

Connect

Our connection starts within the company. Each employee connects with other peers within the division. Each division connects with our leadership team. We believe these business relations between all entities in the company is the ingredient of our success.

We also believe that connection with the community we serve is very important. Our business contributes to the economic growth in many ways. We pay taxes to the government that is vital for nationwide development. To our people, we improve the standard of living by providing jobs. A total of 90% of our workforce is local. We invest on their career development via industry exposures and trainings. We contribute similarly to the education by providing internships and projects sponsorship. Improved collaborations promote mutual growth and we always opt to work with local suppliers of technology solutions.

Innovate

Our passion for innovation starts within the company. A strong connection that exists between the leadership team and employees can optimize our operation workflows. Digitalizing these work processes will maximize our productive working time.

We also focus on innovation across our technology and services. Through our continuing relationship with our partners, suppliers, clients and government, we aim to bring in new technologies to serve our customers better. We use our market intelligence to identify business trends and needs. This helps us to supply solutions through our innovations. We also invest on innovations that are environmentally and economically sustainable.

With these innovations, we aspire to create meaningful impact to the society through our investment.

With our enduring relationship with our clients, suppliers, government and the community, we aim to provide solutions through innovations.

Connect & Innovate is what we believe in.

What We Do

We are a homegrown consultancy and service company. We provide services to the oil and gas industry. We provide services for upstream and downstream businesses. We aspire to be a world-class service provider.

		We started operations with a staff force of two			
		We provide sequence chronostratigraphy for the Malay Basin and basin study for PCSB			We became a PETRONAS-licensed company
2005	Inception of Onyx Engineering Sdn Bhd	2006		2009	
	OVS SKO Gas Lift Optimization and Virtual Metering contract EPDOS contract (digitizing)				PCSB Core Analysis umbrella contract Core Laboratory moved to a 18k sqft premise at Batu Caves
2010	Core handling & preservation and laboratory was set up at Kota Damansara	2011	First land electromagnetic (EM) project in SK331 and SK332 (Miri – Bintulu, Sarawak)	2012	Full Tensor Gravity contract was awarded ISO 9001:2008 certified
					The first to preserve core using liquid nitrogen in Malaysia Field Performance Center (FPC) contract was awarded
2013	EM project in West Gelagah Kambuna, Medan, Indonesia	2014	Media Management contract was awarded	2015	BioSolv – onshore HC recovery from sludge
	Biggest market share for Core Analysis services by securing Murphy, Lundin, Petrofac and JX Nippon contracts FTG multi-client contract		ISO 17025 accredited Production & Integrity Assurance and Well Technology services and Kota Kinabalu office was set up FTG proprietary		FPC services are extended to MPM Petrophysical Database and Associated Services Data Store Operational Services contract Rock Physics contract
2016		2017		2018	

Our Story

Since its inception in 2006, ONYX Engineering Sdn Bhd (604212-P) has diversified its portfolio of offerings from the initial provision of supply of specialist personnel, E&P Training in the area of basin studies particularly in the Southeast Asia and West Africa regions to E&P Data Acquisition consultancy and services (in the area of TEM – land and marine) and E&P Data Management consultancy and services in 2008.

In 2010, we added E&P Core Laboratory, E&P Seismic Data Acquisition (land and marine/2D, 3D and transition zone) and FTG (aerial) to our service offerings. Core Laboratory services includes Core handling and Preservation, Routine and Special Core Analysis, Geological Analysis. From its humble beginnings as a small laboratory situated in Kota Damansara, the laboratory is now sited at a 18000 sq ft converted warehouse at Batu Caves, fully operational in the first quarter of 2012.

EXPLORATION GEOPHYSICS

Exploration Geophysics is focused on characterizing exploration uncertainty. With our strategic alliances, we provide sophisticated and highest quality data with our innovation and technology.

We were the first to provide airborne FTG in Malaysia. With more than 270,000 sqkm of possession, our FTG data in Malaysia is vast and increasing by the day. We received Excellent HSE Performance, a recognition from PETRONAS for our safety in exploration activities.

Full Tensor Gravity (FTG)

We provide FTG service providing sophisticated and highest resolution gravity data from airborne (air-FTG) as well as marine platforms. We acquire the best quality of gravity data to-date, applying the most advanced data processing, and providing the most reliable interpretation.

FTG measures minutes of changes in density (gravity) in all direction (X, Y and Z). The technique is known to be very useful compared to conventional technique in data coverage and efficiency.

Key applications:

- Provides map of gravity response/anomalies
- Widely used for the search of new frontier area
- De-risking tools for identification of potential hydrocarbon basin/reservoir
- Combination of FTG and seismic yields a comprehensive image

Transient Electromagnetic (TEM) - Land, Marine

We provide Transient Electromagnetic (Land) services utilizing electromagnetic exploration techniques including and not limited to the followings:

Transient Electromagnetic (TEM)

The induction soundings of square-shaped currents from non-grounded loops form the basis of EM field sources and receivers. Investigation depth corresponds to decay time while the measured time is dependent on the summarized conductivity of sedimentary cover or the average value of electric resistance of layers.

Induced Polarization (EM-IP)

EM-IP is a galvanic current system utilizing grounded transmitters and receivers. IP anomalies of upper layers are caused by the presence of altered geochemical zone above HC traps due to seepage of HC. Combination of TEM and EM-IP allows the identification of promising zones of reservoirs with HC.

Transient Electromagnetic Technique (Marine)

We also offer offshore EM exploration services – using EM Streamer technique. This technique uses a configuration of transmitter and receiver in a towed electric dipole (lines) where receiver unit fixed at receiver point thus only digitals signal transferred to the measuring system core (less noise interference). The system measured in time and frequency domain with offset length up to 12km.

Ocean Bottom Cables (OBC) / Ocean Bottom Nodes (OBN)

Transition Zone Seismic

We are the pioneer in containerized nodal solutions for transition zone seismic surveys with a safe, rapid, and cost effective mobilization, acquisition, retrieval, and delivery of first class of seismic data.

Hydrographic Survey

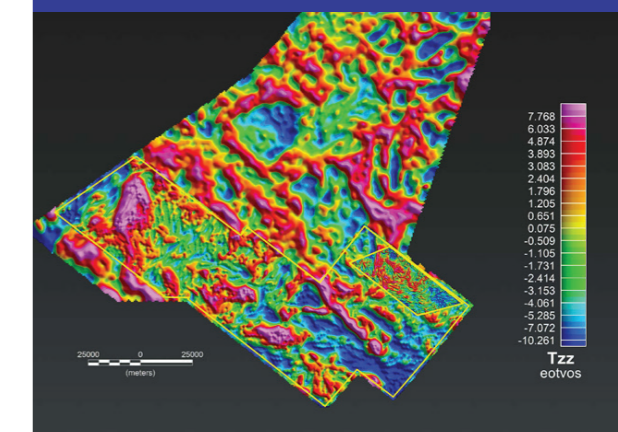
We offer Side Scan Sonar and Multi-beam Echo Sounder surveys. These surveys could be applied in various activities of hydrography investigation. Hydrography is the science which deals with the measurement and description of the physical features of bodies of water and their littoral land areas. Special emphasis is usually placed on the elements that affect safe navigation and the publication of such information in a suitable form for use in navigation.

Surface Geochemical Exploration

We offer Surface Geochemical Exploration service which is a technique based on the principal of oil and gas accumulations (and mature source rocks) having a surface geochemical expression. This hydrocarbon seepage can range from visible oil and gas seeps (macro seepage) at one extreme, to invisible but detectible microseepage at the other extreme.

Micro-seepage (active), usually interstitial gas, is often used to assess exploration acreage or exploration structures for their oil/gas potential - migrating gases have a strong tendency of vertical ascension along a micro-fracture network in the rock system.

Image: FTG anomaly map



RESERVOIR CHARACTERIZATION & LABORATORY

Reservoir Characterization & Laboratory (RC&L) is a division of Onyx that focused on maximising the value of oil and gas reservoir. We integrate wellsite and laboratory services with wider experience and state of the art equipment to enable optimal results from rock analyses thus giving excellent reservoir characterization decisions.

Core Handling & Preservation

We follow the best practices for wellsite core handling and preservation because we firmly believe that these operations are crucial to preserving the value of rock characterization. Wellsite core handling and preservation procedures should follow the best possible practices because the value of all rock characterization is affected by these initial operations.

We are experienced in core preservation at the well site to ensure the samples are handled and preserved correctly. We are experienced in handling both consolidated and unconsolidated core samples.

For consolidated samples, resin or foam are used for core preservation and stabilization. The choice depends on the decision made by our core preservation experts together with the clients. As for unconsolidated samples, dry ice or liquid nitrogen is more suitable to preserve the core. We were the first to preserve cores using liquid nitrogen in Malaysia and in Brunei.

Core Preservation Services

Consolidated – Resin, foam injection

Unconsolidated – Dry ice, liquid nitrogen



Core Analysis

Our 16,000 sqft Core Laboratory in Batu Caves, Selangor, Malaysia, provides a suite of laboratory services that focus on reservoir rock analyses. Supported by local expertise and rigorous quality-check processes, we are experienced in providing Routine and Special Core Analyses, G&G analyses which include Sedimentology, Biostratigraphy and Geochemistry, and Rock Mechanics. Our laboratory capabilities are further expanded with the latest addition to our services, Digital Core Analysis.

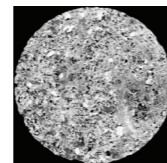
Core Analysis Services

Routine Core Analysis

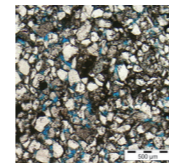
Geological Analysis

Rock Mechanics Tests

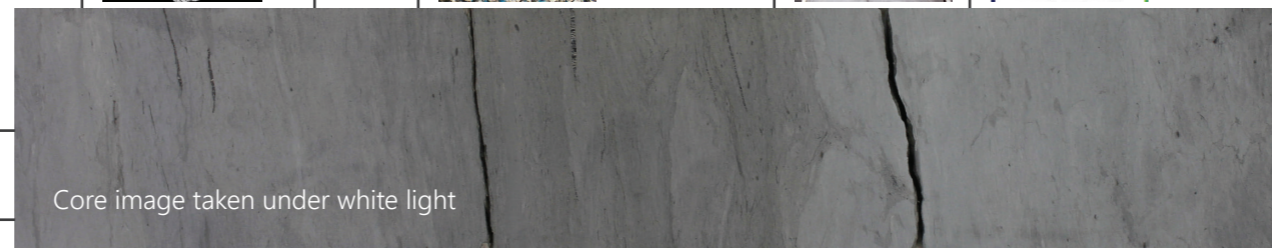
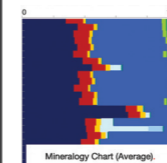
Special Core Analysis



Biostratigraphy
Geochemistry
Sedimentology



Onsite Mineralogy



Onsite Mineralogy

We offer a quantitative mineralogy analysis done at the rig or client's site, increasing the certainty of decisions and reducing incorrect interpretations.

Geomechanics & Pore Pressure Prediction

Get better understanding on your reservoir rock behavior and the mechanical changes associated with completion and production.

Rock Physics

We have extensive experience in quantitative reservoir characterization using seismic, electromagnetic and well log data in hydrocarbon-producing basins around the world. The extensive expertise and a rich suite of integrated services that we can use to decrease risk and reveal the rock and fluid properties of your reservoir.

Multi-physics analysis of seismic and electromagnetic data ensures that the strengths of one data type can be used to compensate for the weaknesses in another. Using our well-driven integrated interpretation workflows, we can optimize reservoir characterization for hydrocarbon-bearing basins of interest around the world. Results from all analyses are delivered in geologic context, providing clients with the information they need to make critical drilling decisions.



TECHNICAL DATA SOLUTION

Technical Data Solutions (TDS) has extensive experience in providing data management services and software solutions. We also have a deep set of machine learning and AI services for your business. Our combined services provide our client with a stress-free data management.

Data Management Services

Imaging and Reproduction

Imaging services include scanning process of various hardcopy documents, with full editing process - involving document clean up, reading orientation fix and adding reading features such as bookmarking and document OCR. The process ensures proper and direct documents handling and provides full cataloging that will be used for tracking and database purposes.

We have fast document scanners with the capability of scanning documents of varying sizes - from A4 to A0 size.

Reproduction services encompass the reproduction of documents from the original source whether hardcopy or digital format. Hardcopy documents are scanned and edited to before being reproduced. Proper finishing includes services after re-production such as comb binding, ring binding or other client requirements.

Digitizing

We offer digitizing services for transforming legacy data documents from hardcopy into a digital format conforming to industry standards. This encompasses various data types such as well logs, seismic sections, and maps data (contour, well location & shot point location).

The process involves the scanning of hardcopy documents. The scanned data is then loaded into digitizing software and converted into a standard digital format such as LAS, LIS, SEGY, and ASCII.

Remastering

Remastering is a process of transcribing data from magnetic media into a newer media or into a computer system. Various type of magnetic media includes legacy media such as 21 and 9 track reel tapes, IBM 3480/3490/3590/3592, DLT and, Super DLT.

Our services range from the whole process of remastering including data copy, data recovery (tape treatment), data conversion and verification, data quality check and data output.

Software Solutions

We provide software specifically for your business flow to speed up your business processes which will help save time and money. We develop our software by utilizing the latest technologies offered by the software and hardware industry. This includes research, new development, modification, reuse, re-engineering and maintenance resulting in the finished application.

Besides that, we also provide technical support of various software as part of solving related issues and technical support ensuring utilizing of the software to the full potential.

Machine Learning

At Onyx, we focus on the development of computer programs that can access data and use it learn for themselves. By applying text & image mining to various documents with multiple formats and working 24/7 high efficiency, we can capture all related information and its data attributes when required with a fraction of time and can be populated in required format or templated.

In addition to that, by using specific algorithms, specific information will be extracted based on the usefulness of the information together with the related information that might be important.



Making complex connections easy

PRODUCTION & INTEGRITY ASSURANCE

P&IA provides production and integrity assurance services, including reservoir souring solutions and oilfield microbiology.

Reservoir Souring Solutions

Using high-quality field data from oil, water and gas sampling and analysis, a qualitative risk assessment and quantitative H₂S production prediction and forecasting is undertaken to understand the risk of the reservoir turning sour. Mitigation strategies are then evaluated and executed field wide.

- Reservoir souring predictive modelling
- Mitigation strategies
- Biocide trial and efficacy
- Onsite biocide optimization
- Nitrate trial
- Fixed Film Upflow Bioreactor (FFUBR)
- H₂S Scavenger trial (HPHT)
- Surface solutions – H₂S
- Scavenging, Scrubbing and Reduction (SSR)
- Oilfield Microbiology

Oilfield Microbiology

With our experience in Microbiologically Influenced Corrosion (MIC), reservoir souring, H₂S mapping, and bacterial monitoring, solutions can be catered to meet the needs of the customer and further provide insights into the health of the reservoir and assets.



Corrosion Prediction

Based on water chemistry and process data, the impact of corrosion on pipelines and tubing can be predicted and assessed so that integrity engineers have a better understanding on mitigation strategies in controlling corrosion as well as corrosion inhibitor efficacy in their assets.

Chemical Evaluation

We provide onsite chemical optimization for corrosion inhibitors, biocides, and oxygen scavengers. This is to ensure that the chemicals involved are not under-dosed and that the desired results are obtained.

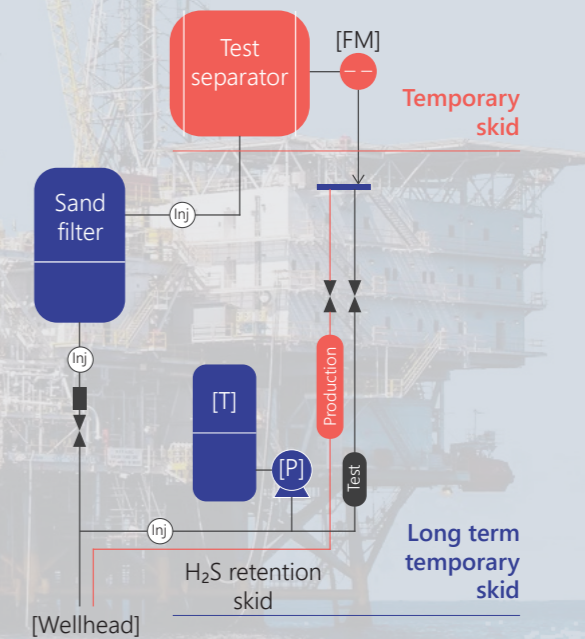
Innovation

H₂S Scavenging, Scrubbing & Reduction (SSR)

Surface treatment and solutions to mitigate the risks posed by H₂S on asset.

Legend

- [P] Pump
- [T] Tank
- [FM] Flow meter
- Inj H₂S scavenger injection



WELL TECHNOLOGY

Well Technology Division is established in 2018 as a 'solutions provider' to the Oil & Gas market in Malaysia and South East Asia, with focus on introducing Innovation across Technology, Service and Integrated Project Management in the following segments:

Drilling Services and Technology

- MPD Technology & Service,
- MWD, LWD, DD & RSS Technology and Service,
- Drill Bits, Dual Action Drill Jars, Well Bore
- Reamers, Whipstocks and Drilling Tools,
- Milling Operations,
- Fishing Services and Equipment,
- Completion Equipment and Service, LHS, Completion Packers, Expandable and Swellable Technology,
- Well Kill Support,
- Experienced Integrated Project Management.

Idle Well Reactivation and Production Enhancement

- Acoustic Well Services,
- Sonic Technology,
- Well Management,
- Well Engineering; Concept Screening, Feasibility and Field Development Studies, Well Design,
- Completion Design,
- Well Test Design,
- Well Servicing and Maintenance,
- Well Testing Programmes,
- Well Integrity; Well Integrity Management System, Well Integrity Assessments, Well Integrity Examination, Well Integrity Investigations,
- Reservoir & Flow stimulations and modelling.

Well and Asset Integrity

- Well Integrity Management System,
- Well Integrity Assessments,
- Well Integrity Examination,
- Well Integrity Investigations,
- Asset Integrity Management System,
- Norsok D-010 Well Integrity Training.

Plug + Abandonment, Decommissioning

- Experienced Integrated Project Management,
- Abandonment Design,
- Fishing Services and Equipment,
- Well abandonment using patented Casing & Pipe Technology (including offshore subsea applications),
- Decommissioning Technology and Service.

Well and Asset Integrity

- Well Integrity Management System,
- Well Integrity Assessments,
- Well Integrity Examination,
- Well Integrity Investigations,
- Asset Integrity Management System, Norsok D-010 Well Integrity Training.

Scale Avoidance & Remediation

- HydroFLOW Scale Management System;
 - 750,000 + installations worldwide in many different industries, 650 successful installations in Oil + Gas.
 - It works by introducing a high frequency radio signal into the pipe which affects a scales capability to adhere to the piping system. Wax also precipitates on these crystals rather than on the pipeline.
 - Its effective in treating common scales associated with the Oil and Gas Industry such as Barium Sulphate.
 - Its non Intrusive, Clamp on Technology which is easily Installed, Inspected and Maintained
 - It Negates the requirement for costly in hole interventions with expensive chemicals therefore reducing associated risk to Personnel, Plant, Production and Environment.
 - It negates interruption of Production.
 - Little OPEX spend and zero CAPEX outlay.
- Acoustic Well Services,
- Sonic Technology.

Training Workshops and Courses

Highly interactive workshops delivered by experienced 'educators' including the following modules:

- Plug + Abandonment,
- Platform Decommissioning,
- Well Integrity,
- Subsea Intervention,
- Rigless Intervention,
- Building motivated and highly effective teams.

HydroFLOW Scale Management System

