development including Wyoming Split Estate Act compliance, condemnation, surface use agreement negotiations and litigation, and state and federal regulatory compliance. Prior to Holland & Hart, Mr. Micheli worked as an Associate for Hughes & Luce LLP, which was acquired in 2008 by KL Gates LLP. Mr. Micheli has been listed in Chambers USA: America's Leading Lawyers for Business and in Super Lawyers as a Mountain States Rising Star for Energy & Natural Resources. Mr. Micheli has a B.A. from the University of Wyoming and a J.D. from Brigham Young University's J. Reuben Clark Law School.

### **Jeffrey L. Weber**

Vice President – Geosciences

Jeffrey L. Weber has served as Luca Technologies' Vice President of Geosciences since 2003 and is responsible for the planning, direction and execution of geosciences in pursuit of Luca's growth and technology objectives. Mr. Weber is a registered Professional Geologist in the State of Wyoming and a Certified Professional Geologist with over 35 years of oil and gas exploration and production experience worldwide in both conventional and unconventional plays. Prior to joining us in 2003, Mr. Weber held the position of Vice President of Exploration with Fidelity Exploration and Production Company beginning in 2000, and with Preston, Reynolds & Co. Inc. beginning in 1996. Upon graduation from Texas A&M University, with a B.S. in Geophysics in 1971, Mr. Weber joined Gulf Oil where, as Regional Geophysicist, he was responsible for Gulf's exploration efforts in the onshore and offshore Texas Gulf Coast. Between 1978 and 1996, Mr. Weber was engaged in independent geological/geophysical prospect generation and consulting. Mr. Weber is a member of the American Association of Petroleum Geologists, the American Institute of Professional Geologists, and the Rocky Mountain Association of Geologists.



### **Roland P. DeBruyn**

Vice President – Engineering Sciences

Roland P. DeBruyn has served as Luca Technologies' Vice President of Engineering since 2003. In this role, he directs Luca's engineering sciences, which involves the synthesis and integration of advanced petroleum reservoir science with the company's biologic research. Mr. DeBruyn has 35 years of experience in petroleum and chemical engineering, gained from technical and executive positions with large and small companies prior to working with us. He was a staff engineer and technical supervisor with Dome Petroleum (1976-1984) and Quinoco Petroleum (1984-1988). From 1989 through 1994, he was Vice President and Gulf Coast District Manager with Hallwood Petroleum. He served as Vice President-Engineering with Preston, Reynolds & Co., Inc. and its affiliated start-up coalbed methane development companies from 1994 through 2000, and then served Fidelity Exploration & Production Company from 2000 through 2003 in the same capacity. Mr. DeBruyn holds a B.S. in Chemical Engineering from the University of Calgary and a M.B.A. from the University of Phoenix. He is a member of the Society of Petroleum Engineers and is registered as a professional engineer in Alberta, Canada.

### **R. Verlin Danner**

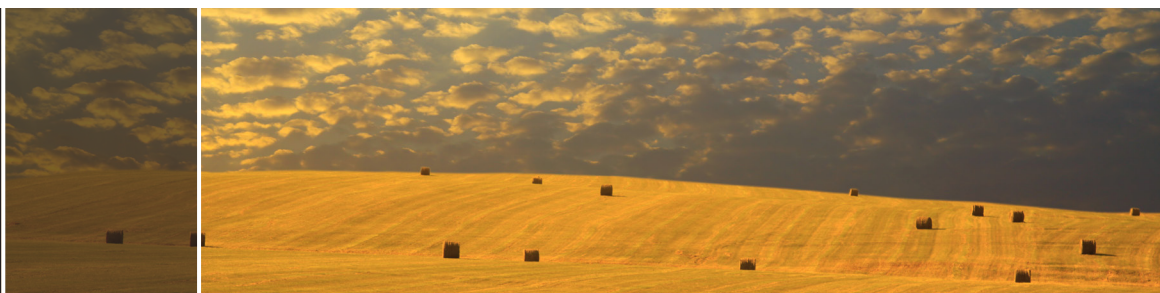
Vice President – Field Operations

R. Verlin Danner has served as Luca Technologies' Vice President of Field Operations since 2003 and is responsible for implementation of Luca's restoration and sampling technology as well as the coordination of gathering anaerobic core samples from diverse hydrocarbon fields located both domestically and abroad. From 2000 to 2003, Mr. Danner was in Project Management for Fidelity Exploration and Production Company. From 1995 to 2000, he was the Operations Manager at Preston, Reynolds & Co., Inc. Previous experience included working with Phillips Petroleum from 1983 to 1993 along with other large and small oil & gas companies. Mr. Danner has owned and managed companies including Thunder Basin Wireline, Thunder Basin Pumping Service, Thunder Basin Operating, Methane Service Corp, Danner Minerals, Danner Farms and Thunder Basin Mechanical. Mr. Danner has over 31 years of operations management experience in executive management and the field.

### **Lisa Rice**

Vice President – Administration and Human Resources

Lisa Rice has served as our Vice President of Administration and Human Resources since June 2011, where she oversees administration, human resources, marketing, public relations and communications aspects for us. Prior to joining us, from 2005 to 2011, Ms. Rice oversaw administration and human resources in the financial services arena for Specialized Loan Servicing and Westerra Credit Union. Prior to 2005, Ms. Rice was a human resources leader for several Colorado based companies, including HealthOne and MDC Holdings. Ms. Rice has led the administrative, human resources, public relations and communications functions for several start-up technology firms. Ms. Rice has a B.A. in Sociology from the University of Colorado, an M.A. in Organizational Management from the University of Phoenix, and holds a Senior Professional in Human Resources certification issued by the Society for Human Resources Management.



## BOARD MEMBERS

### **Eric Szaloczi**

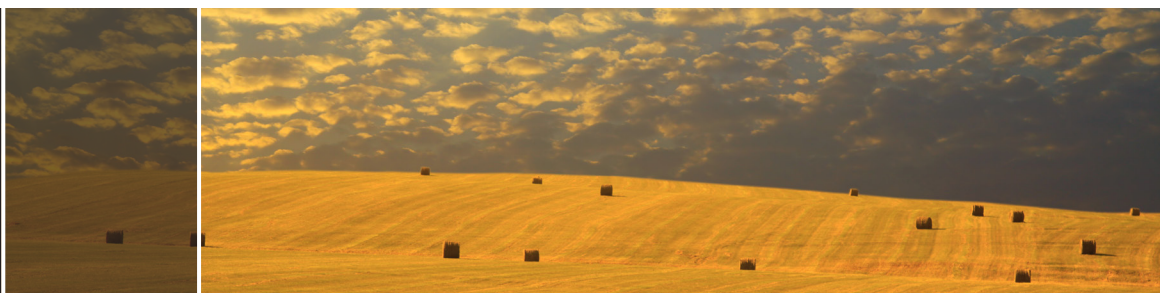
Chairman of the Board, Founder

Eric Szaloczi is our founder and has served as Chairman of the Board since 2003. He also served as our Chief Executive Officer until 2005. Mr. Szaloczi was instrumental in the discovery and development of the coalbed methane industry in the Powder River Basin of Wyoming. During the basin's development, he came to believe that the gas being produced was created by ongoing biological activity within the coal and was not, as commonly believed, the artifact of ancient geological processes. These discoveries ultimately led to the inspiration for our formation. As an executive, operator, investor and entrepreneur in the oil and gas industry for over 40 years, Mr. Szaloczi has extensive management experience in all phases of the domestic oil and gas business. He has led exploration, production, transportation and marketing efforts in most producing regions of North America. Mr. Szaloczi has worked as an independent producer in senior level corporate management positions. Prior to our formation, he was President of Fidelity Exploration & Production Company. He was founder, Director and CEO of Preston, Reynolds & Co., Inc. Mr. Szaloczi is a founder and current Director of the Blue Mountain Foundation, a philanthropic organization supporting a wide variety of charities. We believe that Mr. Szaloczi's qualifications to serve on our board of directors include being a thought leader in the development of sustainable biogenic gas creation technology and his extensive energy industry experience.

### **Raymond J. Lane**

Director

Ray Lane is a Managing Partner at Kleiner Perkins Caufield & Byers, focused on helping entrepreneurs with technological and market insight, organizational development, team building, and selling and managing growth since 2000. Since joining Kleiner, Perkins, Caufield & Byers, he has sponsored several investments for the firm in enterprise and consumer technology, as well as clean and alternative energy. Mr. Lane is an Advisor at Meakem Becker Venture Capital, LLC. He served as the Interim Chief Executive Officer of V-Vehicle Inc. From January 1997 to July 2000, Mr. Lane was President and Chief Operating Officer of Oracle Corporation, the second-largest software company in the world and the leading enterprise software and services company. He also served as the Executive Vice President of Oracle and President of Worldwide Operations from October 1993 to January 1997. Mr. Lane joined Oracle in 1992 as the President of Oracle USA. He led Oracle's business expansion beyond its core database technology into enterprise applications and professional services. Mr. Lane served as a Director of Oracle from June 1995 to July 2000. Prior to joining Oracle, Mr. Lane was a senior partner with Booz-Allen & Hamilton, where he pioneered and led the Information Systems Group, a worldwide consulting practice targeted at helping senior management achieve better results from information technology. Mr. Lane also served on Booz-Allen's Board of Directors and Executive Management Committee. He currently serves on the University's Board of Governors of West Virginia University. For several years, Mr. Lane has served as Vice Chairman of Special Olympics International and served on the International Board of Special Olympics. He was elected to the Academy of Distinguished Graduates of West Virginia University and serves on the University's Foundation Board. Mr. Lane received a Bachelor's degree in mathematics, an honorary Ph.D. in Science from West Virginia University (WVU) and an honorary Doctorate from Golden Gate University.



### **Matthew A. Gibbs**

Director

Matthew A. Gibbs is a General Partner of Oxford Bioscience Partners, a \$1.1B lifescience venture capital fund. Mr. Gibbs joined Oxford in 1997 and became General Partner in 2005. Mr. Gibbs holds the responsibility of management and execution for the firm's public equity portfolio, where he is involved in liquidation strategies for the public companies in the firm's venture capital portfolio. Leading the bio-energy initiative at the firm, Mr. Gibbs played a key role in the distribution and liquidation of Oxford's Fund I. Prior to joining Oxford Bioscience Partners, Mr. Gibbs was with the Venture Fund of Washington, a healthcare venture capital firm. Mr. Gibbs also served as an Analyst at MedVest, Inc., Oak Investment Partners, Marquette Venture Partners and also worked at Johnson & Johnson Development Corporation. Mr. Gibbs leads the bio-energy team at Oxford with investments in Luca Technologies, microbial generated natural gas from coal, and Glori Energy, biotechnology enhanced oil recovery. Mr. Gibbs received his Bachelor of Arts from the University of Colorado and completed Executive Programs at Harvard Business School.

### **George Hutchinson**

Director

George Hutchinson is a Managing Director and Partner at Jefferies Capital Partners (JCP), a private equity fund, where he focuses on energy investing across the entire energy value chain. Mr. Hutchinson has 25 years of experience in energy finance and has achieved success on both the buy-side and sell-side. Prior to JCP, Mr. Hutchinson was Senior Managing Director for Jefferies Randall & Dewey (JRD), a leading worldwide oil and gas advisor. In 2003, Mr. Hutchinson joined at Friedman Billings & Ramsey (FBR) as Managing Director in the Houston energy office, where he specialized in energy 144a equity placement and led the firm to a leading position in sole managed energy equity underwritings. Prior to PBR, Mr. Hutchinson acted as Managing Director and Head of the Houston office for Trust Company of the West. Mr. Hutchinson received his undergraduate degree from Boston University's School of Management.

### **David A.B. Brown**

Director

David A.B. Brown has served as director since November 2011. He is Chairman of the Board of Directors of Layne Christensen Company, a provider of services to the water, water infrastructure and minerals explorations businesses. He also serves as Chairman of the Audit Committee of the Board of Directors of EMCOR Group, Inc., a large engineering and building management company and is on the Board of Directors of EnscO Plc, the second largest offshore driller in the world. From 2005 to 2011, Mr. Brown was Chairman of the Board of Pride International, Inc., which was merged into EnscO Plc in May of 2011. Mr. Brown was President of The Windsor Group Inc., a strategy consulting firm focused on the energy services industry, from 1984 to 2005. He has also been Chairman of the Audit Committee of the Board of Directors of Western Company of North America, and Pride International, Inc., BTU Inc. and Mission Resources, Inc. Mr. Brown is a Canadian Chartered Accountant with a Bachelor of Commerce and a licentiate in Accountancy from McGill University. He also holds an MBA with distinction from the Harvard Business School where he has also attended several executive programs. Since 2003, he has served on the faculty advisory Board of the DeSautels School of management at McGill University. Luca believes Mr. Brown brings extensive financial, accounting and business experience to its board of directors.