2017 Houston Data Management Symposium & Tradeshow
Speakers Abstracts

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Panel Discussion – The Future of Data Management
James McFarland (Tulane University), Medhat El Nahas (University of Houston), Tim Coburn (University of Tulsa), Paloma Urbano (ConocoPhillips), Jeremy Eade (BP)

A panel discussion on the Future of Data Management.

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Regulatory Data Standards Committee Update
An update on the Regulatory Data Standards Committee.

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Legacy Migration using a Virtual PPDM: A Case Study
Steve Cooper (EnergyIQ) & Gary Meyers (Anadarko Petroleum Corp)
Migrating a legacy, distributed data management environment to a modern system based on PPDM can be disruptive, causing costly operational downtime and impacting many areas of the business. These issues are multiplied with the number of systems that provide or consume the information involved in the migration, as each one must be replaced or retooled to work with the new system. In order to mitigate risk through such a migration and maintain user trust, it is important to ensure that the project is divided into manageable phases that do not disrupt existing functionality and data access, while continually delivering added value to the business.

This paper will discuss an approach to migrate a complex data management environment with multiple data providers and consumers to a new, integrated data management platform using a virtual PPDM data model to minimize disruption and deliver significant business value.

Short Biographies: Steve Cooper has 20 years of experience in E&P information management. Dr. Cooper spent 14 years with Petroleum Information and IHS on the energy management side of the business. During this time, he held the position of CTO with responsibility for infrastructure, development, and global data accumulation systems. In late 2007, he started EnergyIQ to provide E&P domain and technical expertise to help companies manage their data to meet the needs of the business. Today EnergyIQ is the leading provider of E&P Data Management solutions with customers in USA and Canada.

Steve is deeply involved with the PPDM Association, having served as the Chief Communications Officer (CCO) in the past, as well as holding a Board position for a number of years. Additionally, Steve has served on the Board of Directors for Capital Gold Company (TSX:CGC; OTC/BB:CGLD) and Aurico Gold (AUQ: NYSE). Steve can also be seen presenting at industry conferences and panels.
Steve holds a Ph.D. and B.Eng in Mining Engineering both from the University of Nottingham in England. He has completed a number of non-credit petroleum engineering courses through the Colorado School of Mines.

Gary Meyers – Gary's involvement in Oil & Gas Data Management began in 1982 making seismic shotpoint base-maps, after previous stints in the Gulf of Mexico as a Derrickman and Roughneck. These days Gary oversees the Anadarko Well Corporate Datastore as wells as Directional Survey data management and processes.

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Progressing The Profession With You
Trudy Curtis (PPDM Association)
Presentation Details to be determined

Short Biography: Trudy is the Chief Executive Officer of the Professional Petroleum Data Management (PPDM) Association, based in Calgary, Alberta, Canada. She has over 35 years of experience in the industry and is known around the world for her advocacy of data management as a professional discipline and data as a critical corporate asset. After receiving a BSc. from the University of Calgary in 1978, Curtis went to work in the Oil and Gas industry, and ultimately the PPDM Association. As chief architect of the PPDM data model, trainer, speaker and leader, she has led the way to the creation and industry adoption of standards, best practices and the professionalism of data management in the petroleum industry. In addition to her role as CEO of the PPDM Association, Curtis was previously Co-Chair and is now Secretary of the Standards Leadership Council. Curtis was recipient of the Stewart McAdoo Pillar award in 2011 and the Phillip C. Crouse Cornerstone award in 2013.

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Run the MDM Race to Win
Michael Higginbottom (CommerceLink)
The task of building an E&P MDM System can seem daunting, and at times overwhelming. However, there is no need to quit the MDM race. I will be sharing lessons learned, tips, and techniques to aid you in successfully finishing the MDM race.

Short Biographies: Michael has spent the last 7 years assisting G&G Customers realize Business Value with their important E&P asset, data. This includes assisting in building two MDM systems from scratch, and starting the third near the beginning. He spent time at Chesapeake Energy and Devon Energy in Oklahoma City, and EOG Resources in Houston. Prior to Oil and Gas, he was a developer in the Airline Industry, and successfully implemented integrations at two Major Airlines. Michael founded CommerceLink in 2014 to assist Companies in being successful in creating Enterprise Data Management Systems via successful Integration with data sources internal and external to the Company. He has a Bachelor of Science in Computer Science with Minors in Math and History\ from The University of Oklahoma. In his Spare time, he enjoys travelling with his Wife and three children, boating and aspires one day to be a Professional Broom ball player.

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Field Validation of Industry Standards at a National Oil Company
Jess Kozman (PPDM Association) Via Professor Caprock
A project to move a National Oil Company from its legacy role as a government bureaucracy with an oversight role to that of an active asset manager showed the value of adopting and adapting industry standards for an upstream information management initiative. The PPDM version 3.9 data model was used to prioritize data objects according to risk and opportunity. The Energistics Business Process

Reference Model was used to help identify data types contributing to Decision Support Packages in the organization's stage gate process. The OGP Seabed Survey Data Model provided part of a standardized table of contents for use in the corporate GIS system. Data management skill levels were benchmarked against the UK Oil & Gas Common Data Access Competency Management System. And the Energy Industry Profile of ISO 19115-1 was used to select mandatory attributes for technical documents. The resulting efficiencies were aligned with business outcomes and embedded in documented processes.

Short Biography: Jess Kozman is a geophysicist by training, a technology expert by experience, and a data manager by choice. His specialty is aligning data management optimum accepted industry practices with corporate growth strategies, and he has worked with the largest NOC's, IOC's and service companies on the planet. He has hands on experience managing data from global petroleum production operations, as well as data from the mining sector, earthquake monitoring, CO_2 sequestration, and planetary sciences.

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Leveraging PPDM for Well Log Validation
Brian Richardson (iStore)

Modifying thousands of well log files one at a time is a thankless task that can take years to complete. We need to work smarter. Working smarter means systematically analyzing log files and using software and database tools to get the work done orders of magnitude faster. Using Oilware well log scan and load software in conjunction with iStore report and validation modules, more than 20,000 files were loaded, validated and updated in just 2 weeks. This article will discuss the techniques used and how leveraging PPDM turned an estimated 12 year project into a few weeks.

Short Biography: Mr. Brian Richardson has been involved in Exploration and Production data management for more than 15 years and has participated in and led a wide variety of upstream data-related projects over the years.

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Providing a firm data foundation for an Integrated Operating Center
Jim Crompton (Noah Consulting)

An important development for many oil company's digital oilfield programs is a solution often called an Integrated Operating Center (IOC). As the name suggests, an Integrated Operating Center involves a multi-disciplinary approach with the added element of linking the field process control system and operations with the office engineering, drilling and logistics support. Often this solution also brings in third party suppliers and contractors providing a full-scale coordination environment for many aspect of asset performance management. While the benefits are many and varied, the challenge to bring together all the relevant data in a timely manner to enable monitoring and modelling, surveillance and support, analysis and activity planning is not trivial. If you have problems integrating all this data in the office, consider the challenge of linking OT and IT and responding in near real time to field issues. Many articles have been written to discuss the physical room layout for collaboration, the technology deployed, and the decision support work process that are in scope but less often discussed is the data foundation that is needed to support an Integrated Operation Center. This talk will focus on how starting with a solid data foundation will significantly improve the implementation of a IOC and result in the ability to make better decisions based on solid analysis of trusted and timely data.

Short Biography: Jim Crompton is a distinguished leader in E&P data management and digital oil field programs. After retiring from a major oil company, he started working with Noah Consulting on thought leadership and client engagement activities. Jim was named a Chevron Fellow in acknowledgement of his contributions during his career.

Jim was elected chair of Petroleum Industry Data Exchange where he was able to influence the direction of the standards setting activities towards emerging technologies, and advanced electronic business models for the industry. He was selected to participate in the SPE Distinguished Lecturer Program for 2009-2010.

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Classifying Well Files using Artificial Intelligence

Kumaran Veeraragavan (Bluedeq)

Many organizations continue to use share drives for storing and sharing corporate documents. Users struggle to find the right document when needed. Although document management systems solve these challenges, moving to these systems and keeping them up-to-date involves a collecting, collating, and classifying documents. Several solutions have been developed using file folder structures, file naming standards, etc. as basis to classify documents. But to be successful they require a manual effort to name and/or place documents and in most instances, this is not an option. The presentation will focus on elaborating on a solution to automatically classify, metadata enrich and file documents into a repository. The solution uses the latest advances in image processing, OCR and machine learning. The solution will help organizations easily migrate documents from shared folders while supporting the document management journey by automatically classifying and filing documents.

Short Biography: As Management Consultant with 20+ years of work experience in the Information Technology field I have been providing advice and designing solutions for my clients. As a client partner in Bluedeq, I continue to provide these services with a focus on machine learning and big data analytics.

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Data Warehousing in the Cloud

Ken Cavner, Origin Energytech

In the current climate of the energy industry, learning to do more with less is considered to be the keystone of a successful company. The energy industry finds itself in a position that demands strategic collaboration between energy partners. The information age is once again upon us and is more critical than at any time in the past. The manner in which information is captured, stored, shared and disseminated is increasingly important for our industry to prosper and grow with the changing economy.

The purpose of this lecture is to present the benefits of the PPDM Data Warehouse in a cloud space environment. Specifically, to discuss the manner in which "Industry-wide Best Practices" can be implemented across multiple enterprises using new technology available on cloud space platforms. The cloud is a promising technology that will enable the energy industry to establish well-defined, easily adopted global best practices.

This lecture will define components of a typical, on premise PPDM Data Warehouse implementation and highlight common difficulties encountered with such an endeavor. The benefits of cloud space implementations of the PPDM Data Model will be discussed and new ideas will be introduced that will

demonstrate how to incorporate best practices into enterprise infrastructure models and provide new avenues for information sharing between energy partners.

Short Biography: Ken Cavner is a twenty veteran of the energy industry with considerable experience as a software developer and ten years of energy business experience. He is a business facing technologist and most recently, before starting Origin Energytech Services, was the Director of Operations Technology for a Denver based Oil and Gas company. He is focused on the success of the oil and gas industry through better use of technology.

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Panel Discussion on Well Identification – Regulator, Operator and Data Vendor Perspective
Regulators – Joe Stasulli (Texas Railroad Commission), Jane Stanczyk (Colorado Oil & Gas Conservation Commission)

Operators – Al Huber (Shell), Rachel Sissenwein (ConocoPhillips), Cindy Cummings (Repsol), Ricardo Bohorquez (BP)

Data Vendors – Ali Sangster (DrillingInfo), Zane Reynolds (IHS Markit), Lisa Stennes (TGS), Hugh Hopewell (Wood MacKenzie)

Moderator: John Jacobs

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A Data Manager's Look Back
Pat Ryan (Noah Consulting)
Many folks are coming up on retirement as oil and gas professionals and over the course of their careers have seen many changes in the industry and themselves. Pat Ryan, a Noah consultant and former Corporate Well Data Manager at Nexen, will share some of her lessons learned, insights and observations from her 38-year career. She will discuss going from a small consulting company to mid-size operator companies then back to a small consulting company and how her responsibilities shifted as she moved through the ranks. Over time she witnessed many changes in subsurface and surface data management. This talk will look at what has changed and what has stayed the same, as well as the challenges and critical success factors in a data management career. And of course, how PPDM played a significant role in her success.

Short Biography: Pat Ryan is the Senior Principal at Noah Consulting in Calgary. Over the past 38 years, Ms. Ryan has worked within oil and gas operating companies as a data manager in a wide range of job functions and special projects. She offers broad geotechnical experience and knowledge, excellent business analysis, data governance and data management skills along with strong communication and interpersonal skills. Previous roles demonstrate her leadership and management capabilities, initiative, flexibility and aptitude for change

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Updated Tools and Techniques Bring New Life to "Old School" Data Warehousing at Jonah Energy
Telha Ghanchi (Stonebridge Consulting) & Thomas Burgett (Jonah Energy)
Data warehousing doesn't get the hype that big data analytics gets in the oil and gas industry these days. But oil and gas companies of all sizes are still using "old school" data warehouses because they are a proven, practical solution for giving users – i.e., information consumers – access to the data they need to make informed business decisions. In 2016, Jonah Energy partnered with Stonebridge Consulting on a data warehouse needs assessment and development engagement that successfully did just that.

Jonah has a number of operational systems that are used to manage the daily activities of the organization. While these systems offer some specific reporting, they are not designed for the broader analysis needs of the organization and accessing the data in a few of the systems is particularly difficult. An assessment was conducted to explore the current state and details of the data access challenges, identify high-level analysis and reporting requirements and create a solution architecture for delivering information to the enterprise. Priority data sets sourced from five systems included production volumes, reserves data, general ledger, lease operating statement and AFE related data. Utilizing data management tools such as an upstream dimensional data module and connectors designed to speed implementation time, the data warehouse at Jonah was up and running in less than six months.

Accessing key data through the data warehouse improves productivity, empowers people and directly impacts the bottom line by reducing additional license count and application support costs as the business grows, time saved compiling and building reports, and providing greater opportunity for analysis and value-added business functions. The data warehouse provides an integrated information base for continued development as Jonah continues to grow.

In this session, attendees will learn:
• Why Jonah opted for a data warehouse
• How implementation time was accelerated via a standard dimensional model and connectors
• New business insights gained and the value of the data warehouse to Jonah business users

Short Biographies: Thomas Burgett is a IT Business Analyst/PM at Denver-based Jonah Energy. In his current role at Jonah, Thomas is responsible for managing a range of IT projects. Prior, he was a senior consultant at Quorum Business Solutions and worked in various land and lease roles at QEP Energy Company. Thomas began his oil and gas career after earning a master's degree in business administration for the University of Central Oklahoma. During that time, he worked on a large software implementation involving migrating data from a legacy system to a modern solution—at which point he discovered his true passion for business and data analytics. Born and raised in Oklahoma, Thomas resides in Denver and considers himself a native Coloradan at heart.

Telha Ghanchi is a Principal Consultant at Stonebridge Consulting. In his current role, Telha is responsible for managing and offering consultation on enterprise-data integration related projects for E&P companies, specially focused on financial systems. Prior to joining Stonebridge, he served as director of development at an upstream oil and gas software company where he led a successful team comprised of onshore and offshore personnel. Telha began his oil and gas career right after he graduated from University of Houston with bachelors of science in information systems management. His first project involved building a budget and planning software for a Houston-based natural gas producer. His duties

and responsibilities later on evolved to include a mix of functional and managerial roles, gaining crucial industry knowledge around financial and budget/forecast-related systems. Telha resides in Houston and considers himself a true Texan.

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A Case to Evolve from Managing Data to Mastering Critical Technical Data
Shari Bourgeois and Katy James (Certis Information Management)

Our industry has been managing data for a long time, particularly in the geosciences in support of exploration. This was often done through a focused data management group, either centralized or asset area focus. In recent years, it has become exceedingly more important to manage technical data across the entire well development lifecycle which requires integration with, not only other technical data, but financial data as well. The push for this change in data management was largely driven by the fast-paced shale development and the increased reliance on data-driven analytics. In order to manage critical and high-value data across the entire well development lifecycle, from planning to disposition, we must focus more on mastering data than managing data. Mastering data pushes the governance and quality management to the source of the data closest to the time it is created or acquired. This means that everyone involved in the development & the management of a well has a role in data management and standards are critical to success.

Short Biography: Katy James is a Geoscience Process and Data Consultant for Certis Information Services. She specializes in business process mapping and establishing information governance to support critical processes. Prior to joining Certis, she worked as an Onshore Development Geologist primarily in the Eagle Ford Shale and worked in a number of technical roles for Landmark (Halliburton). Her roles at Landmark included Technical Advisor for the Global Business Development Team for the DecisionSpace suite of applications; Technical Consultant for the OpenWorksR5000 deployment team; and liaison between the geoscience and data management communities at several major energy companies. She holds a Master's of Geology from the University of Houston.

Shari is currently an E&P Information Management Advisor for Certis Information Services. Prior to joining Certis, she spent 25 years with Marathon Oil Company in multiple technical roles including Chief DBA, Enterprise Solution Delivery Advisor, Enterprise Data Architect, and Enterprise Technical Information Director before retiring in 2015. Key accomplishments included delivering Marathon's first Well Operations Data Warehouse; architecting and delivering the Technical Master Well Solution, known as MIDAS; establishing and delivering on a roadmap for mastering critical technical data across the entire well development lifecycle; and establishing Marathon's first Big Data Analytics process and team. MIDAS won the World Oil Award for best Data Management solution in 2009.

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Smart Machines Herald A New Era: An Upstream Perspective
John Rowe (Enaxis Consulting)

Artificial Intelligence (or Smart Machines) promise to usher in a new era of industrial revolution that has no historical precedence.   This new era promises to create operational and capital efficiencies that hold great promise for the Oil & Gas industry. Smart Machine components such as analytics have been touted as primary tools for Upstream organizations to lower cost in the era of oil price volatility.   Oil & Gas companies have a genuine opportunity to implement Smart Machine technologies in ways that will allow

them to substantially increase their competitiveness for the long term. In fact, Oil & Gas companies can better utilize Smart Machines because of their focus on data management.
This presentation will cover several key questions:

- What is the definition of Smart Machines?
- Why is Smart Machine technology important?   How is the Smart Machine era different than previous Industrial Revolutions?
- What impact will the Smart Machine era have on the Upstream industry?
- What steps must individuals take to prepare for the Smart Machine era?
- How should you prepare your organization for change brought about the Smart Machine era?

Biography: John Rowe is a Principal at Enaxis Consulting where he leads the Analytics & Information Management service line. John has over 23 years of management consulting and industry experience spanning a number of industry verticals including oil & gas, automotive, financial services, healthcare, manufacturing, retail, and transportation. He has gained a wealth of knowledge in both business process and information technology management. John has conducted a multi-year Smart Machine research program working with leading universities & industry thought leaders. John has chaired both regional and national conference panels addressing the business and societal impact of artificial intelligence.

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Advanced Data Management & Analytics Enablement for O&G
Nishanth Raj (Deloitte Consulting)

Advanced Analytics uses sophisticated techniques such as machine learning, cognitive science, text mining, sentiment analysis etc. to discover deeper insights from data. As the technologies and vendor ecosystem continue to evolve, there is a tremendous potential in O&G industry to reap value from data by employing these capabilities. This paper discusses how O&G companies can learn from other industries and continue to mature in the space of data management and advanced analytics. The paper will discuss use cases as well as capabilities leveraging Advanced Analytics and Data Management capabilities to solve pressing problems faced by the O&G industry.

Short Biography: Nishanth has over 15 years of experience in working with companies in the O&G sector to innovate and deliver capabilities & solutions that transform them into information driven organizations. His main area of expertise is in Enterprise Data Management & Architecture along with additional expertise in the areas of business process optimization, systems integration, business intelligence & change management.

Anoop is a Manager in Deloitte's Oil & Gas Information Management practice with experience in delivering strategy, process improvement and technology implementation solutions for multiple Fortune 500 clients. He has led multiple projects that delivered Data Management and Analytics solutions in several upstream functions such as Geophysical Data Management, Reservoir Engineering, Well Planning & Execution and Production Management. His key strength lies in the ability to manage diverse and geographically distributed teams to deliver high quality technology solutions that solve complex business problems.

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