EPEX 2023

Energy Prospectors Expo

OPI 60th Conference and Trade Show

May 31st to June 1st
Best Western Lamplighter Inn &
Conference Centre, London, Ontario

WHAT IS EPEX?

EPEX highlights the multifaceted nature of Ontario's oil, natural gas and salt industries and how they fit into Ontario's energy landscape. EPEX identifies opportunities to help other energy sectors. After all, we're all doing the same thing but in different ways -- and that is why the OPI and OGSR Library wanted to bring everyone together.

ENERGY PROSPECTORS EXPO

Each one of you is an important collaborator in this conference and your participation highlights the multidimensionality of our energy sector in Ontario.

The EPEX logo is a tesseract, a four-dimensional shape with 24 faces, chosen to represent the complexities and multiple layers of energy production in Ontario.

EPEX is about more than prospects – it's about exploring.

Join us in the plenary session and let's start generating collaborative energy!

Social Media #epex2023

We're live online, in more ways than one this year. Join the conference using the webinar link below and follow the conference, post pictures, and ask questions on twitter using the hashtag: **#epex2023**

Webinar link:

https://us06web.zoom.us/j/88519556723?pwd=bVlLMGl2NE1paHpHS2FyMG9OVTZEQT09

Help us improve the conference for 2023 by filling out an in-person **survey** or **poll** in the webinar.

Schedule of Events

Wednesday, May 31st

Live at the Best Western Lamplighter Inn & Conference Centre, London, Ontario

Length	*Time*	*Event*	*Presenters*
4 hrs	**12:00 PM**	Trade Show Setup	
2 hrs	**5:00 PM**	Welcoming Reception & Trade Show	Trade Show Exhibitors

Thursday, June 1st

Live at the Best Western Lamplighter Inn & Conference Centre, London, Ontario + Webinar

Length	*Time*	*Event*	*Presenters*
30 min	**7:30 AM**	Welcome Breakfast	
	8:00	**Exhibit Hall Opens**	Trade Show Exhibitors
5 min	**8:45**	*Official Conference Opening*	Welcoming remarks
20 min	**8:50**	*OPI Industry Plenary*	Scott Lewis, Peter Budd; OPI
20 min	**9:10**	*A Legacy of Innovation: the petroleum industry in Southwestern Ontario*	Christina Sydorko, Oil Museum of Canada
60 min	**9:30**	Networking Break and Coffee	Trade Show Exhibitors
		BLOCK 1: CAES, Hydrogen, and Utilities	
15 min	**10:30**	*Bedrock Compressed Air Energy Storage: A Collaboration with the MNRF*	Zain Javed, Bedrock Energy
15 min	**10:45**	*Key Economic Factors For Clean Hydrogen Projects*	Harry De Rose, Hydrogen Optimized
15 min	**11:00**	*Connecting Customers to Natural Gas - A Utility Perspective*	Susannah Robinson, EPCOR
15 min	**11:15**	*Carbon Capture and Sequestration Legislation in North America and their Influence on Future Ontario Legislation*	Phil Walsh, Toronto Metropolitan University
15 min	**11:30**	***Block 1 Panel Discussion***	

130 min	**11:45**	Networking Lunch	Trade Show Exhibitors
		Luncheon Keynotes	
	12:15 PM	Melissa Young, Skilled Trades Ontario	
	12:30 PM	The Honorable Graydon Smith, Minister of Natural Resources & Forestry	
		BLOCK 2: Underground Storage	
15 min	**1:15**	*CSA Z341 Hydrogen Supplement Cursory Review*	Coleman Hale, Lonquist
30 min	**1:30**	*Drilling Techniques for Salina Salt Formation Cavern Development*	Colten Long and Patrick Seymour, Lonquist
15 min	**2:00**	Update on Salt Cavern Storage in Ontario	Jug Manocha, Ameta Projects Inc.; Contributing authors Terry Carter, Carter Geological Services; and Ben Barnes, Double B Well Services
15 min	**2:15**	***Block 2 Panel Discussion***	
30 min	**2:30**	Networking Break and Coffee	Trade Show Exhibitors
		BLOCK 3: *Ontario Updates and Services*	
20 min	**3:00**	*Sarnia-Lambton: Ontario's Hydrogen Hub*	Matthew Slotwinski, Sarnia-Lambton Economic Partnership
10 min	**3:15**	*Pathways Alliance – Leading Opportunity in Canada's Energy Transition*	Robert Mugo, COSIA with Pathways Alliance
15 min	**3:30**	*Collaborative approaches for hydrogen in the clean energy economy*	Jacquie Hoornweg, Ontario Tech University
	3:45	*Advancements in Automation and Autonomation of Stream-Flo's Self-Contained Hydraulic Storage Well Emergency Shutdown Valves*	Dave Olmsted, Stream-Flo Industries
15 min	**4:00**	***Block 3 Panel Discussion***	
5 min	**4:15**	Closing Remarks / Trade Show Closed ***Submit your post-conference survey to help us build EPEX!***	Thank You for Attending!
	5:00 PM	Reception BBQ Hosted by Lagasco Inc. and Eastern Oilfield Services Inc.	**Everyone is invited** to 2807 Woodhull Road, London

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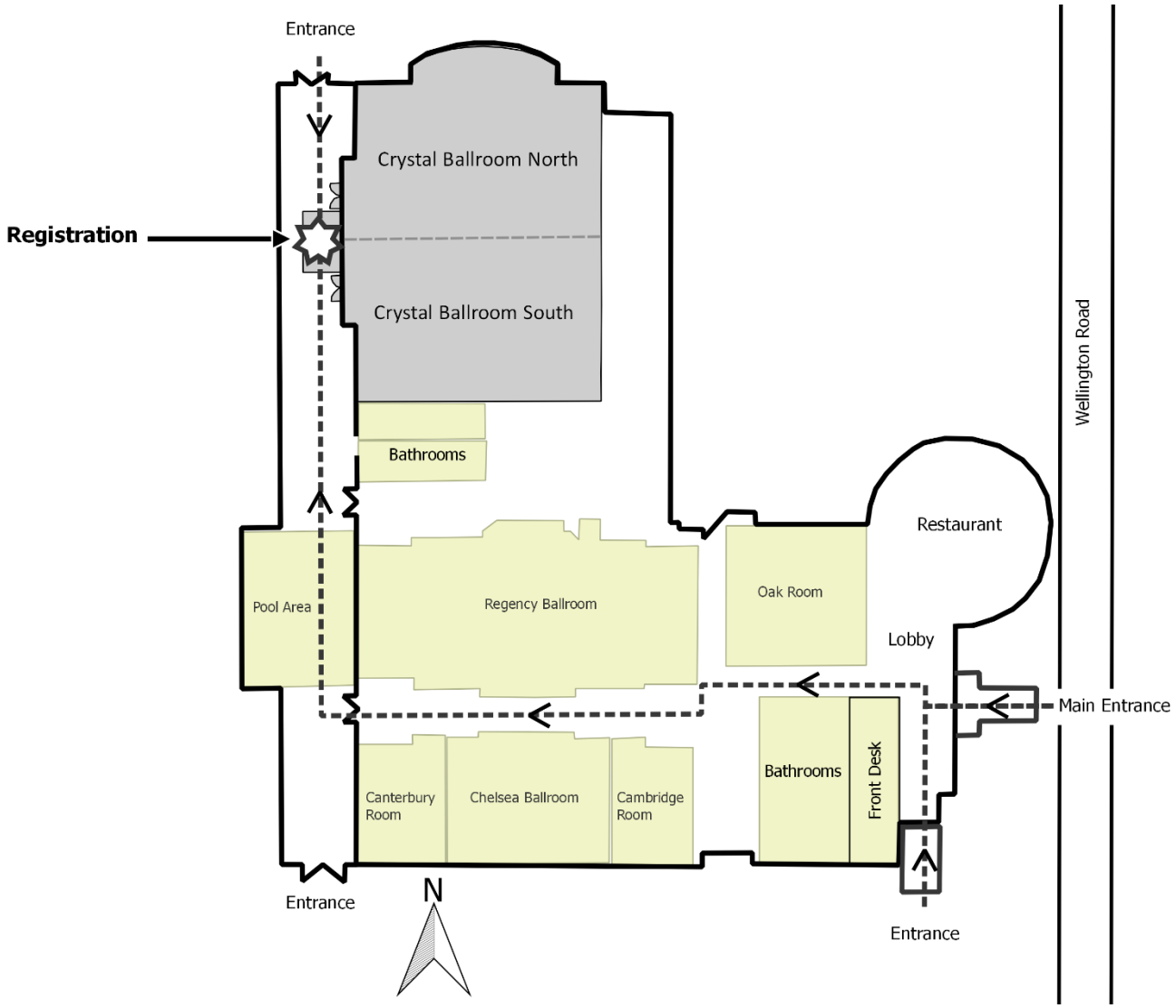
Venue Map

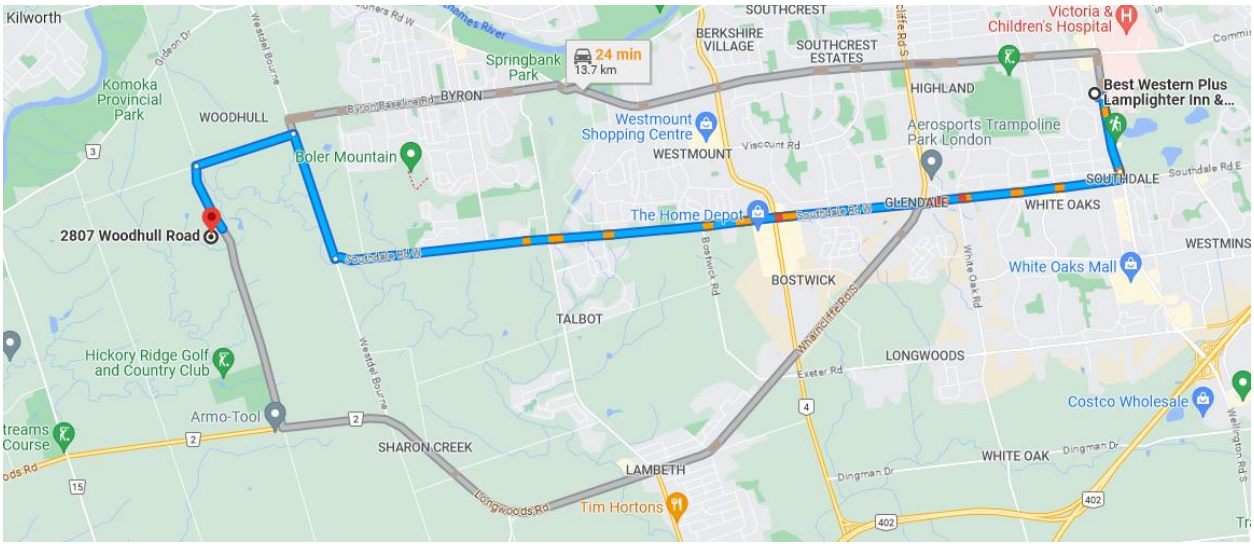
Best Western Plus Lamplighter Inn & Conference Centre

Crystal Ballroom North – Will host the Trade Show Exhibitors, Networking, and Keynotes.

Crystal Ballroom South – Will host the Plenary and Speaker Blocks.



Reception Map



Beginning at Best Western Lamplighter Inn & Conference Centre:

↰ Turn right onto Wellington Rd
1.0 km

↰ Turn right onto Southdale Rd E
10.4 km

↰ Turn right onto Westdel Bourne
1.7 km

↰ Turn left onto Elviage Dr
1.3 km

↰ Turn left onto Woodhull Rd
900 m

Arrive, 2807 Woodhull Rd.

Thank You Sponsors!

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Jim McIntosh Petroleum Engineering

Stream-Flo Industries Ltd.

Thank You Exhibitors!

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Eastern Oilfield Services

Elexco Land Services, Ltd.

Great North Wellhead and Frac

Lee Specialty Seal Inc.

LimeGREEN Equipment Inc.

Lonquist & Co. (Canada), ULC

Oil Museum of Canada

OGSR Library

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OPI Chairman's Welcome

It is my pleasure to extend a warm welcome to all attendees and guests, both virtual and in person, to EPEX 2023

This year the OPI is excited to present its 60th Conference and Trade show which has been supporting collaboration and innovation in the oil and gas sector for over 60 years and more recently through the EPEX format broadening participation to all Paleozoic subsurface ideas and activities.

Thank you to all continuing and first-time participants in this year's conference including: sponsors, presenters, exhibitors, and volunteers.

My appreciation and thanks to the OPI Conference Committee co-chaired by Niki Clark and Peter Budd for their work in organizing the Conference.

On behalf of the OPI, I would also like to extend my gratitude to the Oil Gas and Salt Resources library staff including Jordan Clark, Matt Dupont, and Rhys Paterson for their support in the planning and execution of this year's conference.

We hope you enjoy EPEX 2023.

Thank you for attending,

Scott Lewis, Chairman

Ontario Petroleum Institute

Conference Chair's Remarks

For almost six decades, this Conference has served as a platform for industry professionals, researchers, policymakers, and stakeholders to gather and exchange knowledge, ideas, and experiences in the subsurface energy sector. It has, no doubt, been a catalyst for innovation, collaboration and progress within our dynamic industry in the Province of Ontario and beyond.

As we reflect on the rich legacy of this Conference, we are reminded of the remarkable advancements and breakthroughs that have shaped our industry over the years. From conventional drilling techniques to cutting-edge technologies like hydraulic fracturing to new advancements in energy storage, our industry has continuously evolved to meet the ever-growing energy demands for the Province.

Today, we find ourselves at a critical juncture where the energy landscape is undergoing rapid transformation. The transition towards a sustainable and low-carbon future has become imperative, and the petroleum industry plays a vital role in this journey. We must embrace this challenge as an opportunity for innovation, diversification, and responsible resource management.

EPEX 2023 offers a unique opportunity to engage in stimulating discussions, gain insights from renowned experts, and forge valuable connections with colleagues and industry leaders. The program is designed to provide a diverse range of perspectives, that we hope will offer something for everyone.

On behalf of the Conference Committee, I would like to extend our gratitude to the many sponsors, exhibitors and speakers for their generous support.

I would also like to express my appreciation to the organizing Committee for their dedication and hard work in orchestrating this exceptional event.

We are thrilled to welcome so many attendees in person this year. We hope you will find EPEX 2023 to be informative and thought-provoking.

Niki Clarke, Conference Co-Chair

Speaker Biographies and Abstracts

Plenary Section

Christina Sydorko

Oil Museum of Canada

Christina spent 15 years teaching in the Lambton Kent District School Board before moving to be the full time Educational Programs Coordinator at the Oil Museum of Canada, National Historic Site in 2017. Christina is the recipient of the 2021 Award of Excellence in Programming from the Ontario Museum Association for virtual programs and the Lambton County Innovation Award for 2021. In a short period of time Christina made the virtual pivot to create innovative digital programs delivered to over 5000 students across Canada about Petroleum History, technology, and the environment. She is also the co-chair of Digital Transformation in Ontario museums for the Ontario Museum Association. Christina hopes to encourage a new generation of young people to find the wonder and exciting opportunities in the physical world around them.

NOTES

Christina Sydorko - Abstract

A Legacy of Innovation: the petroleum industry in Southwestern Ontario

A look through the historical records shows that the petroleum industry in Ontario has looked to innovation and creative ideas to meet the challenges of transportation, drilling, refining and the environment. Not content to be followers of world trends but instead focused on creating their own solutions; unique to the environmental and technological obstacles faced. Out of the muddy swamps in Enniskillen township people refined the raw crude into the wonder product of Kerosene, built transportation networks of plank roads and railways and build some of the first vertically integrated oil companies. This is our legacy of innovation is ours to own and build a bright future to meet tomorrow's challenges.

BLOCK 1 – CAES, Hydrogen, and Utilities

Zain Javed
Bedrock Energy

My name is Zain Javed, I have an educational background in Mechanical and Petroleum Engineering. Prior to working in Ontario's energy industry with Bedrock, I have worked in IT as a project manager for projects in automation, compliance and risk. Before that I was based in the Middle East, providing drilling, completion and production solutions to Oil and Gas operators in the region. My diverse experience is evidence that I am eager learner who is keen on expanding on my knowledge and skillset to grow both personally and professionally.

NOTES

Zain Javed - Abstract

Bedrock Compressed Air Energy Storage: A Collaboration with the MNRF

Bedrock Energy Corp. (Bedrock) has submitted an application for well licenses and injection permits to access two underground, depleted and purged former natural gas reservoirs as part of its compressed air energy storage (CAES) project in the Municipality of Bluewater, Ontario. This application is pursuant to O.Reg 151/22 made under the Oil, Gas and Salt Resources Act, amending O.Reg 245/97.

The uniqueness of the local geology in Bluewater allows for the use of these porous rock reservoirs, which are a novel feature of CAES operations in Ontario. Bedrock has taken a diligent and dedicated approach to preparing the application, with a focus on safety, environmental impact, and economic benefits.

In this presentation, we will provide an overview of how Bedrock's application is similar to other storage applications in the province, with particular focus on natural gas storage. Our application is designed to comply with all relevant safety regulations and best practices, and we have conducted extensive environmental impact assessments to identify and mitigate potential risks. Our CAES operations will use renewable energy sources to power the compressors that will fill the reservoirs, thereby reducing greenhouse gas emissions and supporting the province's climate change goals.

Harry De Rose

Hydrogen Optimized

Harry, is an experienced manager with a decade of expertise in fast-paced sales environments. He has spent the last 4 years diving deep into the high growth electrolyzer market and its emerging trends.

Harry's passion for sustainability drives him to believe that electrolyzers are crucial to achieving a cleaner energy future. He is committed to helping his clients reduce their carbon footprint and reach their environmental objectives.

NOTES

Harry De Rose - Abstract

Key economic factors for clean hydrogen projects

There are a daunting amount of factors that can influence the economics of a clean hydrogen project but which of these are the most important? How will these elements will change over the next 5,10,30 years and if so by how much?

The goal of this presentation is not to answer these questions but provide a framework with which you to begin the evaluation of your own project.

Susannah Robinson
EPCOR

Ms. Robinson is an energy executive with over 30 years of experience.

She is currently Vice President for EPCOR Ontario Utilities Inc. and the CEO of EPCOR Ontario Distribution Ontario Inc. Prior to joining EPCOR, Ms. Robinson held senior roles at regulated and non-regulated energy companies in areas of strategic planning, regulatory, risk management, customer experience and operational leadership.

She currently serves on the Board of the Electricity Distribution Association and the Chair of the Utility of the Future Fund. In 2019, she was appointed by the Minister to the Board of the Technical Standards and Safety Authority. A strong believer in community involvement, she also serves on the Board of the Toronto Public Library Foundation where she Chairs the Human Resources Committee and is a Board member of BigLake Arts.

Ms. Robinson has a Bachelor of Political Science from McGill University. In 2017, she was certified by the Institute of Corporate Directors at Rotman School of Business

NOTES

Susannah Robinson - Abstract

Connecting Stakeholders to the Natural Gas Distribution System

This presentation will provide a utilities perspective to connecting stakeholders to the utility distribution system. Stakeholders include residential, commercial and agricultural customers; local gas supply and most recently renewable natural gas. Considerations which the utility must balance include a) cost effectiveness, b) reliability and security of supply and c) Public Policy objectives. EPCOR considers the system's long term demand forecast in order to appropriately contract for gas supply, storage and upstream pipeline capacity in developing it's supply plan. The supply plan is filed with the Ontario Energy Board is intended to provide strategic direction that will guide EPCOR's ongoing decisions related to its natural gas portfolio such that the utility is able to meet Peak Day, seasonal, and annual demand throughout the winter and summer periods for customers in a cost-effective manner.

Phil Walsh
Toronto Metropolitan University

Dr. Phil Walsh is a Professor in Entrepreneurship & Strategy at the Ted Rogers School of Management. Prior to joining academia in 2003, he spent 22 years in industry as an exploration geoscientist, consultant, and founder of junior energy companies. In 1987, Phil formed a consultancy that provided geoscience services, strategic planning and policy services to energy companies, investment fund managers, and a number of governmental and municipal agencies. He is currently an Advisor to the Clean Energy Zone at Toronto Metropolitan University's Center for Urban Energy and a Visiting Research Fellow at the University of Winchester's Center for Responsible Management. He is the co-author of Corporate Responsibility and Sustainable Development, and the Canadian Edition of Foundations of Strategy. Phil is a registered professional geoscientist in the Province of Ontario and a member of the Society of Petroleum Engineers, the International Association of Energy Economics, and the Petroleum Exploration Society of Great Britain. He holds a B.Sc. (Hons) in Geological Sciences from Queen's University, an M.B.A from the Ivey School of Business, Western University, and a Ph.D. in Strategic Management from the University of Bradford, U.K.

NOTES

Phil Walsh - Abstract

Carbon Capture and Sequestration Legislation in North America: Lessons for Ontario

The recognition by certain U.S. states and Canadian provinces with substantial fossil fuel resources of the need to limit CO2 emissions in order to meet future federal emission targets or pay a financial penalty, has led to the promotion of Carbon Capture and Sequestration (CCS) projects within their jurisdictions. This has led to a need to revise existing legislation to allow for these projects. This presentation highlights the general design of legislation in the U.S. and explores the different approaches taken by Alberta, Saskatchewan, and British Columbia. The context of landowner mineral rights vs crown mineral rights was found to have an influence on the design or approach taken with CCS legislation. These findings have implications for the design of CCS legislation in Ontario given the hybrid nature of mineral rights ownership in the province.

Block 2 – Underground Storage

Coleman Hale

Lonquist & Co., LLC

Coleman Hale is a Vice President and Senior Petroleum Engineer for Lonquist & Company. He graduated with a Bachelor of Science in Petroleum Engineering from Texas Tech University. He has 15 years of experience with solution mined caverns, and underground storage and disposal across the United States and Canada. He has authored three technical papers for the Solution Mining Research Institute related to natural gas storage cavern engineering, technical well remediations, and MIT's within complex geology. He sits on the technical committee for CSA Z341 and the sub-committee for the Z341 hydrogen storage supplement. He is a registered professional engineer in various provincial and state jurisdictions, and a Class 4 Examiner in Ontario.

NOTES

Coleman Hale – Abstract

The Hydrogen Storage Supplement to CSA Z341

The CSA Z341 standard provides guidance and minimum requirements for the storage of hydrocarbons in underground formations. The most recent series (2022) does not consider hydrogen or hydrogen blend storage. Due to recent increased interest, growth, and field implementation of greenfield and brownfield hydrogen storage projects, a Z341 supplement was developed to establish minimum requirements for hydrogen and hydrogen blend storage projects.

The presentation will review the following major topics which reflect notable amendments or additions to the existing Z341 standard:

- CSA Z341 (Series 2022)
    - Purpose and exclusions
- Hydrogen Supplement
    - Purpose, exclusions, and precedence
- Notable Topics
    - Definitions
    - Geologic Understanding
    - Dual Barrier Philosophy
    - Materials (Casing, Casing Connections, & Wellhead)
    - Core Collection & Testing
    - Casing Cementing
    - Casing Inspection Logging
    - Well Servicing/Logging Equipment & Procedures
    - Mechanical Integrity Tests
- References and CSA Store Weblink
- Q&A

Colten Long and Patrick Seymour
Lonquist & Co., LLC

Colten Long

Colten Long is a Project Manager for Lonquist & Company. He attained a Bachelors of Science in Petroleum Engineer from Texas A&M University. Colten has 5 years of experience related to drilling, completions, and workovers in the upstream oil and gas and solution mining industry and has been specializing in underground storage projects for 2 years in the Pacific Northwest and Gulf Coast regions of the United States.

Patrick Seymour

Patrick Seymour is a Project Manager for Lonquist & Company. He attained a Diploma in Petroleum Engineering Technology from Southern Alberta Institute of Technology. Patrick has 20 years of experience related to drilling, completions and workovers in the upstream oil and gas and solution mining industry and has been specializing in underground storage projects for the past 6 years in Eastern and Western Canada.

NOTES

Colten Long and Patrick Seymour - Abstract

Drilling Techniques for Salina Salt Formation Cavern Development

Drilling in unconventional formations has revolutionized the energy industry, and among these formations, the Salina Salt presents a unique challenge and opportunity. This presentation aims to provide an insightful overview of the techniques, considerations, and advancements associated with drilling operations in Salina Salt formations.

The Salina Salt formations are characterized by their extensive and thick salt layers, creating a distinctive geological environment for drilling activities. Understanding the unique properties and challenges of drilling in this formation is essential for successful exploration and production. This presentation will delve the drilling techniques and strategies employed in Salina Salt formations. These include but are not limited to the use of advanced wellbore stability analysis, casing design, and drilling fluids tailored to mitigate salt-related challenges. The presentation will also explore the benefits and limitations of various drilling methods, such as vertical, deviated, and horizontal drilling, in optimizing production from Salina Salt formations.

In summary, this presentation aims to equip attendees with a comprehensive understanding of the intricacies of drilling in Salina Salt formations. By exploring the geological, technical, and environmental aspects, participants will gain valuable insights into the potential of Salina Salt as a promising resource, the challenges it poses, and the innovative approaches to optimize drilling operations in this unique formation.

Jug Manocha
Ameta Projects Inc.

Jug has been involved in the Ontario oil, gas, and subsurface hydrocarbons storage industry, for 40 years. He has presented on many different topics at the OPI Technical conference. He is recipient of Award of Merit from Ontario Petroleum Institute, Award of Merit from the Canadian Standards Association, and an Amethyst award from Ontario for plugging of a hazardous well.

He will be discussing some trends in salt cavern caverns in Ontario and some findings from recent cavern operations.

NOTES

Jug Manocha - Abstract

Update on Salt Cavern Storage in Ontario

Ontario has a large amount of bedded salt deposits that are suitable for storage cavern development. There are 71 operational salt solution mined storage caverns in Ontario with a combined storage capacity of approximately 3.4 million m3 (22 million barrels) for hydrocarbon storage. These are typically storing petrochemicals and liquified petroleum gases at high pressures. One salt cavern is being used for compressed air energy storage (CAES) since 2019.

The geology is well suited for further storage cavern development. The salt deposits in Ontario occur principally along the western edge of the southwestern region, and are utilized in the Windsor, Sarnia, and Goderich areas. Salt occurs within four of the Salina units in Ontario; the A-2, B, D, and F units, at depths ranging from 300 to 720 meters (984 to 2,362 ft.) below the surface. This coincides with the eastern edge of the Michigan Basin and is an extension of the Michigan salt deposits. The total combined salt thickness in these four units exceeds 215 meters (705 ft.) in the Sarnia area.

All of Ontario storage caverns are constructed within salt strata of the Salina A-2 Unit and the B Unit. Solution mining of salt is presently occurring in Windsor and Goderich. The hydrocarbon storage caverns are operating in Windsor and Sarnia areas. The CAES storage cavern is in Goderich.

The caverns are operated and maintained in accordance with Canadian Standards Association Standard Z341 Storage of Hydrocarbons in Underground Formations. New provincial regulations and standards for Compressed Air Energy Storage (CAES) in solution-mined salt caverns have been recently adopted. And given the inconsistencies of green energy sources such as wind and solar, there is potential to further develop storage caverns to take advantage of the storage caverns for CAES and for hydrogen storage initiatives.

Update trends:

A. Cavern development history – no new hydrocarbon storage caverns have been brought online since 1992. The limiting factor appears to be the ability to manage brine that is generated from dissolution.
B. Additional hydrocarbon storage - Many operators would like to increase the storage capacity and increase redundancies. There is increased demand for mid-stream hydrocarbon storage.
C. Overhauls and findings – most of the hydrocarbon storage caverns are more than 40 years old. Many have had new liners installed. Some of the recent evaluations indicate corrosion in the upper sections of the outermost casings that need to be addressed.
D. The Z341 requires verifying mechanical integrity on all hydrocarbon storage caverns testing on 5- and 10-year frequencies. This verifies that integrity of the cavern systems and reduces the potential for incidents.
E. More Compressed Air Energy Storage – the geology is suitable for more development and there may be additional existing caverns that can be developed for the CAES systems.
F. Potential for Hydrogen / hydrogen blends - this is an international trend, and some operators are evaluation the potential for storage in Ontario.

Block 3 – Ontario Updates and Services

Matthew Slotwinski

Sarnia-Lambton Economic Partnership

Matthew delivers site selection services and special projects related to Sarnia-Lambton's core industrial sectors including investment attraction, retention and expansion initiatives.

Matthew has helped the Sarnia-Lambton Hybrid Chemistry Cluster and Sarnia-Lambton Energy & Chemistry Cluster gain international recognition, attracting new investment and employment to the Sarnia-Lambton area, and is working to achieve the same for the Ontario's Hydrogen Hub.

Matthew graduated from the University of Western Ontario's Master of Public Administration program after completing his Bachelor of Commerce degree at the University of Guelph. He has obtained a Certificate in Economic Development from the University of Waterloo and Economic Developers Associations of Canada and was named one of North America's Top 50 Economic Developers by Consultant Connect.

NOTES

Matthew Slotwinski - Abstract

Sarnia-Lambton: Ontario's Hydrogen Hub

The Sarnia-Lambton Economic Partnership is leading the charge in cementing the Sarnia-Lambton area as “Ontario’s Hydrogen Hub”. This presentation will look at the why the Sarnia-Lambton area is the best place for the focused development of the low-carbon hydrogen economy in Ontario, and how the Strategic Plan for Ontario’s Hydrogen Hub in Sarnia-Lambton – released in 2023 – has identified enabling mechanisms for the establishment and growth of the local low-carbon hydrogen economy across a variety of production pathways.

Robert Mugo
COSIA with Pathways Alliance

Robert K. Mugo is the Director, Green House Gas Environmental Priority Area with COSIA, a division of Pathways Alliance. As Director, Robert's responsibilities at COSIA includes supporting members with the identification, evaluation and launching of activities and projects to reduce the GHG footprint of the oil sands sector, including in the areas of CCUS, electrification, fuel switching and process improvements.

Robert has over 25 years of industry and consulting experience, and during his career has provided technical, stakeholder and regulatory expertise to projects in the oil and gas, mining, water supply and manufacturing sectors. Robert has worked on projects in Canada, USA, Asia and Africa.

Robert holds a bachelors degree from the University of Nairobi, as well as MSc and PhD degrees in environmental chemistry and geochemistry from the University of British Columbia, Vancouver, Canada.

NOTES

Robert Mugo

Pathways Alliance – Leading Opportunity in Canada's Energy Transition

The Pathways Alliance is a collaboration of Canada's six largest oil sands producers. Together, these companies represent about 95 per cent of current oil sands production. In June 2021 we announced a comprehensive multi-phased plan to reduce current oil sands GHG emissions by about 22 million tonnes annually by 2030 on our path to net zero by 2050.

Our proposed foundational project is a carbon capture and storage (CCS) network and C02 pipeline which would gather captured CO2 from more than 20 oil sands facilities and transport it to a hub in the Cold Lake area of Alberta for safe underground storage. The line would also be available to other industries in the region interested in capturing and storing CO2.

CCS is also a great enabler of other technologies. Pathways continues to work on over 80 technologies in addition to CCS in order to tackle this challenge from multiple angles, including hydrogen, electrification, renewables and direct air capture. As the innovation arm of Pathways Alliance, COSIA continues this important Technology Development work.

Jacquie Hoornweg
Brilliant Energy Institute, Ontario Tech University

Jacquie Hoornweg is Executive Director of Ontario Tech University's Brilliant Energy Institute (BEI). The Institute serves as a thought leader and collaboration mechanism for decarbonization and clean energy system development across Canada and globally.

Jacquie joined BEI with two decades of energy industry experience and deep roots in Canada's nuclear sector. Prior to that, she spent several years as a journalist covering energy, environment, and politics.

Her career includes more than a decade at Ontario Power Generation (OPG), including four years on OPG's Executive Leadership Team, where she served as vice president, Corporate Relations and Communications. She co-founded and served as president and managing partner of Querencia Partners Canada Ltd., working with energy sector leadership and clients on policy, strategy, thought leadership, engagement and communications.

Jacquie is a board member on the Canadian Advanced Manufacturing in Nuclear Alliance and the University Network of Excellence in Nuclear Engineering. She facilitates the Durham Hydrogen Hub and works with experts at Ontario Tech and with partner organizations across Canada to advance research, commercialization and deployment of hydrogen and other clean fuel and electrification solutions for Canada's energy transition.

NOTES

Jacquie Hoornweg

Collaborative approaches for hydrogen in the clean energy economy

Dave Olmsted

Surface Safety Systems Stream-Flo Industries Ltd.

44 year career in the Surface Safety segment of the Wellhead and Flowline energy sector, specializing in hydraulic and self-contained hydraulic emergency shutdown systems (ESDVs).

Dave's passion for supporting customers has taken him to 51 countries where he has seen virtually every type of installation and configuration related to this type of safety equipment.

Most comfortable working directly with end users and integrators, his knowledge of these systems is unparalleled.

If there is a particularly technical complexity to the application, Dave will find a solution based on his experience and dedication.

NOTES

Dave Olmsted

Advancements in Automation and Autonomation of Stream-Flo's Self-Contained Hydraulic Storage Well Emergency Shutdown Valves

To provide an overview of recent advancements in self-contained hydraulic storage well emergency shutdown valve technologies that allow for automation and autonomation of these critical storage well emergency shutdown systems.

EPEX 2023 & OPI Gold Volume Archives

Now in its 60th year, an extraordinary amount of valuable technical information has been presented at OPI conferences. All material from previous conferences has been archived and digitized for convenience, please enjoy.

All digitized volumes can be found online:

http://www.ogsrlibrary.com/catalogue

Presentations from EPEX 2018, 2019, 2021 & 2022 are available on the OGSR Library YouTube channel:

https://www.youtube.com/user/ogsrlibrary

Acknowledgements

Conference Co-Chairs:
Peter Budd
Niki Clarke

OPI Chair:
Scott Lewis

OPI Office Manager:
Lorraine Fillmore

Conference Committee:
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Peter Budd
Niki Clarke
Lorrain Fillmore
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