PERTH
DATA MANAGEMENT WORKSHOP & FIELD TRIP

AGENDA
August 9 & 10, 2017
Traditional vs Emerging E&P Data Management

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AGI
Are trust issues affecting your relationship with your data?

Poor-quality data costs the average company $14.2 million annually.

From business decisions based on bad data.
From bad data replicated across multiple systems.
From manual data compilation and massaging for reporting.

Bad data is bad business.

EnerHub™ from Stonebridge Consulting is a cloud-based enterprise data management solution for oil & gas. EnerHub validates and syncs data across your organization, connects source systems, and delivers the information that matters to your people. EnerHub’s open architecture plugs into your existing systems and enables you to elevate data quality to a corporate competency.

Get your relationship with your data back on track. Contact us to schedule an EnerHub™ demo.

### Wednesday, August 9, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>1:00-1:15 pm</td>
<td>Meet across the street from the CBD Train Station For Field Trip &amp; Departure By Bus</td>
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<tr>
<td>1:30-3:50 pm</td>
<td><strong>Perth Core Library - Field Trip - Sponsored by Paragon Information Management Services</strong>&lt;br&gt;<strong>The Digital Core Atlas</strong>, Louisa Dent (Department of Mines and Petroleum)&lt;br&gt;Abstract: The Digital Core Atlas is GSWA's new digital product that displays multiple types of analytical results for hundreds of core samples from a petroleum well or drillhole in one fully interactive and user-friendly package. The Core Atlas links information from a single well and displays a fully photographed cored section in plain light and ultraviolet light, where available. The position of all samples collected is indicated by icons that denote analysis type, superimposed onto the core photos. These icons are interactive, allowing the user to click and display the results of each analysis conducted on a given sample. The Core Atlas also features extensive appendices, which include definitions and sample summary lists for each data type, and links to all raw data spreadsheets, photographs and reports. These data can be accessed both offline, and online through the Western Australian Petroleum and Geothermal Information Management System (WAPIMS).</td>
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<td>3:50-4:15 pm</td>
<td>Return to the CBD Train Station By Bus</td>
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### Thursday, August 10, 2017

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>8:30-9:00 am</td>
<td><strong>REGISTRATION &amp; BREAKFAST</strong></td>
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<tr>
<td>9:00-9:30 am</td>
<td><strong>Welcome &amp; PPDM Update</strong>&lt;br&gt;Jess Kozman (PPDM Association)</td>
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<td>9:30-10:00 am</td>
<td><strong>Channeling The Data Tsunami To Support Faster, More Accurate Business Decisions</strong>&lt;br&gt;Rob Murray (Woodside)&lt;br&gt;Abstract: Never before has the Oil and Gas business had so much data to direct, rank and mature its portfolio of opportunities. The potential for faster, more accurate portfolio decision making has been recognised with the increase in the size, fidelity and accuracy of seismic surveys, increased capacity of storage, faster networks, higher performance of hardware, and the increased 'intelligence' of its processing and interpretation software. Sub-surface Data Management organisations have the passion, understanding, skills and high standards of excellence to partner with the business and support this advancing capability. This presentation seeks to demonstrate how this desire for decision-acceleration can be achieved with earlier engagement and partnership of the Business with Data Management.</td>
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<tr>
<td>10:00-10:10 am</td>
<td><strong>Sponsor Spotlight - AGIA</strong></td>
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<td>10:10-11:40 am</td>
<td><strong>Voluntarily Taking An Exam! Am I Crazy? Insights On the Journey To Becoming A PPDM Certified Petroleum Data Analyst</strong>&lt;br&gt;Alex Ross (Government of South Australia, Energy Resources Division)&lt;br&gt;Abstract: Professional recognition and structured career advancement for oil &amp; gas data and information specialists lags behind our peers in geoscience and engineering. PPDM's Certified Petroleum Data Analyst (CPDA) professional certification provides a great way to improve professional recognition. I'll take you through my journey to becoming a PPDM Certified Petroleum Data Analyst in 2015. No, I'm not going to tell you the exam questions, but will provide you with insights on what to expect when applying, studying for, then taking the exam. I hope that you too gain this thoroughly worthwhile, internationally recognised certification to further demonstrate your oil &amp; gas data and information professionalism.</td>
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<tr>
<td>11:00-11:10 am</td>
<td><strong>Sponsor Spotlight - Katalyst Data Management</strong></td>
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<td>11:10-11:40 am</td>
<td><strong>Designing Database For Legislation Reinforcement</strong>&lt;br&gt;Yanrong Li &amp; Felicia Irimies (West Australian Department of Mines, Industry Regulation and Safety)&lt;br&gt;Abstract: According to petroleum acts and regulations of Western Australia, companies need to submit well and survey reports and data, annual title assessment reports, scientific studies reports conducted as part of work commitment, to the Department of Mines and Petroleum (DMP). As a regulator, DMP needs to monitor the data submission, catalogue and archive the received data, and release the data online to the public when the confidential period elapses. DMP also aims to better service the petroleum industry by capturing and releasing well sample analysis data from the reports submitted to DMP. WAPIMS is a systems designed to serve these purposes. We will share our experience in WAPIMS' design and continuous improvement/changes in line with the changes of legislation and the departmental information technology strategy, discuss the key data types, must-have fields in these data types, and constraints being implemented in order to better control the consistency and quality of the data.</td>
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<tr>
<td>11:40-12:10 pm</td>
<td><strong>Data Lifecycle Management: The Maturity Path</strong>&lt;br&gt;Andrew Owen (Geoscience Australia)&lt;br&gt;Abstract: The National Offshore Petroleum Information System (NOPIMS) manages offshore petroleum data and samples, including those supplied to the Australian Government under the Offshore Petroleum and Greenhouse Gas Storage Act 2006. Before NOPIMS, the focus was on improving data quality; electronic documents and the physical repository; and efficiency and effectiveness including the acquisition of a robotic data store. NOPIMS has evolved to a single data discovery and delivery platform. Ongoing development is aligned with the Public Sector Process Rebuilding (PPR) model. Phase 3 – Self-service is progressing by migrating Geoscience Australia (GA)’s legacy data from the existing Repository systems into NOPIMS. This will occur over 3-years by a GA/NOPTA jointly funded project. Once completed the majority of industry data requests and delivery will be through NOPIMS. The vision is for all stakeholders to submit, manage, and retrieve their own data within NOPIMS, which represents Phase 4 of PPR.</td>
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<td>12:10-1:00 pm</td>
<td><strong>LUNCH - Sponsored by DataCo</strong></td>
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<td>1:00-1:30 pm</td>
<td><strong>Embracing Emerging Technologies To Economically Revisit Legacy E&amp;P Data</strong>&lt;br&gt;Andy Cairns (CGG Services (Australia) P/L)&lt;br&gt;Abstract: Operators have long recognised and seen value in revisiting legacy datasets, with severe pressure on budgets there is an increased focus on extracting value from existing assets. All too frequently legacy data volumes are archived in ways that require remediation and modernization before they can be used, with significant associated time and cost. The application of emerging technologies allows legacy datasets to be prepared for analysis quicker and more cost effectively than ever before - with the aim of identifying previously unrecognised or overlooked prospectivity. Two case studies are used to illustrate how emerging technologies have the potential to revolutionise legacy data access. In the first, machine learning algorithms were used to structure and extract meta-data from a large library of unstructured well data. In the second a very large library of seismic data on legacy media is being rapidly and reliably transcribed to SEGY and uploaded to the cloud for quick and easy access and subsequent analysis and interpretation.</td>
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<td>1:30-2:30 pm</td>
<td><strong>Traditional Vs Emerging E&amp;P Data Management (Interactive Discussion)</strong>&lt;br&gt;PDPD Western Australia Leadership Team&lt;br&gt;Abstract: The opportunity of this reunion of a broad cross-section of industry data management professionals from Australia and the region will be taken to compare views and experiences on a number of current hot issues including: the new government data discovery and delivery resources, possible long-term consequences of the present downturn, emerging data exchange challenges, risks and opportunities of emerging technologies.</td>
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<td>2:30-3:00 pm</td>
<td><strong>BREAK</strong></td>
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<td>3:00-3:10 pm</td>
<td><strong>Sponsor Spotlight - DataCo</strong></td>
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<td>3:10-3:40 pm</td>
<td><strong>The Changing Role Of WITSML And Now ETP In Managing Drilling Data</strong>&lt;br&gt;Nigel Deeks (Energistics/Schlumberger)&lt;br&gt;Abstract: The Energistics data transfer standard, WITSML, has historically been used primarily for the transfer of real time data. The recent release of WITSML v2.0 and the accompanying, new API, “ETP” (Energistics Transfer Protocol), significantly extends the standards capabilities, and allows its use in more complex data management workflows. ETP brings a new high volume, low latency; “pub-sub” interface to all current Energistics standards, removing restrictions of earlier versions. WITSML v2.0 adds significant metadata capacity and changes the way channel combinations are handled which enhances interoperability by removing previous “dialect” issues. Carrying additional metadata has advantages for analytics and in combination with the new Data Assurance Object, enables effective data validation. WITSML 2.0 and ETP provide a much more effective platform to support big data and drilling analytics for well construction and open the possibility of adopting the standard more widely for data management throughout the data lifecycle.</td>
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<td>3:40-4:10 pm</td>
<td><strong>Back To The Future: The Need of Great Data Management For Analytics</strong>&lt;br&gt;Simon Kendall (Interica Limited)&lt;br&gt;Abstract: Growing up as a Geoscientist in the 1980’s pattern analysis was entirely a matter of using the human brain in order to store and analyse the data of the day whether this was in geology, geophysics, petrophysics or reservoir engineering. The challenges of the time were merely to catalogue, store and retrieve information captured in an analogue form and use it as such. The most sophisticated forms of data processing and analysis at that time were deployed in seismic processing and analysing reservoir behaviour. The fundamentals of the work were that of a geologist, geophysicist or reservoir engineer’s expertise and knowledge. Fast forward 40 years and all technically innovative aspects of the work in the oil and gas industry have been transformed by the development of computer power and data access capability. This has driven a transformation of work flow processes by the ability to undertake sophisticated co-analysis of the attributes of seismic, well logs, microseismic and many other data types. To capitalise on concepts such as seismic stratigraphy, the geoscientist or engineer now has at their disposal the experiences of the ‘Big Data and Analytics’ journey taken by other industries over recent decades. This is now only just emerging in the E&amp;P domain and move processes from a reactive to a proactive mode. The questions that still arise are how good enough is good enough for the data?</td>
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<td>4:10-4:25 pm</td>
<td><strong>Closing Remarks</strong>&lt;br&gt;Jess Kozman (PPDM Association)</td>
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Make Better Decisions

EnergyIQ creates information certainty in an uncertain E&P world.

IQinsights™
Real-time well data for accurate analysis and decision certainty

IQlifecycle™
Corporate Well Data Master for efficient operations across the Well Lifecycle

IQgeoscience™
Geoscience Well Data Master to enable consistent data-driven decisions

IQempower™
End-to-end planning, execution and performance

IQexchange™
Automated workflows based on real-time information, events and activities

Contact EnergyIQ to learn how you can use the best data to make better and faster decisions.
Titanium Sponsor Spotlight - geoLOGIC systems ltd

Headquartered in Calgary, geoLOGIC systems has been creating and supplying data and integrated software solutions to the energy and production industry for three decades. Our market-leading decision support tool, geoSCOUT, is a fully-integrated, Windows-based exploration system that supports oil and gas professionals in their search for hydrocarbons by combining presentation-quality mapping and cross-section tools with data handling and analysis software. We also offer a range of data and data management solutions, including a robust data center (the gDC) which houses spatially enabled value-added government well and land data in an open Public Petroleum Data Model, as well as a proprietary data engine for all of your company’s data management needs. Our industry leading well and land data is also offered through a web-based interface, gDCweb, granting our clients access from almost anywhere.

Designed, built and tested in-house by our team of experts, you can count on geoLOGIC’s comprehensive suite of decision support tools and value-added data to help you do your job faster and with unparalleled accuracy. With decades of experience, strong government, regulatory and partner relationships, and proven systems and processes, we provide industry leading data solutions for thousands of clients. From high level decision makers to end users, our solutions provide our customers with the tools they need to find answers, every step of the way.

To learn more about geoLOGIC, visit www.geoLOGIC.com, or twitter.com/geoLOGICsystems.

Platinum Sponsor Spotlight - Stonebridge Consulting

Stonebridge Consulting, LLC, provides business advisory and technology services that enable oil and gas companies to produce hydrocarbons efficiently and safely, optimize volumes, increase margins, and maximize returns. We focus on helping our clients get lean and stay lean in today’s challenging energy market with innovative industry solutions such as EnerHub™, our cloud-based enterprise data management solution for oil and gas. EnerHub™ validates and syncs data across the organization, connects source systems, and delivers the information that matters. We are headquartered in Tulsa and have offices in Houston, Oklahoma City, and Denver. Learn more EnerHub™ and our wide range of oil and gas business advisory and technology services at www.sbti.com.

Workshop Plus Sponsor Spotlight - EnergyIQ

Information Certainty

EnergyIQ creates information certainty in an uncertain E&P world. Our customers preserve and grow business value, stay ahead of the competition, and protect capital using our E&P Solutions, our people, our experience, and our customer relationships. EnergyIQ’s commercial software solutions have been specifically designed, developed, tested and proven to create and restore trust and confidence in your E&P data, so that you can see end-to-end performance of all assets—from the well to the business. This allows you to have information-based decision certainty. With decades of practical, hands-on experience in E&P, from geosciences through IT to the business, EnergyIQ has the people and the experience necessary to provide you with more confidence in your data. At EnergyIQ, we value every customer relationship, and work as partners to bring certainty to every customer need, project, solution implementation, data and information requirement, and overall contribution to the business. By working with EnergyIQ you will:

- Reduce E&P data ambiguity
- Increase data integrity and trust
- Eliminate insight disconnects
- Increase information reuse
- See all assets, end-to-end, and
- Reduce enterprise spend

So - just how much certainty do you have in your E&P data?
Visit www.energyiq.info for more information.
Sponsor Spotlights

Workshop Sponsor Spotlight - Katalyst Data Management
Complete Life Cycle Subsurface Data Management
Katalyst Data Management provides a complete data management solution assisting oil and gas companies with the difficult challenge of managing the vast amount of subsurface data and information acquired for exploration and production. Katalyst’s end-to-end solution includes every step in the process, from data capture and verification, to data storage and organization, to marketing seismic data online.

Subsurface Data Portal: iGlass
Katalyst’s hosted data management software iGlass provides a complete set of tools that encompass the full life cycle of our customers’ subsurface assets. Built on PPDM 3.8 public data model, iGlass incorporates a web based ESRI GIS map interface for direct access to subsurface data, including data types across multiple domains, in a single map view.

Online Data Marketplace: SeismicZone.com
Powered by Katalyst, the SeismicZone ecommerce site connects geophysicists and seismic data brokers who are in the market for licensing data. The user-friendly SeismicZone map allows users to query and quality inspect 2D and 3D seismic surveys that are available for license in their area of interest. iGlass users have the option of marketing their proprietary data on SeismicZone.com.

Subsurface Data Services
With 30 years in the industry and four global datacentres, Katalyst is capable of handling any scale of project for managing subsurface data. Our data services include:
• Tape Transcription
• Data Conversion
• Scanning and Imaging
• Metadata Capture
• Professional Data Audit
• Navigation Verification and Loading
• Well Log Digitization

For more information, please visit katalystdm.com.

Speaker Sponsor Spotlight - AGIA
The Australian Geoscience Information Association (AGIA); Initiating, aiding, promoting and improving the exchange of information in the earth sciences. The Australian Geoscience Information Association (AGIA) Incorporated (Inc.) is a national group made up of people and organisations working in any area of the geosciences at the professional level, and acts as a medium of communication for all those interested in geoscience information.

The objects of the Association are:
• to initiate, aid, promote and improve the exchange of information in the earth sciences and related areas;
• to encourage mutual co-operation among users and processors of earth sciences and resources information; and
• to maintain links between members and geoscience information organisations in Australia and overseas.

Through AGIA you will meet other geoscience information professionals and share contributions and debate on a wide range of topics. AGIA’s activities include seminars, workshops and conferences, always with plenty of opportunities to network in pleasant surroundings. The Association’s website provides access to many useful resources, and there is also a private AGIA LinkedIn Group http://www.linkedin.com/groups?gid=4379286 . To discover more about AGIA, visit the website at http://agia.org.au/
Sponsor Spotlights

Lunch Sponsor Spotlight - DataCo
DataCo is one of the largest independent Data and Information Management service companies to the global upstream Oil & Gas industry. Since founding in 2001, our company has grown significantly through the provision of services and solutions to many of the world’s leading E&P companies. Our brand stands for quality. We recognise the importance to your business of making technical, commercial and safety decisions on the highest quality data and information. Being independent and with our business focussed primarily on Upstream Oil & Gas, we offer our clients an alternative option to using locked-in products or cross-industry generic solutions provided by the multi-industry service companies. We work to your specific requirements making sure you get exactly what you need to achieve success.

Our long track record in the industry together with our extensive workforce of data and information management specialists enables us to provide you with unbiased expert advice founded on years of experience in our field. We seek to build long-term business relationships built on quality, reliability and trust. Our services are available wherever you operate in the world and are supported from one of our global technical centres.

Please contact Neil Constantine to learn more about our operations in Australia and across the broader Asia-Pacific region, where we support clients from our Perth and Kuala Lumpur offices.

Thank You To The Australia West Leadership Team
The PPDM Association would like to thank the Australia West Leadership Team for all their invaluable efforts in making the 2017 Perth Data Management Workshop a success. Though they only kicked-off in January 2017, this team has helped organize and enhance all our western Australia events, and we are truly fortunate to work with them to build the western Australia community together. Thank you...
- Martin Storey, Well Data Quality Assurance (Chair)
- Christopher Hudson, Inpex (Secretary)
- Tony Perry, Paragon Information Management
- Alex Stanojevic, BiMCoN Australia
- Patrick Stenhouse, NOPTA
Speaker Biographies

Rob Murray, Woodside - Robert Murray is a Subsurface Data Services Team Leader with Woodside Energy Ltd.

Alex Ross, Government of South Australia - Alex Ross is a data & information savvy geoscientist who closes the gap between the business and IT. Building on degrees in Geology & Sedimentology from London University, his early career saw him implementing geological workstations in Shell UK. This was followed by 19 years in Schlumberger Information Solutions in a variety of roles including geoscience software technical support, marketing, sales and operations management. For the past 5 years Alex has provided specialist oil & gas data and information consultancy services to: Santos; Beach Energy; Origin Energy and the South Australian Government. Branching out into the mining industry has revealed many similarities in geoscience data & information business needs. Based in Adelaide, his leisure time is spent cycling and researching the links between geology & wine.

Yanrong Li, West Australian Department of Mines, Industry Regulation & Safety - Yanrong Li is a database administrator for WAPIMS at DMP. She holds a MPhil in computer science and a BEng in Petroleum Engineering.

Felicia Irimies, West Australian Department of Mines, Industry Regulation & Safety - Felicia Irimies is the manager for Petroleum Exploration Information group at DMP. She holds a MSc in Petroleum Geology.

Andrew Owen, Geoscience Australia - Andrew Owen graduated from Macquarie University with a Bachelor of Science in Geophysics and Geology. Following various stints in the petroleum and mineral exploration industry, he joined the Bureau of Mineral Resources in 1991. As the Geoscience Australia Repository Manager. Andrew has overseen transformational change in the Repository which covers the National Offshore Petroleum Data & Core Repository, Data Integration Project and the National Offshore Petroleum Information Management System.

Andy Cairns, CGG Services Australia P/L - Andy Cairns graduated from the Western Australian Institute of Technology in Perth with a Bachelor of Engineering degree in Electronics. He joined GSI in 1980 – working as an Instrument Engineer on Marine Acquisition vessels followed by spells as Senior Engineer in the GSI Processing centres in Perth, Sydney, Cairo and Oman. In 1996, Andy joined CGG and was the Project Manager for the PDO EMAS project in which all of PDO’s legacy data was archived to an HSM system. This was his introduction to the issues involved in managing a large library of seismic data. Andy has since worked in Data Management for Guardian Data Seismic, Veritas and CGG – being involved in numerous archival projects and data stores in locations such as Malaysia, Brunei, Italy, England, USA and Australia. Andy currently heads up the Data Management Services business line of CGG in Australia, and remains active in developing processes and software tools to enhance the migration and management of seismic data.

Nigel Deeks, Energistics/Schlumberger - A Senior Geologist with SLB, he is currently tasked with supporting and advancing real time operations internally and for our clients in the region. With a background in Structural Geology and Visualization, he joined SLB over 20 years ago from research and has worked with Software, Drilling and Petrotechnical segments in the UK, Norway and now Australia. Representing SLB on the Energistics WITSML SIG as an elected member of the executive for 2017, locally he is a member of the FESAUS committee.

Simon Kendall, Interica Limited - Simon Kendall studied at the University of Newcastle upon Tyne where he was awarded a BSc in Geology and an MSc in Organic Geochemistry. He started his first job at Petro Canada in Calgary working on the East Coast of Canada where the newly discovered gas resources of the Scotian Shelf and oil resources offshore Newfoundland were being discovered. This work in the frontier basins was followed by work in the Sverdrup basin and international countries for Petro Canada. He then joined a major oil and gas consultancy, Robertson Research, as a technical scientist before moving to a series of commercial and managerial positions. On the acquisition of Robertson by Fugro he changed technical direction by founding and developing a data management capability as Fugro Data Solutions. This was followed by a move to Reservoir Group in 2011 and an MBO of the data management capability in 2013 where at Interica Simon has followed his passion for great data management and the opportunities that data analytics provides to improve workflows and exploration and production effectiveness.
Knowledge has to be improved, challenged, and increased constantly, or it vanishes.

Peter Drucker

Power your upstream decision-making with customer-driven data, integrated software and services from geoLOGIC.

At geoLOGIC, we help turn raw data into actionable knowledge. That’s a powerful tool to leverage all your decision making, whether it’s at head office or out in the field. From comprehensive oil and gas data to mapping and analysis, we’ve got you covered. Get all the knowledge you need, all in one place with geoLOGIC.

For more on our full suite of decision support tools, visit geoLOGIC.com