

# SYNERGISING PARTNERSHIPS



PETRA

## OVERVIEW

PETRA Energy Bhd, an integrated brownfield oil and gas service company, is making strong in-roads in the industry. Having worked with some of the major oil giants over the past two decades, PETRA became the third local Malaysian company to participate in the Small Field Risk Service Contract (SFRSC) in partnership with Coastal Energy Company to develop and produce petroleum from a small field cluster offshore peninsular Malaysia.

PETRA's successful venture in the SFRSC and penetration into the technology-driven brownfield development, which includes subsea services, are attributed to its strong market reputation as a committed, integrated brownfield service provider since 1988.

Over the past two decades, the Group has provided services in:

- Integrated Brownfield Maintenance and Engineering
- Marine Fleet Support
- Design, Fabrication, Supply and Installation
- Engineering and Project Management

Through 'single point of responsibility and accountability', PETRA has successfully completed major integrated brown field projects such as the retrofitting of ExxonMobil's offshore oil and gas facilities; topside major maintenance, hook-up and commissioning

Coupled with its partnerships with global exploration and service players, PETRA is strongly geared towards capitalising more opportunities in:

- Small field or marginal field development
- Brownfield development
- Subsea services
- Topside major maintenance, hook-up and commissioning

**PETRA aims to deliver greater value for its stakeholders.**

## OUR COMPETENCIES

### Marine Fleet

The Group owns and operates accommodation and work barges, AHTS vessel and workboats. The Group will continue to increase its fleet size to meet the growing demand of offshore marine services.

### Fabrication Yards

The Group's minor fabrication yards, which are located in close proximity to major sea ports, provide fabrication and construction services, whilst serving as hubs for equipment supplies, storage and logistics.

# MOVING TOWARDS A NEW ERA OF OIL AND GAS DEVELOPMENT AND PRODUCTION.

## HEALTH, SAFETY, SECURITY AND ENVIRONMENT

Health, Safety, Security and Environment (HSSE) is the top and utmost priority of the Group's business operations.

The Group's stringent compliance to HSSE protocols and practices has earned it numerous accolades over the years.



## QUALITY ASSURANCE AND QUALITY CONTROL

PETRA is committed to providing quality services and continuously enhances its management and operating systems. The Group has been recognised by Lloyds Register and Det Norske Veritas in the following disciplines:

### Quality Management System Certification – ISO 9001:2008 accredited by Lloyds Register

- TMM Project Management and Operations
- Engineering, Operations and Maintenance
- Engineering Design and Project Management

### Management System Certification – ISO 9001:2008 accredited by Det Norske Veritas

- Design and Fabrication of Process Equipment

## OUR CORE VALUES

**Integrity   Professionalism   Commitment   Teamwork**

## DEVELOPMENT AND PRODUCTION – SMALL FIELD RISK SERVICE CONTRACT (SFRSC)

PETRA became the third local Malaysian company to participate in the Small Field Risk Service Contract (SFRSC) with Coastal Energy Company to develop and produce petroleum from the Kapal, Banang and Meranti small field cluster offshore Peninsular Malaysia.

The services to be provided under the SFRSC include:

### Primary Scope of Services

- Implementation of the Field Development Plan
- Implementation of Production operations to achieve a set of first oil date, and thereafter to sustain production activities

### Duration of SFRSC

The SFRSC for the KBM Cluster is for a term of eight years commencing June 2012. The first oil was in December 2013.

PETRA's participation in the SFRSC is the cornerstone for the Group's endeavour in moving up the value chain to develop and produce petroleum.



## TOPSIDE MAJOR MAINTENANCE, HOOK-UP, CONSTRUCTION AND COMMISSIONING

PETRA has firmly established itself as an integrated provider for topside major maintenance, hook-up, construction and commissioning (TMM / HuCC) of offshore and onshore oil and gas installations. The scope encompasses all surface engineering capabilities that include design, engineering, procurement, fabrication, installation, hook-up, construction, commissioning and marine fleet support.

To provide maximum benefits to our clients, our services are executed on a 'single-point of responsibility and accountability' or integrated basis that ensures operations efficiency, reduced costs and faster project turnaround.

HSEQ and QA / QC procedures are engaged at all levels of operations to ensure compliance with project requirements in reference to applicable laws, codes, standards, specifications and regulations.

### Our Capabilities

- Pre-drill, post drill and well tie-ins
- Rejuvenation of platforms and living quarters
- Brownfield tie-ins and modifications
- Green field installation, hook-up and commissioning
- Helideck removal and installation
- Onshore minor fabrication
- Engineering and work execution, planning and construction
- Provision of construction equipment and personnel
- Provision of offshore marine vessels
- Procurement of long lead project materials
- Mobilisation of specialist vendors such as rope access, hydroblast and welding habitats
- Provision of specialist services such as bolt tensioning, cold cutting and flange facing, hot tapping and GRE fabrication works
- NDT inspections and testings
- Support for well intervention and acidisation
- Marine fleet support

Our TMM / HuCC operations and marine fleet logistics are managed by our project offices, which houses a highly competent team of industry professionals with extensive experience in project management, work planning, design, engineering and implementation, HSEQ, QA / QC and marine operations.

PETRA clocked approximately 30 million man-hours over a six year period whilst operating a fleet of marine vessels and a crew of more than 1,000 offshore.



## TOPSIDE MAJOR MAINTENANCE, HOOK-UP, CONSTRUCTION AND COMMISSIONING

The Group secured its first deepwater offshore services contract from Shell to provide support services for the Gumusut-Kakap semi-submersible Floating Production System (FPS). The Gumusut Kakap FPS operates at depths of approximately 1200m.

### Proven Track Record

#### PETRONAS Carigali HUCC

Contract: two cycles (on-going)

#### Shell Malaysia TMM

Contract: two cycles

#### ExxonMobil Retrofit

Contract: one cycle



## MARINE FLEET

As owner and operator of a fleet of marine vessels comprising accommodation work barges, accommodation workboats and anchor handling tug supply vessels, PETRA is able to facilitate brownfield operations whilst optimising client costs.

The vessels provide support for the Group's TMM / HuCC operations and are also leased on term charter to clients for offshore work in the oil and gas industry.

The vessels are Malaysian and/or foreign flagged, and are fully equipped to meet stringent international and industry standards.

v **MV ANIS**  
Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**45MT** lifting capacity  
**199** men



#### < PETRA GALAXY

Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**25MT** lifting capacity  
**189** men



#### ^ PETRA ENDEAVOUR

Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**68MT** lifting capacity  
**300** men

#### < KAS MARINE 1

Malaysian Flag  
DP 1 / FIFI 1  
**ABS**  
Classification  
**60MT** Bollard Pull  
**5150BHP**



< **MV ALYA**  
Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**45MT** lifting capacity  
**199** men



^ **PETRA CHALLENGER**  
Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**300MT** lifting capacity  
**300** men



< **PETRA LYRA**  
Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**68MT** lifting capacity  
**300** men



^ **PETRA DISCOVERY**  
Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**60.5MT** lifting capacity  
**300** men



▼ **PETRA ORBIT**  
Malaysian Flag  
**ABS**  
Classification  
Pedestal Crane  
**25MT** lifting capacity  
**189** men

## FABRICATION AND CONSTRUCTION



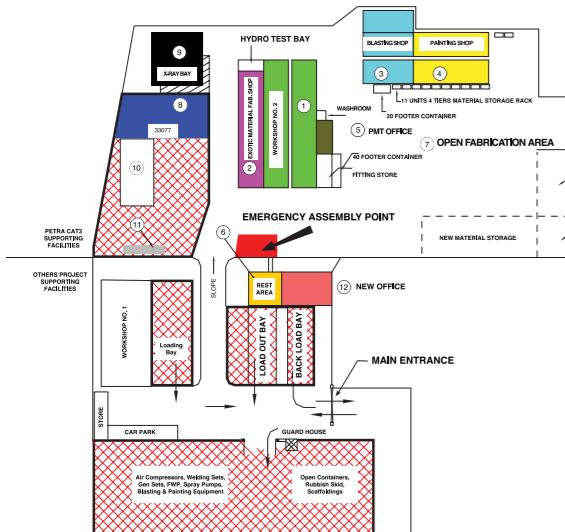
PETRA's minor fabrication yard in Labuan provides fabrication and construction services, and also serves as a hub for equipment supplies, storage and logistics. The activities and services at the Yard, amongst others, include fabrication, assembly, erection, inspection, testing load out, planning and non-destructive testing (NDT).

The Yard's strategic location, i.e. close proximity to the clients' oil and gas facilities, ASEAN Supply Base (ASB) and the Group's marine fleet, has enabled PETRA to ensure timely deliverables to the clients' facilities offshore.

The Yard comprises a team of key personnel as well as technical support teams that have completed work orders for oil majors like PETRONAS Carigali, Shell Malaysia and others.

The Yard covers an area of approximately 2.3 hectares and houses support facilities as follows:

- Two offices
- Two workshops
- Material lab shop
- Hydro testing facilities
- Blasting shop
- Open fabrication yard
- Radiography bunker
- Scaffolding storage shed
- Logistics and materials handling



## INTEGRATED PRODUCTION & OPERATIONS SOLUTION PROVIDER

PETRA provides multi-disciplinary exploration and reservoir management consulting services for the oil and gas industry through the provision of sub-surface geological and geophysical, reservoir, production engineering and well engineering services.

In oil field optimisation, we provide Full Field Review (FFR) and Field Development Plan (FDP) of ageing assets and reservoirs to enable our clients to make informed decisions on operating onshore and offshore oil and gas facilities.

From the FDP recommendations, clients have the option to decide on the following:

- Operate "as is" basis
- Redevelop for maximum immediate recovery
- Redevelop for long-term reservoir recovery
- Redevelop to arrest production decline
- Abandon / decommission wells and facilities

### Our Capabilities

- Integrated brownfield rejuvenation and optimisation
- Production enhancement and field rejuvenation
- Well and asset integrity management
- Well and asset abandonment
- Small field and bypassed oil development
- Training and consultancy



**P2 Energy Solutions**  
Formerly known as ISS Group



**Petroleum Experts Limited**  
Petroleum Engineering Software Tools IPM Suites



**Caesar Systems**  
Petroleum Ventures & Risk (Petro VR) Decision Support Tools



**Platte River Associates, INC**  
Petroleum Systems Modeling Software

We have managed projects utilising field optimisation techniques and new technologies on behalf of both operators and lead contractors in numerous locations throughout the world.

Field rejuvenation, stranded reserves exploitation and bypassed oil recoveries are the key areas of our focus for our clients.

Our track record also includes successes in new technology application for the rejuvenation of mature oil and gas fields. We achieved this through our multi-disciplined expertise, and also by working hand-in-hand with our rapidly expanding international clientele base that includes many of the major principals worldwide.





# PETRA PROVIDES A HOST OF ENGINEERING, OPERATIONS AND MAINTENANCE SERVICES FOR THE OIL AND GAS INDUSTRY.

## ENGINEERING, OPERATIONS AND MAINTENANCE

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Our service facilities, which are fully equipped with specialised tools, machinery, calibration testing equipment and managed by a team of competent and experienced personnel, are able to provide a full range of repair, overhaul and maintenance services. We also undertake on-site emergency onshore plant & offshore platform breakdown and preventive maintenance services.



### Our Capabilities

- CATERPILLAR and Waukesha engine operations and maintenance
- Marine maintenance support
- Mechanical and rotating equipment maintenance and services
- Electrical and instrument calibration and maintenance
- Testing and certification
- Fabrication and manufacturing
  - Component re-engineering
  - Spare parts fabrication, modifications and upgrades
- Offshore and onshore shutdown engineering support and services
- Offshore & onshore lifting equipment rental & services and crane operations and maintenance services
- Hydrostatic testing for valves and cylinders
- Rebuilding of coolers, heat exchangers and radiator
- Operation and maintenance for Aqua-Chem Watermaker

Our operation in both East & West Malaysia (Miri, Labuan & Kemaman) are supported by a highly competent team of professionals and technical personnel, comprising specialist, field service engineer, supervisors, senior technicians, technicians, welders and machinists. Combined, they possess extensive experience in maintenance and operations of a wide range of rotating and static equipment of the oil and gas industry. We also provide project management services in compliance with QA/QC Standards (ISO 9001:2008 Certified) and HSSE procedures and guidelines, with over two million incident free man-hours for completed contracts and service provisions.

The unit's warehouse carries a substantial inventory of raw materials, which include parts and components for fast turnaround of repair and manufacturing services.

## EQUIPMENT PACKAGING, PRODUCTS, MAINTENANCE AND SERVICES



### ALMiG

ALMiG is one of the leading compressed air technology system providers with decades of experience delivering premium products in the compressed air sector.



### Amarillo Gear

Right Angle Gear Drives for Pumps Offshore.



### Aqua Chem Inc.

Aqua-Chem is the leader in providing Global Water Solutions. From the North Sea to the Middle East, from the Far East to the Indian Ocean, we offer the industry's leading solutions for converting seawater, brackish and polluted water into pure, fresh water.



### Dawson Downie Lamont

Reciprocating Pumps.



FG Wilson provides essential standby power in over 150 countries around the world, to critical applications such as hospitals, airports, data centres, telecommunication networks as well as residential properties and factories.



### IFS

Integrated Flow Solutions LLC (IFS) is a global solution provider of skid-mounted, modular liquid and gas process systems. These units are fully optimised "Engineered-to-Order" packages which ship ready to "plug into" the process flow at your plant.



### LSI Robway

Sales and Services of Wireless & Cable Based Products for Offshore, Marine, Overhead and Hydraulic Cranes.



### NEWAY

General Industries Valves, Repair & Maintenance Centre.

### Niigata Chiksan

Marine Loading Arms.

**PETRA** packages, supplies and commissions equipment used extensively in the oil and gas, petrochemical, refining and other related industries. All our equipment packages meet international standards and regulations.

We specialise in rotating and mechanical equipment packages, and provide services that include design, engineering, testing, installation, hook-up and commissioning for a host of engineered equipment – supported by globally recognised equipment manufacturers.

In addition, our team of specialists provide technical support for site installation, commissioning, training on equipment use, on-going / scheduled maintenance and breakdown repair services.

### Types of Engineered Equipment

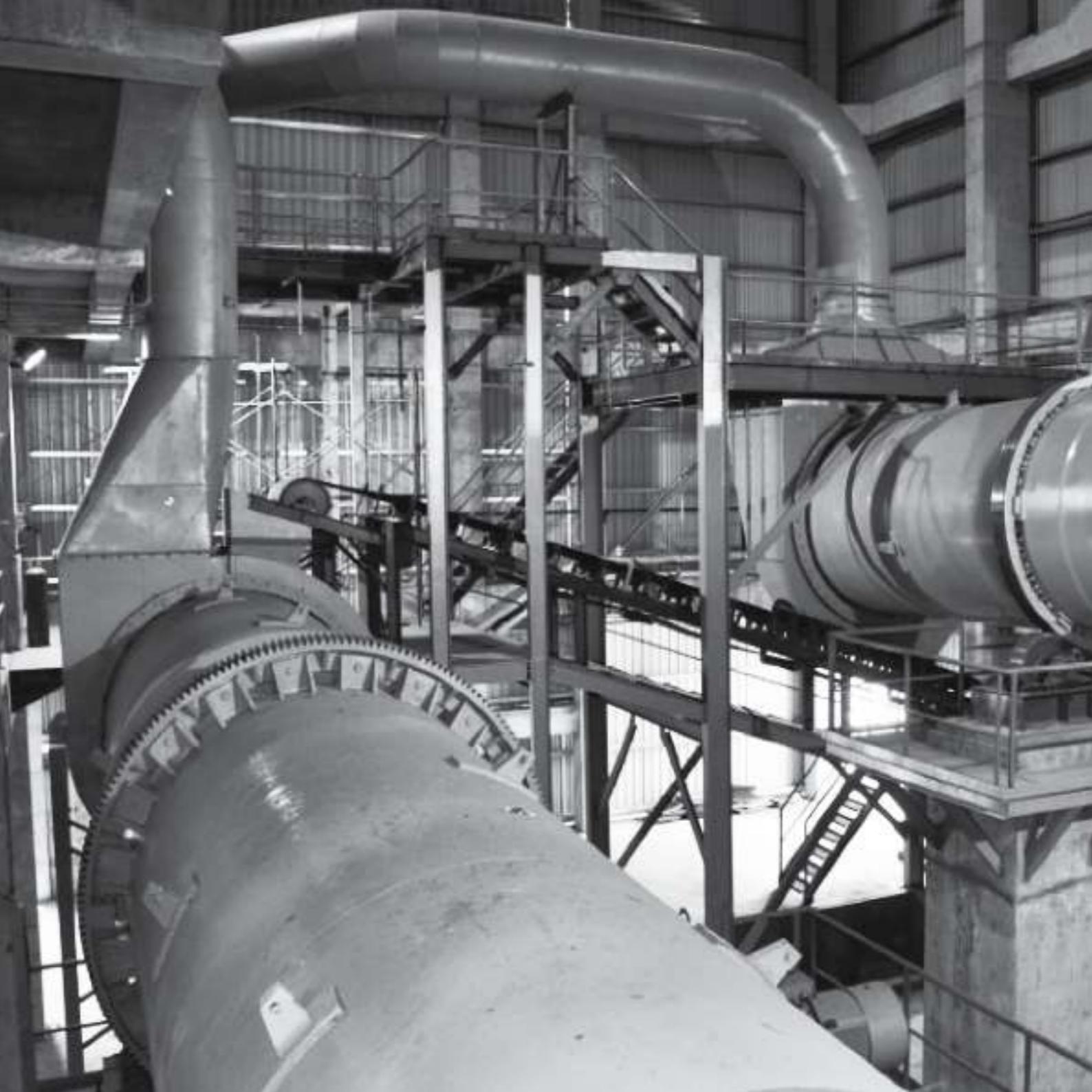
- Centrifugal and Vertical Pump Packages Air Compressor Skids
- Reciprocating Pump Packages
- Rotary Screw Air Compressors
- Horizontal Centrifugal Pump Packages Vertical Firewater Pumps
- Gas and Diesel Power Generators
- Vertical Service Water Pumps

- Water Makers
- Chemical Injection Pumps
- Control Systems (Electrical and Pneumatic), and other services for packaged equipment

For skid packaging, we provide design, assembly and testing of mechanical, structural, instrumentation and electrical items that incorporate proprietary engineered equipment, piping, structural frame, supports, pressure vessels, tanks and I&E installation. The scope also covers painting, logistics, project documentation, training and management.

Our packaging and manufacturing facility occupies a covered area of approximately 5,700 sq. meters.

Supported by our highly competent in-house design engineering and fabrication capabilities, we have successfully packaged engineered products and equipment in collaboration with world-renowned principals to further enhance our services.



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