

## INTRODUCTION

ARV is a medium-sized oil & gas, mining and infrastructure products and services provider with offices in Bangkok and Sattahip in Thailand, Jakarta, Brisbane and Perth. ARV specialises in the design, engineering, project management, procurement, fabrication, logistics, installation and commissioning of onshore and offshore projects in alliance with governments and the private sector, specifically relating to pipelines, gas processing facilities, platforms and equipment modules of up to 500 tonnes in size. ARV undertakes large projects for smaller companies, who often require “fast-track” builds to realize positive cash-flow quickly, as well as smaller projects for larger companies. ARV’s procurement division also undertake procurement projects for companies in Australia looking for cheaper overseas solutions.

ARV has executed a broad range of projects from a complete offshore field development through modular components for offshore rigs, etc. to onshore pipelines and a gas receiving plant. ARV’s fabrication yard has been instrumental in delivering ARV’s recent projects, producing everything from subsea manifolds and compression skids to cranes and air conditioned accommodation modules.

As such ARV is ideally positioned to support the Australian market for the fabrication of modules and skids for import into Australia because:

- ARV is an Asian company with Australian shareholders and Australians in key management positions;
- ARV has a fabrication facility ideal for fabricating skid mounted equipment, modules and racks up to 500 tonnes;
- The ARV fabrication facility is near a deep-water port, with easy access to international trade routes;
- ARV’s procurement division specialises in sourcing low-cost effective solutions from South-East Asia for the Australian market;
- ARV is fully ISO accredited, with a web based Integrated Management System;
- ARV has Board of Investment status in Thailand, which allows ARV to import foreign equipment and raw materials into Thailand duty free for inclusion into modules or skids destined for export;
- The Thailand – Australia Free Trade Agreement (TAFTA) provides for the duty free or duty reduced importation into Australia, ultimately lowering costs for clients;
- Australian representative offices enable ARV to meet clients face to face and provide the necessary management interface;
- Our Australian offices also facilitate “after-sales” service, whereby ARV can address any follow up items or warranty support if needed;
- ARV understands the importance of Intellectual Property and we have systems in place to protect both our Clients’ and our own IP; and
- Easy communication throughout ARV, as the business language is English even on the shop floor.

ARV offers value added support and services for Australian projects through:

- Experienced Project Management teams based in Bangkok, Jakarta and Perth;
- Engineering support, drafting, etc. and/or managing local 3rd party contractors;



- A procurement team that is experienced in sourcing materials from both local and international markets, optimising material selection to keep project costs at a minimum; and
- An internationally experienced logistics team that can manage or assist in the import/export of the modules or skids from Thailand into Australia, if required.

### KEY PERSONNEL

**Alan Stewart**, Australian, is the Managing Director of ARV and is based in ARV's head office in Bangkok. He has approximately 28 years experience of oil and gas project management, fabrication and construction. Alan has extensive knowledge of the oil and gas industry in the Asia Pacific Region and the Middle East. Alan founded ARV in 2005 with Rodney Silberstein and Varavut Pachimsawat, prior to which he worked for McDermott International, Inc. for 22 years and CUEL for 1 year.

**Rodney Silberstein**, Australian, is a Director of ARV and runs the representative office in Perth. Rodney has over 26 years experience in oil and gas as an Engineering Manager with engineering consultants and operators, primarily managing engineering projects in the North Sea, Australia and South-East Asia. Rodney worked for J P Kenny Houston for 11 years, Unocal for 8 years, and CUEL for 2 years.

**Andrew Boyd**, New Zealand, is Vice President Business Development and Corporate Affairs, based in Bangkok, joined in 2008 after a long management career.

**Colin Ward**, British, is Fabrication Manager at ARV and is based in the fabrication yard in Sattahip. Colin has over 25 years in the construction industry working in project management, fabrication and construction management. Colin has experience working in Africa, South-East Asia and the Middle East.

**David Wilson**, Australian, runs ARV's representative office in Queensland. David has over 30 years experience of oil and gas engineering project and construction management in South-East Asia, Europe and the Middle East. During this time he established and managed engineering companies in London and Jakarta.

**Leon Kleppe**, Australian, Field Development Manager based in Jakarta office with over 20 years experience in the upstream and midstream oil and gas sector in the Asia-Pacific region, with the last 12 years in Indonesia.

**Mike Pierce**, American, is Procurement Manager, based in Bangkok, joined in 2009 with over 40 years experience in procurement, a majority of which was spent at Fluor. Mike has been in South-East Asia for over 20 years.

**Peter O'Brien**, Australian, is Project Director at ARV and is currently based in Perth. Peter has over 35 years experience in project management, construction and engineering. Prior to joining ARV, Peter worked for Clough for 3 years, Global Industries for 1 year, Enron for 2 years, McDermott International for 17 years, a freelance consultant for 1 year and at a petrochemicals plant in Brisbane for 8 years.

### QHSE

ARV continuously improves its processes by using the best available technology and employing competent personnel with appropriate education, training, ability and experience. ARV has ISO9001, ISO14001 and OHSAS 18001 certification.



ARV's web based certified Integrated Management System (IMS) ensures that the Company, its subsidiaries and affiliates operate in a highly cooperative fashion for the effective, affordable and safe delivery of products and services in accordance with ARV's QHSE Policy. Quality forms the basis of the IMS, which drives the continual improvement of all aspects of the organisation thus achieving greater customer satisfaction. ARV's System Manual describes the general approach of the IMS and explains what is understood under the QHSE Policy. The IMS dictates management style, code of conduct, method of approach and is a core element of ARV's operations.

### **FABRICATION**

In 2008, ARV acquired a fabrication yard in Sattahip, a port at the centre of Thailand's Eastern Seaboard industrial corridor. The yard is ideally located an hour from Bangkok's main international airport, Suvarnabhumi, and has wide road access to the deep-water port 12 kilometres away.

ARV builds "truckable", high-density preassembled modules, units and racks to all major design standards including, among others:

- ASME VIII Div.1, 2 and 3 (U, U2, R, PP, S);
- AS 1210;
- ANSI B31.3 / ANSI B31.4 / ANSI B31.8;
- API Codes, Standards and Recommended Practices;
- AWS D1.1; and
- DNV 2.7 – 1.

ARV has, at any given time, between 60 and 240 skilled employees in its Sattahip Yard, with an annual production capacity of 6,000 tonnes. If necessary, this can be extended using facilities provided through local alliances. As the area is the focal point of Thailand's petrochemicals and manufacturing industries, there is an abundance of skilled tradesmen, internationally recognised oil and gas and mining suppliers, local suppliers manufacturing to international standards and specialist support services, such as crane hire, heavy lifting and transportation. Therefore ramping up manpower either directly or via an agency is straightforward.

Production engineering support is provided onsite. The in-house engineering support team is able to provide 3D AutoCAD support from fabrication/shop drawings to detailed drawings and conceptual design.

The yard and its workshops are equipped with all necessary tools, including overhead cranes, cutting equipment, rollers, semi-automatic and manual welding equipment. Blasting, painting and hydrotesting are subcontracted to nearby specialists with whom ARV has established relationships.

### **THIRD PARTY CERTIFICATION**

ARV has fabricated and provided certified pre-fabricated modules and skids under DNV, ABS, and other regimes. We are flexible in our approach to certification and are willing, and able, to obtain additional certifications, such as ASME U Stamp, where required to meet our clients' requirements.



## **PROCUREMENT**

ARV is targeting the provision of fabricated or procured items for the oil and gas and mining sectors in Australia, as ARV is able to combine lower cost construction with strong project management and our established network of contacts in Australia.

Utilising its team that is experienced in all areas of supply chain management, ARV is able to ensure timely delivery of materials from a global network of suppliers. Our team sources both locally and internationally but a significant portion of equipment and materials used in construction can be sourced locally, thereby lowering overall costs for the customer. Many internationally recognised companies have their manufacturing base in Thailand and many of the local manufacturers can supply materials that meet Australian standards. The remainder is imported and Thailand is ideally located geographically to procure items from China, Indonesia, India, Japan, Korea, Malaysia and Singapore.

ARV's systems ensure transparent, effective control over projects, giving our clients confidence that we are able to provide timely supply and delivery, complete status reporting throughout the project and all necessary coordination. Our team has been working in a project environment for many years and understands priorities and the potential impact on a project.

## **INTELLECTUAL PROPERTY SECURITY**

ARV is used to working with clients' proprietary information and safeguards clients' information to ensure that any intellectual property stays confidential. To this end, ARV operates a multi-level security system expressly designed to minimise the risk of loss, theft or destruction of its electronic files. Both our and our clients' intellectual property is important to us, and utmost care is taken to maintain a high level of security for our clients' and our own data.

## **WARRANTIES**

ARV, with its ties to Australia, is in for the long haul, and will of course provide any guarantees and warranties required by contract. More importantly, we will be there to follow up with our clients on any after-sales service requirements.

## **BOI and TAFTA**

Import duties are potential burdens that need to be considered when assessing the total costs of pre-fabrication, pre-assembly and modularisation in a foreign location. Thailand has particular benefits for Australian projects where fabrication abroad is being considered, including:

### **Thailand Board of Investment (BOI) Promotions**

Equipment and materials imported into Thailand to be incorporated in a module or skid destined for export transits duty free under BOI tax exemptions; and

### **Thailand-Australia Free Trade Agreement (TAFTA)**

Under this agreement, items fabricated in Thailand with "local content" in excess of 60% have Australian import duties reduced by 100%. Items where less than 60% of "local content" is from Thailand are subject to reduced Australian import duties prorate the "local content". "Local Content" is (FOB Cost Thai Port - CIF Thailand Third Country Content) / FOB Cost Thai Port expressed as a



percentage. Most items fabricated and assembled in Thailand should qualify for 100% reduction of import duties when imported into Australia.

### **ARV GROUP CAPABILITIES**

ARV has established a track record of successfully executing EPIC and Project Management contracts. ARV understands project culture, the unique characteristics of each project, the need for flexibility and to be able to manage “change”. ARV prides itself on being able to offer a cost effective and compliant solution for any construction challenge that a client may have, and we have proven to be able to respond to change in a fashion that minimises the impact on project schedule and costs, optimising the probability of project success. Therefore ARV is able to offer a number of value added services or support for projects in Australia, whether providing or supplementing project management, engineering and procurement functions.

### **PROJECT MANAGEMENT**

The diverse technical backgrounds of the ARV project personnel, combined with specialist ARV knowledge in the fields of contract administration, risk management, opportunity assessment, cost estimating, cost control, planning, scheduling, interface management, procurement and logistics, gives ARV the ability to set the highest goals in Project Management with a corresponding expectation of success.

Depending upon the requirements of any given project, dedicated ARV teams can manage projects in their entirety or selected ARV personnel can be integrated into a client’s existing project management team.

In any case the project team will be supported by ARV’s Project Management System and Procedures. These cover all aspects of a project from management tools such as “Tendering, Contracts and Risk Management”, “QHSE”, “Design Management” and “Subcontractors, Suppliers and Consultants” to detailed system procedures.

### **ENGINEERING**

ARV has an in-house team of engineers based in the Jakarta office and specialist 3<sup>rd</sup> parties, with whom we have established working relationships. ARV is able to assist in the optimisation and completion of engineering projects, and given the requirements, can assist in the design and drafting, engineering and customisation of any given project.

The team’s expertise enables ARV to steer the design process towards the optimum constructible, operable and maintainable system with the required functionality.

### **LOGISTICS**

ARV has a dedicated logistics team that can assist in the export of fabricated items from Thailand to Australia under the Thailand – Australia Free Trade Agreement, and can also assist in the import of the fabricated items into Australia. If required, ARV can assist the client in ensuring that the receipt of the fabricated items is as easy as if the items had been fabricated in Australia. ARV can also



assist/manage the application for government licenses related to the import of restricted materials or dangerous goods.

### **ARV – FABRICATOR AND/OR PROJECT PARTNER**

What makes ARV your ideal fabricator and/or project partner is that ARV, through its Australian shareholders and Australian key management, understands Australia, the work in Australia, the Codes and Standards and what is required for project success. This knowledge coupled with its experienced fabrication and projects operations in Thailand and Indonesia means that ARV can provide cost and schedule effective solutions for your various constructions needs.

ARV's ability to provide a combination of project management, fabrication, engineering and project support services means that clients benefit from Asia's lower cost while maintaining communication, efficiency and quality expected of a locally based Australian firm.



## TRACK RECORD

### Completed Fabrication Projects

- AJ Lucas, end client Chevron Australia, Gorgon Field Project Temporary concrete stability blocks;
- AJ Lucas, end client Chevron Australia, Gorgon Subsea Pull heads, Onshore Test Heads and Umbilical Bellmouths;
- Energy Partners Australia, HDD Rollers;
- MOGE Yadana to Yangon Pipeline Project, Pipeline Centre;
- MOGE Yadana to Yangon Pipeline Project, Pig Receiver;
- Chevron Thailand Platong Air Handling Units;
- Halliburton Proprietary Item, DNV Certified Engine Skid;
- GSI Compression Skid Refurbishments;
- Thunder Cranes Proprietary Item;
- PTT Z-Spool Rectification;
- PTTEP North Arthit Field Development;
- Salamander Energy (Previously Green Fields International USA) Bualuang Field Development; and
- ARV Proprietary Items.

### Completed Project Management & EPIC Projects

- MOGE Yadana-Yangon Pipeline Project Pipeline Centre.
- Reindeer and Devil's Creek Project; and
- Chevron E&P Gulf of Thailand Installation Campaign 2009;
- CEP-NL B13 Shallow Gas Field Development Study;
- Kambuna Field Development;
- PTT ARTHIT Pipeline End Manifold Tie-In Spool Modification and Installation;
- PTT ARTHIT Pipeline End Manifold Tie-In Spool Recovery;
- PTT ARTHIT Pipeline End Manifold Tie-In Spool Installation;
- PTTEP Northern Arthit Development in the Gulf of Thailand;
- Pipeline Replacement Program in Ulsan Port, Korea;
- Bualuang Field Development Project;
- PGN South Sumatra – West Java Phase II Gas Pipeline Project;
- PTT's Third Trunkline Project;



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