



## ESCUELA DE VERANO DE GAS Y ACEITE CONVOCATORIA 2019

### PROGRAMA INTENSIVO PARA ESPECIALISTAS Y FUNCIONARIOS DEL SECTOR HIDROCARBUROS

#### ANTECEDENTES

Con fecha 16 de diciembre de 2016, la Secretaría de Energía y el CONACYT, emitieron la convocatoria Cooperación con la Universidad de Alberta – Red de Conocimiento para que las instituciones de educación superior, centros e institutos de investigación, públicos o privados, asociaciones civiles sin fines de lucro y organizaciones civiles del país, presentaran propuestas en consorcio con la Universidad de Alberta y con otras instituciones académicas nacionales y extranjeras con objeto de formar una red de Conocimiento, para proponer soluciones innovadoras a los retos específicos del subsector hidrocarburos, a partir de proyectos de investigación científica y tecnológica, así como también el desarrollo de talento humano. El 17 de febrero de 2017, la Comisión de Evaluación aprobó la propuesta **Fortalecimiento de Capacidades y Formación de Talento para el Subsector Hidrocarburos: Universidad de Alberta, UNAM, Universidad Panamericana y Alberta Energy Regulator.**

El proyecto consta de cuatro subproyectos estratégicos, siendo uno de estos la Escuela de Verano en Gas y Aceite. La intención de la Escuela de Verano es ofrecer capacitación intensiva en una amplia gama de temas relacionados con la industria hidrocarburos, impartida por expertos de la Universidad de Alberta, y de la UNAM, a funcionarios mexicanos involucrados en los sectores públicos y privados del sector energético. Los cursos de la Escuela de Verano serán creados siempre teniendo en cuenta las necesidades de la industria y su principal objetivo es el de beneficiar a una amplia variedad de profesionales del sector hidrocarburos en México. Los cursos impartidos proporcionarán conocimiento sobre temas selectos de la industria petrolera mexicana, investigación de vanguardia y mejores prácticas y fomentarán vínculos entre colegas profesionales en Canadá y en México. La UNAM y la Universidad de Alberta asegurarán que los cursos sean impartidos por líderes en sus campos y que los participantes tengan la oportunidad de relacionarse con ejecutivos de su mismo nivel en el gobierno, la industria y en el ámbito académico, brindando una oportunidad única para que profesionales mexicanos puedan obtener conocimientos y experiencia de clase mundial en una variedad de temas relevantes al sector hidrocarburos de México.

Los cursos de la Escuela de Verano abarcan toda la cadena de valor de la industria petrolera (i.e. la industria de la exploración y producción y la industria de transformación industrial). Las Escuelas de Verano ofrecidas en 2019 y 2020 estarán enfocadas a la industria de exploración y producción (up-stream) y las de los veranos de 2021 y 2022 estarán enfocadas a la industria de transformación industrial (down-stream). De las primeras cuatro Escuelas de Verano, dos se darán en la Universidad de Alberta y dos en la Universidad Nacional Autónoma de México con un programa en cada tema y de manera alternada.





Por lo anterior la UNAM y la Universidad de Alberta

## CONVOCAN

A los funcionarios mexicanos del subsector hidrocarburos a que se registren para participar en la 1ª Escuela de Verano que se llevará a cabo en Edmonton en Canadá del 15 al 28 de septiembre de 2019, conforme al Programa anexo

## BASES

PRIMERA. Podrán participar hasta 20 funcionarios mexicanos especialistas en el tema de hidrocarburos, propuestos por su institución de adscripción y a los cuales se les otorgará una beca para cubrir los siguientes rubros: colegiatura del curso, hospedaje, alimentos, transporte a los diferentes centros que se visitarán (dentro y fuera de Edmonton), costo de las actividades de los fines de semana. La beca NO cubre boleto de avión ni los gastos personales en que incurra el funcionario (i.e llamadas telefónicas, lavandería, tintorería, compras, etc.)

SEGUNDA. Los interesados en participar deberán registrarse en línea ([http://www.hidrocarburos.unam.mx/escuela\\_verano-inscripcion.html](http://www.hidrocarburos.unam.mx/escuela_verano-inscripcion.html)) y anexar: postulación oficial de su institución según formato proporcionado, su C.V. y copia de sus títulos, mediante lo cual acreditará su nivel académico, experiencia profesional y cargo.

TERCERA. La Escuela de Verano se impartirá en inglés, por lo que los interesados deberán tener un nivel de comprensión y manejo del idioma equivalente a 500 puntos del TOEFL.

CUARTA. La institución de adscripción del candidato se compromete a proporcionarle el boleto de avión a Canadá, así como las facilidades que requiera para su participación en la Escuela de Verano una vez que se reciba la carta de aceptación, emitida por el comité técnico del proyecto.

QUINTA. Es responsabilidad del candidato, tramitar de manera oportuna las visas que requiera para su viaje a Canadá.

SEXTA. En caso de cancelación después del 5 de agosto la institución o el candidato, según proceda, deberá reintegrar el costo del material derivado de la Escuela de Verano.

**Esta convocatoria estará vigente hasta el 30 de junio de 2019**

Ciudad de México a 22 de abril de 2019

Para mayores informes y aclaraciones  
Fis. Patricia Zúñiga-Bello  
Coordinadora de Gestión y Vinculación  
[p.zuniga.bello@gmail.com](mailto:p.zuniga.bello@gmail.com)



Universidad Nacional  
Autónoma de México





I. Energy Strategy and Finance I (Week One: September 16-20 in Edmonton)

<b>Week One Sessions</b>	<b><i>Outline and features</i></b>
<b>1. Global Trends and Emerging Issues</b>	<p>This overview session provides a peer-based setting for participants to test their understanding of fundamental issues affecting international oil and gas development. It builds upon participants' own experience in oil and gas development, and provides a context for your full program. It aims to:</p> <ul style="list-style-type: none"><li>• Develop an in-depth understanding the key trends, and of what is driving them;</li><li>• Examine the impact of these trends on both supplier and consuming nations, as well as in developed and emerging markets, including Mexico;</li><li>• Consider the challenges faced by oil and gas industry and governments to develop effective, context-based policies.</li></ul> <p>Working with these trends will position the discussion in the third session below on strategic management.</p>
<b>2. Understanding Regulatory Frameworks</b>	<p>This session provides an understanding of how and why frameworks for regulating oil and gas development are effected, particularly in the upstream and midstream sectors.</p> <p>The session develops an in-depth understanding of why regulations are needed, the mechanics of their application, and who might apply these regulations in practice.</p> <p>The session looks at regulatory theory and practice, having first reviewed key characteristics of the oil and gas industry, and elements of petroleum law essential to understanding regulations. Discussion includes a look at alternate regulatory models and considers the responsibilities and functions of industry and government that such models must accommodate.</p>
<b>3. Strategic Management of Energy Resources</b>	<p>The session is primarily focused on developing knowledge and skills needed in shaping the future of an organization.</p> <p>The concepts include developing an effective strategic plan and its implementation. Working with the trends and issues identified in Session 1 of the program, the group will develop their skills and knowledge. These include developing an effective organization, process improvement and application of motivation concepts.</p> <p>The session will provide opportunities for participants to challenge their mental models regarding strategic management and update their knowledge and skills learned from the session.</p>



<p><b>4. Value Chain Management Strategies for the Oil and Gas Sector (session 1)</b></p>	<p>How the value chain of an industry is constructed would determine how this industry would operate and compete in today's global economy. However, the creation and construction of a value chain is affected by many factors and business decisions. Research and development, production and distribution decisions would determine the length of the value chain and who the partners would be. While the value chain reflects how value is created, it is also a product of many marketing, production and supply chain decisions. To manage a value chain effectively means making the right strategic decisions regarding these underlying factors.</p> <p>This session introduces the concept of value chain management and how it reflects the underlying strategies on product development, competitive positioning, and supply chain configuration. The session would conclude with how these concepts would apply to the oil and gas industry.</p>
<p><b>5. Energy Finance from a Strategy Perspective</b></p>	<p>Corporate financial decision-making is the topic more deeply explored in this session.</p> <p>To support the core topic, the session includes a quick overview of:</p> <ul style="list-style-type: none"><li>• How finance, energy and strategy are related;</li><li>• The concepts of risk, return and opportunity cost of capital;</li><li>• Use of financial statement analysis to support corporate financial decisions, including ratios used in the oil and gas industry</li></ul> <p>The session explores in more depth the concepts of capital budgeting and the financial decision making process, both when investing in capital projects and when obtaining financing to execute the same projects. Capital project evaluation methods and practical examples, as well as case studies of corporate decisions in the energy industry, will be shared with participants.</p>
<p><b>6. Petroleum Project Management</b></p>	<p>Project management is an important tool of modern management, particularly for big jobs, unique jobs, and jobs that require many skills. The objective of the session is to develop an in depth understanding of all aspects of project management, including:</p> <ul style="list-style-type: none"><li>• Definition of a project and of a successful project;</li><li>• Planning and monitoring of a project, including network scheduling techniques;</li><li>• Project organization and staffing;</li><li>• Qualitative planning and control tools;</li><li>• Overcoming obstacles to a successful project;</li><li>• Risk management techniques;</li><li>• Role of a project manager;</li><li>• Benefits from project management; and</li><li>• Using project software for project planning and control.</li></ul> <p>The session will provide opportunities for participants to apply concepts on many practical examples.</p>



<b>7. Oil Terminal Operations Management</b>	<p>The importance of effective management and handling of an oil terminal cannot be over-emphasized. The efficient transporting to terminals and storing of crude oil or refined petroleum products in tank farms are key for operators to manage inventory.</p> <p>This session overviews operations in the oil terminal or product storage facility and functions of oil operations, facilities managers, terminal managers, and HSE (Health, Safety and Environment) personnel. This session will involve exchange of strategies for improving terminal management and handling skills.</p> <p>Participants will acquire knowledge of operations and management of oil and oil product terminals. They will recognize and learn how to apply safe practices and procedures during the various operations in terminals including emergency response plans. North American regulation and standards for crude oil and refined products storage and transportation at terminals will be cited.</p>
<b>8. Managing Change</b>	<p>Programs and projects are developed to deliver specific benefits and outcomes. Unfortunately, it is common knowledge that over 60% of projects fail and the benefits and outcomes they promise are never realized. When projects do not fail, the value promised is only partially realized.</p> <p>This Change Management introduction presents a strategic approach to realizing the benefits promised by projects and programs. It considers the leadership, technical and people requirements of leading a successful project; it applies a change management methodology and tools from Prosci® and provides Change Leaders implementing organizational projects with insights, best practices, skills and references to resources to enable the realization of the full value promised by projects.</p>
<b>9. Leduc #1 Museum and Energy Discovery Centre</b>	<p>This visit is to Alberta's foremost energy science museum, where guests can learn about the diversity, complexity and history of Canada's energy sector through sustainable, responsible and educational experiences. The site is approximately one half-hour outside of Edmonton; transportation will be provided.</p>

II. Weekend Excursion to the Rocky Mountains: September 21-22 in Jasper and Banff – *Details to be provided at a later date*



III. Energy Strategy II (Week Two: September 23-27 in Calgary)

Week Two Sessions	<i>Outline and features</i>
<p><b>1. Production of Heavy Oil and Natural Gas Processing</b></p>	<p>This review of heavy oil and natural gas production and transportation provides awareness and understanding of the technology and current issues surrounding the extraction of bitumen from the oil sands and natural gas from reservoirs. Heavy oil is a large component of the world's oil resources, and Alberta's oil sands are one of the largest known deposits of oil anywhere in the world. The growth potential for oil sands and natural gas development in western Canada remains huge, but production and transportation present unique challenges, which also will be explored. Session topics include:</p> <ul style="list-style-type: none"> <li>• What are oil sands?</li> <li>• Heavy oil chemistry</li> <li>• Heavy oil statistics, resources and reserves</li> <li>• Thermal recovery and processing</li> <li>• In-situ recovery methods</li> <li>• Mining recovery and processing</li> <li>• Upgrading</li> <li>• Marketing</li> <li>• Gas sweetening and sulphur production technology</li> <li>• Current issues and opportunities</li> </ul>
<p><b>2. Horizontal Drilling and Completions: An Overview of New Technologies and Methods</b></p>	<p>“Drilling for Production equals Reservoir Exploitation Approach” is how this session could be summarized. The session proceeds via a survey of horizontal and multilateral drilling, and then proceeds to consider EOR (Enhanced Oil Recovery) Drilling, both from the perspective of recent advances in technology, and via a systems approach, using the eight-part UBD Process. The third portion of the session will address advances made in completion and production using a review of downhole completion tools. Lastly, the group will review production and artificial lift.</p>
<p><b>3. Strategic Human Resources Management</b></p>	<p>This session deals with the alignment of Human Resources (HR) and business plans, providing an opportunity to explore how HR can align with business strategy to efficiently and effectively contribute to Company results through impactful people leadership.</p> <p>Content includes a discussion of internal and external influences on people leadership; HR operating models; work force planning; talent management and strategic people leadership challenges.</p> <p>As this program deals with the alignment of HR and business plans, the audience is for business leaders and HR professionals.</p>
<p><b>4. Alberta Energy Regulator</b></p>	<p>TBC; however, looking to include an introduction to AER, followed by discussion about its pipeline regulatory framework, pipeline incident response and integrated decision approach.</p>





<p><b>5. Tolling, Tariff and Regulatory Concerns in Oil and Gas Transport (in 2 sessions)</b></p>	<p>This session provides an understanding of how Canada’s energy industry, and in particular energy transportation, is regulated in Canada and the province of Alberta, which is considered by many observers as the best in the world.</p> <p>The objectives of the session are to understand how energy transport, via pipeline, rail, truck and marine modes, are regulated to ensure both public safety and the economic interests of the nation and province. Beginning with an overview of the unrefined energy products and co-products to be transported to markets, the session will examine in detail how national and provincial regulators assess the sometimes-conflicting objectives of public and environmental safety with economic contributions. With a strong focus on pipelines, we will examine how tariffs - “the rules of the road”- are established in Canada.</p> <p>Tolling methodology as applied by Canadian regulators will be discussed using real examples from the transportation industry. The role of storage hubs for oil, natural gas and natural gas liquids will be investigated.</p> <p>Finally, an overview of commonly employed energy marketing and transportation agreements will be presented. The session closes with a discussion of emerging issues in energy transportation and how industry and regulators are developing solutions. Participants should expect this to be a highly interactive session with an instructor with many years of hands-on energy transportation and marketing experience.</p>
<p><b>6. Tight (Shale) Oil and Gas Development</b></p>	<p>“Tight” oil and gas reservoirs feature very low permeability compared to conventional reservoir rocks – meaning fluids move through them very slowly. Oil and gas in tight reservoirs therefore cannot be produced at economic rates using conventional vertical wells. Only recently, through the development of horizontal drilling and multi-stage hydraulic fracturing technologies, has industry been able to boost tight reservoir production to economic rates. Tight oil and gas resources are immense, and have already radically altered the supply picture in North America.</p> <p>We will review tight oil and gas resources in the United States and Canada, focusing on the regulatory, infrastructure and data issues that have supported their development. We will see how lessons learned can be applied in other parts of the world – and particularly in Mexico, which shares much potential with world-class tight reservoirs in Texas.</p>



<p><b>7. Oil and Gas Marketing and Trading (in 2 sessions)</b></p>	<p>This session provides an understanding of what needs to follow the exploration, development, and production phases of the petroleum value chain, that is, the commercialization stage, with a focus on selling and marketing.</p> <p>The objectives of the session are to understand how markets work for unrefined petroleum products and co-products, and how transportation is effected from supply to customer.</p> <p>We will be examining the three hard truths of global energy, and how they determine what constitutes saleable energy products, and what count as co-products. We will investigate key market outlets for both oil and gas, and related pricing mechanisms and dynamics. In doing this, key market and transportation issues will be introduced, including strategies for achieving optimal inventory management and industry commercialization and other associated concepts. We will discuss marketing and transport agreements, and a case study in commercialization and marketing aspects of a sour, liquids-rich, natural gas field will be team assigned.</p>
<p><b>8. Pipeline Operations and Integrity Management</b></p>	<p>This session address strategies for improving the cost effectiveness of pipelines as a means of transportation in the following areas:</p> <ul style="list-style-type: none"><li>• Types of pipeline system - gathering, transmission and distribution;</li><li>• Technical innovations in the past 25 years that have driven operating costs down: Optimal route selection; efficient hydraulic design; environmental protection; nominating flow volumes and batching products; flow improvement; custody transfer and metering.</li><li>• Maintenance philosophies: System reliability; pigging and cleaning; integrity management via intelligent pigging; pipeline condition assessment and in-service repairs.</li><li>• Leak detection and automatic control.</li></ul>
<p><b>9. Value Chain Management Strategies for the Oil and Gas Sector (session 2)</b></p>	<p>This session reviews how value chain management has become an important competitive tool in global business and production strategies. At the heart of value chain strategy are the questions of how different segments of the value chain should be structured and formed to create an optimal value chain and how effective supply chain management is key to making this strategy work. By tying a firm's marketing and business goals to its sourcing, distribution and production strategies, an appropriate supply chain is fundamental to achieving a firm's value chain goals.</p> <p>In turn, the intra-industry relations among these functional areas would crucially affect the complexion of its value chain and how it should be managed. What then are the key parameters in value chain management strategy in the petroleum industry? How should the value chain of this industry be best managed given its supply chain realities? How would the industrial structure and government-business relations and regulatory framework impact on a nation's petroleum value chain? Who are the key players in managing the petroleum value chain? These are questions we will strive to answer through class presentations and participant discussions.</p>





I. Energy Strategy and Finance I (Week One: September 16-20 in Edmonton)

<b>Week One Instructors</b>	<b><i>Biography</i></b>
 <p><b>Mike Ames, PEng</b> <i>Global Trends and Emerging Issues; Strategic Management of Energy Resources</i></p>	<p>Mike Ames is an oil and gas executive with over 35 years of broad international and domestic exploration, development and production experience with major, independent and junior operating oil and gas companies. He has been the Global Vice President of Exploration for a large US corporation, where he managed new country entry, exploration and development operations. He has also been a Founder of two start-up oil and gas companies, one international and one domestic, and served as a Director for several companies. Recently, as a consultant, he co-founded a strategic advisory company to provide services to a National Oil Companies in Africa. He is comfortable with all aspects of the upstream business from detailed hands on technical work, operations management, reserves reporting, joint ventures (JVA's, JOA's, TCM's, OCM's); and business development including origination, country entry, portfolio evaluation, fiscal and commercial agreements, economics, M&amp;A, and strategy development.</p>
 <p><b>Mike Ekelund, PEng</b> <i>Understanding Regulatory Frameworks</i></p>	<p>Mike is the Senior Assistant Deputy Minister for the Alberta Energy Diversification Division. He is a Professional Engineer, as well as a Barrister and Solicitor (currently non-practicing), and a member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGA) and the Alberta Bar.</p> <p>In over 30 years with the Government of Alberta, Mike has held a number of positions from lawyer and senior economist to Chief Executive Officer of the Alberta Petroleum Marketing Commission and several Assistant Deputy Minister roles. Prior to working in government, Mike worked as an oil and gas production engineer, a lawyer in a private firm and a legal researcher.</p> <p>Mike is a founding and current director of the Petroleum Technology Alliance of Canada (PTAC), a director of the Canadian Energy Research Institute and was previously a director of the Canadian Petroleum Institute and of Synergy Alberta.</p>



**Edy Wong, PhD**

*Value Chain Management for the  
Oil and Gas Sector*

Dr. Edy Wong is Associate Dean (International), and Director of the Centre for International Business Studies (CIBS) at the School of Business, University of Alberta.

Edy has authored various learning materials in International business and is the author of the Supply Chain Management Professional Program, the only internationally recognized professional designation in Supply Chain Management in Canada. He graduated with a PhD from the University of Alberta in 1984, specializing in International Business and Economic Development. With a keen interest in Asia, he has focused on the Asia-Pacific region and trade related issues in both his research and business activities.

Edy Wong was twice named one of the 50 most influential people in Alberta business by Alberta Venture Magazine, and has been honored by supply chain professionals in Canada with a Lifetime Achievement Award, and Fellowship of PMAC (Purchasing Management Association of Canada).



**Tiago Lage, CFA**

*Energy Finance from a Strategy  
Perspective*

Tiago Lage is the Director of Downstream Oil & Gas for Alberta Economic Development and Trade, where he leads enabling industry development efforts in both sides of the investment attraction ecosystem, private sector and all levels of government.

Tiago is Vice President of the CFA (Chartered Financial Analyst) Society Edmonton, having joined the board in July 2015. He has also participated in key provincial initiatives, such as the 2016 Energy Diversification Advisory Committee and the 2018 Request for Expressions of Interest, to refine more Alberta oil feedstock.

Tiago is a CFA Charterholder, holds an MBA, has a degree in Economics, and speaks four languages.



**George Yan, PEng**

*Petroleum Project Management*

George Yan is Portfolio Manager at Jacobs, a major energy sector PM (Project Management) provider located in Calgary, Alberta. Mr. Yan has more than 30 years' experience in the engineering field, and two decades of work in project management in different countries in the world. He has managed projects valued up to 1.5 billion USD for companies such as Shell, ExxonMobil, Suncor, Syncrude, and other multinational companies.



Mr. Yan also has had considerable managerial experience, directing his own EPC (Engineering, Procurement & Construction) company. In this capacity, he has handled projects ranging from infrastructure, chemical, power plant, oil field and other sectors. George also has served as project management training champion at Worley Parsons. He has worked on both the owner and contractor sides of the PM sector, and understands the project management and business development requirements of both parties.



 <p><b>Martin Webber, CTech</b></p> <p><i>Oil Terminal Operations Management</i></p>	<p>Since 2015, Martin has been the Project Integration Specialist at Enbridge Pipelines Inc. Prior to this role, he served as the Operational Readiness Manager for 4+ years in Durban, South Africa, on behalf of Enbridge Technology Inc.</p> <p>Martin has more than 35 years of comprehensive international and national experience in operational readiness, commissioning, maintenance management, petroleum measurement, technical training development and delivery with global experience in South Africa, Brazil, Mexico, USA, China and Canada.</p> <p>Martin has a Certificate in Project Management and Business Management from the Northern Alberta Institute of Technology (NAIT) and is a registered Mechanical Engineering Technician with The Association of Science and Engineering Technology Professionals of Alberta (ASET).</p>
<p><b>Luis Torres, PEng</b></p> <p><i>Facilities Integrity</i></p>	
 <p><b>Adesiji Rabi, MBA, SCPM, Prosci OMC, CMC, PMP</b></p> <p><i>Managing Change</i></p>	<p>Adesiji Rabi is an employee of the Innovation and Energy Technologies Sector of Natural Resources Canada (NRCan), and a member of the CanmetENERGY Devon team where he is responsible for Program Planning and Performance. Adesiji's interests include organizational change management (OCM) and improving business processes and performance.</p> <p>Adesiji has a Master of Business Administration (MBA) from the University of Alberta, a certificate in advanced project management from Stanford University, and a degree in computer science from the University of Lagos. He is a certified management consultant (CMC), a project management professional (PMP) and a Prosci® certified change management practitioner.</p> <p>In the community, Adesiji supports the Edmonton Region Immigrant Employment Council (ERIEC), and serves as a member of ERIEC's Board of Directors. He is married to Dr. Tolu Olateju.Tolu and they reside in Edmonton with their kids, Tommy and Demi.</p>



## II. Energy Strategy II (Week Two: September 23-27 in Calgary)

<b>Instructors</b>	
 <p><b>Kash Verma, PEng</b></p> <p><i>Oil Sands 101</i></p>	<p>Mr. Kash Verma has more than 30 years' experience with Amoco/BP. He has worked in all aspects of oil and gas production, processing, transportation and business development. Kash has extensive experience in project development and project management. He has designed and managed several multi-million dollar projects throughout Alberta and BC involving pipelines, gas processing plants, conventional and heavy oil production and processing facilities.</p> <p>Kash taught at Fanshaw College in London, Ontario for two years, ten years for SAIT part-time while working at Amoco/BP, and so far, three years full-time for MacPhail School of Energy. He has delivered training for SAIT in Turkey, Kazakhstan, Western Canada and the US and has also taught Angolan nationals for our operator training for workforce nationalization on campus. Kash has also designed and written several courses to address the specific requirements of the oil and gas industry.</p> <p>Kash has an M. Eng. degree in Mechanical Engineering from McMaster University in Hamilton, Ontario. He is a registered Professional Engineer in the Provinces of Alberta and British Columbia.</p>
 <p><b>Denis Gaudet, PEng</b></p> <p><i>Horizontal Drilling and Completions</i></p>	<p>Mr. Denis Gaudet is Principal of DRG Resources. He has traveled extensively in the international oil and gas industry specializing in the pumping service industry; including cementing, coil tubing, nitrogen, industrial &amp; pipeline, and well stimulation. In 1999 Denis began working as an independent engineering consultant with DRG Resources Ltd as the principal consultant. He has specialized in workovers and completions. Denis is now working and teaching for a number of international clients, teaching and training personnel in workovers, horizontal drilling, completions, formation damage, cementing, and stimulation, in areas such as India, Cuba, China, Indonesia, Venezuela and FSU.</p> <p>After graduating in Mechanical Engineering Degree in 1973, Denis began his career in the oil and gas industry with Haliburton, in Fort St John, B.C. He worked four years in northern Alberta and B.C. prior to moving to The Netherlands, where he was responsible for starting nitrogen pumping services in Holland, working both onshore and offshore in the Southern North Sea. In 1979, Denis moved to Aberdeen Scotland with Nowsco Well Service where he became Manager of Operations, responsible for hiring and training personnel for operations offshore, as well as teaching and training local operators. He transferred to Nowsco's Head office in England for four years, before returning to Calgary in 1986, where he worked for Nowsco Well Service, and then with Canadian Fracmaster Limited.</p>





**Tim Grant**

*Human Resources Management  
for the Petroleum Sector*

Tim is currently an Executive Human Resources Consultant. His practice includes providing strategic HR consulting support to non-for-profit organizations, international, and local industry groups on HR best practice, leadership development and career transitions.

After a 35 year career with Royal Dutch Shell, he moved into his current practice after being the VP HR, Canada. Tim has had international assignments in The Hague, Netherlands as a Senior Consultant for Global HR Strategy; and in Houston, US, he lead the America's Recruitment Department.

Tim's earlier HR assignments with Shell Canada have been at multi locations across Canada, and involved providing HR support to manufacturing, upstream, corporate and marketing organizations. A significant opportunity in his career involved leading the Human Resources function for Shell's Athabasca Oil Sands Project. He was part of the greenfield project development team in 1997.

Tim is married with three grown children. When not involved with consulting he enjoys downhill skiing, hiking, golfing and gardening.



**Larry Marks, PhD**

*Oil & Gas Marketing and  
Trading*

Dr. Larry Marks' career in oil and gas began at Shell, where he worked as a geophysicist for 17 years, exploring Alberta's sour gas belt. After an assignment marketing crude oil and condensate, Larry moved to The Hague, Netherlands as Regional Business Advisor for Syria.

Returning to Canada in 1996, he led oil and gas field development, as well as Shell's A&D. In 2001, Larry was appointed VP-Marketing and Transportation covering all upstream commodities movements, sales and business development (natural gas, LPG's, crude oil, condensate, sulphur, pipelines, electricity). His final job with Shell was Global Portfolio Leader for Shell Sulphur Solutions. Larry has broad experience in technical and commercial areas of the energy business.

As well as teaching executives at the University of Alberta, Larry currently provides energy advisory services to industry and governments worldwide.



**Brad J. Hayes, PhD, P.Geol**

*Tight (Shale) Oil and Gas  
Development*

Brad Hayes is President of Petrel Robertson Consulting Ltd., a geoscience consulting firm engaged by industry, government, and legal and financial organizations. PRCL advises on technical and strategic issues concerning conventional and unconventional (“tight”) hydrocarbon exploration and development.

Brad earned a PhD in geology from the University of Alberta, and a BSc from the University of Toronto. He joined PRCL in 1996 after 15 years of exploration experience in operating companies, including Shell Canada and Canadian Hunter. Brad is an active member of the Canadian Society of Petroleum Geologists (CSPG), and served as its President in 2001. He currently serves as a Board member for the Canadian Society for Unconventional Resources (CSUR), and in 2019 completed his second three-year term as a Councillor for the Association of Professional Engineers and Geoscientists of Alberta (APEGA). Brad is also an Adjunct Professor in the University of Alberta Department of Earth and Atmospheric Sciences.

Brad has presented and moderated at numerous technical conferences, and is a prominent media commentator on upstream petroleum industry issues, with particular focus on unconventional reservoirs and related environmental issues.



**Alan Murray, PhD**

*Pipeline Integrity Management*

Dr. Alan Murray retired in 2012 from the position of Chief Engineer at the Canadian National Energy Board having previously held a number of senior management positions with a large pipeline operating company in North America with responsibility for system planning, construction, maintenance and contracting functions.

His forty years of work experience spans research, regulation, third party assessment, design and development in pipelines and offshore structures. He was the founding chairman of the ASME Pipeline Systems Division and is the co-author of the ASME Press text books “Pipeline Design and Construction – A Practical Approach” and “Pipeline Integrity Assurance”.

He has published over fifty papers on a variety of engineering topics. Alan is an adjunct professor at the University of Calgary and has given courses on Pipeline Design and Construction throughout the world. A Mechanical engineer by training, he holds a doctorate in Civil Engineering from the Queen’s University of Belfast and is a Fellow of the ASME.





**Edy Wong, PhD**

*Supply Chain Management  
Strategies for the Oil and Gas  
Sector*

Dr. Edy Wong is Associate Dean (International), and Director of the Centre for International Business Studies (CIBS) at the School of Business, University of Alberta.

Edy has authored various learning materials in International business and is the author of the Supply Chain Management Professional Program, the only internationally recognized professional designation in Supply Chain Management in Canada. He graduated with a PhD from the University of Alberta in 1984, specializing in International Business and Economic Development. With a keen interest in Asia, he has focused on the Asia-Pacific region and trade related issues in both his research and business activities.

Edy Wong was twice named one of the 50 most influential people in Alberta business by Alberta Venture Magazine, and has been honored by supply chain professionals in Canada with a Lifetime Achievement Award, and Fellowship of PMAC (Purchasing Management Association of Canada).