

THE ASIA-PACIFIC ENERGY SECTOR:

# AUSTRALIA & INDONESIA



a special report from *Oil and Gas Investor*  
and *Global Business Reports*

# BIG POWER IN A SMALL PACKAGE

*Australia and Indonesia offer a host of possibilities but neither is yet exploiting its full potential.*

**F**requently sidelined in the global resourcing debate by its giant Asian neighbors, it is difficult to say that for Europeans and North Americans, the most remote major part of the Asia-Pacific region is in fashion.

Yet the area is to some extent an untapped resource. Together, the people of Australia and Indonesia total almost 260 million—roughly double the size of the population of Japan and just 30 million short of the U.S. total. Their combined purchasing power is around US\$850 billion—that's US\$200 billion or so more than India.

As a strategic force, their influence is somewhat diluted by a lack of common political history, social and structural dissimilarities and economic wealth: Indonesia underwent a bloody revolution in 1965 and was under authoritarian rule for the following 33 years, while Australia's record is one of democracy and assured political stability. Indonesia's population is 88% of Muslim faith, while 76% of Australians are either Anglican, Catholic or of other Christian denominations. And, gross domestic product per head in Indonesia is just one thirtieth that of its neighbor.

## Synergies in oil, gas

But it's not impossible to see some common ground. For a start, the two countries' hydrocarbon prospectivity is highly comparable. Proven oil reserves are relatively small and dwindling, standing at 3.5 billion barrels in Australia and 4.7 billion in Indonesia. This is more than the 3 billion proven barrels in Malaysia, but much less than the 35 billion proven in Nigeria, the 15 billion in Qatar or even the 11 billion in Algeria.

Production profiles are similar, too: Australia produces 715,000 barrels per day and Indonesia, some 1.13 million. And both markets

are characterized by declining fields.

Indeed, as Asia's only member of OPEC, Indonesia is currently failing to fill its quota of 1.2 million barrels per day (5.2% of the OPEC total) at a time when the country needs the revenues for infrastructure projects, social programs and debt repayments. Declining self-sufficiency in oil is a challenge that may take a great deal of marketing effort to reverse.

There are obvious and more positive synergies in the gas sector. Both countries have proven natural gas reserves of 90 trillion cubic feet (Tcf). That's still dwarfed by the huge 1,680 Tcf of proven in Russia, the 940 in Iran or the 500 in Qatar. But regionally, there are no bigger plays. This provides plenty of scope for them to establish an edge in exploiting the region's spiraling energy demand.

Indeed, the local export-oriented gas infrastructure is already well established: Indonesia is the world's largest exporter of liquefied natural gas (LNG) and generated US\$5.6 billion from exporting some 26.5 million tons in 2003.

Australia is a little further behind, with LNG exports currently worth around US\$2 billion per year. New projects in both countries will likely see these numbers jump during the next decade. Both sell into the heart of developing Asia, with long-term contracts supplying Japan, Korea, Taiwan and, more recently, China. There is every possibility that large, long-term supply contracts with the U.S. will be signed during the next few years.

A second similarity is that the two countries remain hugely underexplored. This is partly a reflection of a vast landmass, which promotes remote and uninhabited areas with poor infrastructure and market access. Indonesia has a landmass of over 1.8 million square kilometers, making it nearly three times the size of Texas. Australia's land mass is more than 7.6 square kilometers—just

**In June**, we presented the first part of a report on activity and opportunities in the Asia-Pacific oil and gas sector, covering Thailand, Malaysia, Singapore and Brunei. It found a diverse region with an emerging energy sector benefiting from its proximity to some of the fastest growing economies on the planet. The following represents Part 2 of the report, focusing this time on Australia and Indonesia.

On the face of it, these two countries couldn't be less alike—from the size of the populous, to economic wealth and structure, business culture, regulations, languages and social norms. Their only real connections are the Timor and Arafura seas that link Indonesia's east-most islands with Australia's north and northwestern coasts.

However, in terms of the challenges facing their respective hydrocarbon industries the principal issues are the same: firstly, to reverse declines apparent in maturing oil fields and shore-up liquid reserve bases; secondly, to encourage the exploitation of vast gas reserves.

The challenge for Australia is persuading global investors that the

long trip from the U.S. or Europe is worth the effort when much of the big plays are already invested up to the hilt. For Indonesia, there are two additional objectives: continued deregulation of the hydrocarbon sector to boost its attractiveness vis-à-vis those of its regional neighbors and battling international perceptions of debilitating sovereign risk. On both fronts, the process is under way.

The following articles are the result of detailed research and interviews with many of the key players from the hydrocarbon industry in both countries. We look at the background of the local oil and gas industry and the defining characteristics of the two markets, the potential of projects related to liquid natural gas (LNG) and coal-seam gas (CSG), strategies to revitalize dwindling oil reserves, the continued evolution of the local services industry and the renewed momentum in Australia's publicly listed energy sector.

This report was prepared by London-based Global Business Reports. The authors are Emmanuelle Berthemet, hydrocarbon marketing specialist ([emmanuelle@gbreports.com](mailto:emmanuelle@gbreports.com)), and Daniel Kaye, hydrocarbon specialist, Global Business Reports ([daniel@gbreports.com](mailto:daniel@gbreports.com)).

smaller than the U.S. Lower 48.

"We are an underexplored area," says Clive Brown, minister for state development, Western Australia, which is home to more than 60% of Australia's crude, condensate and gas production. "As information becomes better, we expect the area to yield more discoveries."

Meanwhile, few Western companies have the appetite to venture into the more remote regions of Indonesia, which are now considered some of the more prospective areas. Where they do, they either have to have a fairly high tolerance of risk or be nimble enough to shift resources if the going gets tough.

"It's very mountainous and hard work. But there is oil there," says Giuseppe Mercorella of Lion Energy, a small Australian E&P producing on Seram Island in eastern Indonesia. "And in terms of security risks, the perception is worse than the reality."

### Main players

A further shared characteristic can be found in the market dynamics. Outside of a limited number of LNG projects, interest from the global majors remains limited. "I think it's fair to say that the majors aren't falling over themselves to do stuff in Australia," says Don Saunders, regional head of the Australian Petroleum Production and Exploration Association.

ChevronTexaco, Shell and ExxonMobil, for example, all participate in the big pro-

jects. But the majority of exploration comes from the three major local companies—Woodside, BHP Billiton and Santos—as well as a host of smaller independent firms.

Part of the problem for the majors is prospectivity, especially in oil. But many point to poor incentives and a heavy regulatory burden which undermine Australia's ability to exploit its status as a low-risk place to do business. And in a perverse sense, the country's reputation for openness is almost a curse from a marketing point of view. A transparent and low-corruption market is one where the good opportunities have already been snapped up.

Indonesia, on the other hand, has struggled to recover once-booming investor confidence after the dramatic and disastrous financial crisis that afflicted the country in 1997-98, together with more contemporary



North Rankin gas field, one of Australia's biggest, was found in 1971.

concerns about security and terrorism. Big companies with large and unwieldy infrastructure costs feel especially vulnerable. Costs for ensuring the safety of personnel have also risen.

"Schlumberger works with security advisors on a worldwide basis that report to the ceo," says Steve Orr, president of Schlum-

## ROC OIL COMPANY LIMITED

- Sydney base
- International focus
- Operating emphasis
- Sensibly contrary strategy
- Clear corporate goal:  
To make a lot of money  
for all our shareholders



Level 14, 1 Market Street  
Sydney NSW 2000 Australia  
Tel: +61 2 8356 2000 Fax: +61 2 9380 2066  
Web: [www.rocil.com.au](http://www.rocil.com.au)  
Email: [info@rocil.com.au](mailto:info@rocil.com.au)



**Managing director Geoff Towner of Amadeus Energy in Perth welcomes new investment to Australia.**

berger in Indonesia. "And before we engage in any operations, whether it be in Java or Irian Jaya, we do security assessments. We also use approved hotels that are audited on a monthly basis." Schlumberger has recently turned business away on security grounds, he adds.

Still, in a country with a long history of international hydrocarbon activity—Shell began production in this former Dutch colony as far back as 1892—a multinational footprint is still visible. ChevronTexaco subsidiary Caltex Pacific Indonesia currently accounts for around half of Indonesia's oil production, though this share is well reduced from two decades ago.

The largest players in the gas sector are ExxonMobil, Total, Vico, BP and Unocal, which operate under production-sharing contracts (PSCs). The local state oil company, Pertamina, accounts for a relatively small share of crude production and is currently undergoing restructuring. Its responsibilities for managing PSCs were offloaded onto a new regulatory body, BP Migas, in 2002.

### Major opportunities

On one level, the lack of enthusiasm shown by the majors at a time of record high energy prices is discouraging. But it might not stay that way. The successful completion of the first democratic presidential elections in Indonesia in September has generated significant optimism that reform of local institutions will accelerate and benefit investor perceptions.

"People want stable government and their investments protected. Then they will come here," says Bur Maras, ex-president director of oil services and production company Lekom Maras and who was recently elected to the Indonesian parliament where he will focus on oil and gas-related issues.

Meanwhile, some argue that the recent introduction of new incentives for exploration in deepwater Australia may be of real

benefit.

But so long as prospectivity is perceived as weak and bigger plays are in process elsewhere, industry efforts to generate more interest from the majors could turn out to be an uphill battle. A more fruitful strategy might be to focus on investments and partnerships on a much smaller scale, of which both countries have a relatively large, ready-made share.

Despite its attractions, is the region simply too far away to be able to generate interest from juniors based farther-afield? For some, maybe. But the principal opportunities in Indonesia are shares in existing production stakes, which their operators claim to be relatively low-risk.

And in Australia, similarities in laws and customs mean that U.S. companies can palm-off operations to a local partner and face less operational risk than they would on a project geographically closer to home.

Moreover, there are plenty of examples of successful small and midsize businesses working across the Pacific, but the other way. One is Amadeus Energy, an A\$76-million (US\$54-million) market-capitalized E&P that owns oil and gas producing assets in Texas and Oklahoma. The company is listed on the Australian Stock Exchange and all corporate decisions are taken from its headquarters in Perth, Western Australia. But onsite technical and exploration operations are managed by Texas-based service contractor TNT Engineering.

Amadeus' strategy, says managing director Geoff Towner, offers domestic investors exposure to long-life, proven fields in North America, while offering international investors coming to Australia extra diversity.

One thing that would help local industry is further investment in the local pipeline infrastructure—crucial to encourage explorers to enter what have until now been considered remote or marginal areas as well as to exploit deepwater offshore areas. In Australia, investment hopes have probably been dealt a blow by the problems surrounding

---

**"I think it's fair to say that the majors aren't falling over themselves to do stuff in Australia."**

**Don Saunders,  
Australian Petroleum  
Production and Exploration  
Association**

---

the 1,500-kilometer Dampier-to-Bunbury gas pipeline, operated by Epic Energy, which this year fell into receivership. Local industry blames the regulatory body for setting the tariffs too low.

Indonesia needs funds to build the Indonesian integrated gas-transmission system—the first part of what is hoped could become a trans-Asean gas grid.

A combination of the local regulatory environment, niche-suited prospectivity, industry restructuring and market access make opportunities for investors a little more complicated than they might be.

But locally, there is no sense in which the hydrocarbon industry is being marginalized by government. In fact, reforms and government support indicate that authorities are becoming more responsive to the energy industry's needs. Indonesia looks set to rely heavily on the revenues and investment a buoyant hydrocarbon industry can offer, while Australia's strategic location and diplomatic relationships give it both access to surging Asian markets and the energy-hungry U.S. West Coast. Some of these issues are discussed in the following articles. □



**Indonesia's mature oilfields may spell opportunity for small firms with lower overhead.**



# A Bright Future

Planned for Investors in **Victoria Petroleum N.L.**



Victoria Petroleum N.L. looks set to increase oil production after joining the ranks of Australia's oil producers. Participant in onshore North Perth Basin 15 million barrel Jingemgia Oil Field production tested at 5000 barrels of oil per day in 2004.

- ▶ Successful development drilling program in Jingemgia Oil Field with planned production increase to 3,500 barrels of oil per day in August 2004
- ▶ Largest exploration acreage holder in South Australia and Queensland Cooper/Eromanga Basin
- ▶ Five well drilling program in South Australia Cooper Basin commenced in August 2004 against industry background activity of 22 wells in 2004
- ▶ Industry exploration success in SA Cooper Basin of 45%
- ▶ Testing potential 1 TCF Coal Bed Methane play in Wyoming, USA in October 2004
- ▶ Australia and US net oil production of 125 bopd in 1st Qtr 2004 with 14 wells planned in 2004
- ▶ Exploration drilling well funded with \$3.6 million cash on hand

**CONTACTS** John Kopcheff Managing Director Chas Lane Exploration Manager  
**PHONE** 08 9220 9800 **FACSIMILE** 08 9220 9801 **E-MAIL** admin@vicpet.com.au  
**ADDRESS** Level 36 Exchange Plaza, 2 The Esplanade, Perth Western Australia 6000  
**VICTORIA PETROLEUM ASX CODE: VPE FOR MORE INFORMATION PLEASE VISIT** [www.vicpet.com.au](http://www.vicpet.com.au)

VICTORIA PETROLEUM N.L.



# OIL POTENTIAL

*Time to start thinking small? In devising a strategy to arrest sliding oil reserves, the industry may do well to build on interest from the juniors.*

**I**n a region accustomed to an abundance of natural resources, it's difficult to imagine life without oil. But local industry is beginning to think that way.

"One of the major things driving our industry at the moment is liquid fuels self-sufficiency, or lack thereof," says Don Saunders, head of the Western Australian branch of the Australian Petroleum Production and Exploration Association (APPEA). "We are heading for a major shortage over the next six to 10 years."

In Indonesia, officials hold a similar view. Rachmat Sudibyo, head of Indonesia's upstream regulatory body BP Migas, has stressed that exploration needs to be intensified and the usage of natural gas accelerated if the country is to avoid a slip into net-oil-importer status within the next 10 years.

Indeed the facts are striking enough. Production of crude oil and condensate in Australia fell a whopping 18% in 2003 alone, to stand at an average of 512,000 barrels per day. Declines have continued through 2004: in the first half of the year, daily production averaged 452,000 barrels.

The major oil producing field—in the Bass Strait in Southern Australia—has been in decline since 1985 and discoveries made since then will soon no longer be sufficient to plug the gap. In the absence of any major new discoveries, Australia's self-sufficiency in liquids (the percentage of national oil and condensate consumption that is supplied domestically) is forecast to fall from 70% to 53% by 2015.

If existing production targets aren't hit, say APPEA, the number could fall as low as 22% in 10 years time.

Similarly in Indonesia, crude and condensate production has steadily fallen from a recent peak of around 1.5 million barrels per day in the mid-1990s to just over 1.1 million in the first half of 2004. It's the only OPEC producer witnessing sustained production declines on field maturity grounds. (Production in Iraq and Venezuela has been disrupted for other reasons.)

In both countries, discoveries continue to be made, such as ExxonMobil's 250-million-barrel find at Cepu Field in Indonesia in 2001 and Santos' potential 100-million-barrel discovery at Exeter Field (in partner with the neighboring Mutineer Field) offshore Western Australia in 2002. But while welcomed, the number of dis-



Woodside Energy's Cossack Pioneer FPSO on the North West Shelf, Australia. The firm will supply LNG to China.

coveries falls well short of the amount needed to offset the rapidly declining nature of existing fields.

## Can the trend be reversed?

One argument is that the problem of maturing fields is being overstated—and not for the first time. Pessimists have been predicting an imminent shift to net-import status in Indonesia, for example, for much of the past 30 years. Yet oil production trended upwards through the 1980s, as a combination of new discoveries and improvements in technology continually shifted the decline curve further out.

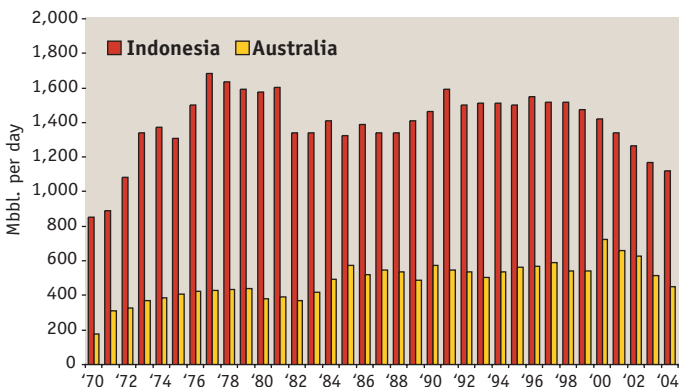
Something similar could readily happen again—especially given the huge amount of unexplored acreage throughout the region. For example, the Great Australian Bight off Southern Australia is an area in which local operator Woodside Energy is looking to explore. The territory hosts just 15 wells, but is the size of the Gulf of Mexico, which boasts 40,000.

But such a revival is predicated on accelerated levels of exploration spending that are not taking place. Indeed, the number of exploration wells drilled in Australia has plummeted from a peak of 270 in 1985 to just 83 in 2002, while annual spending on exploration fell 47% in real (inflation-adjusted) terms during the same period.

Moreover, the actions of the region's largest domestic producers make the pessimist's case more compelling still: Woodside is looking to expand its operations into the U.S. and Africa; both BHP Billiton and Santos see their core business increasingly shifting towards the Gulf of Mexico; and even Pertamina intends to become more active in Vietnam and Malaysia as it emerges from its restructuring during the next few years.

In other words, there's a lack of confidence that the region can generate finds that might offset existing production declines in any meaningful way. This time, the threat of a sustained decline in liquid self-sufficiency seems to be real.

**Production of Crude Oil and Condensate 1970-2004**  
(2004 is Jan-Jun avg only)



Source: EIA

outline

## Indonesian restructuring

So what can be done? Despite perceptions of modest prospectivity, it's fair to say that some of the region's problems are man-made and therefore within the power of local authorities to reverse. Some argue that incentives for exploration in Indonesia have been savaged by onerous production-sharing terms, which typically split oil royalties 85%/15% in favor of the government (70%/30% for gas) and are amongst the highest in the world.

In frontier areas, the split is a slightly more favorable 65%/35% (60%/40% for gas). "In the past, there has arguably been a view in government that we shouldn't be letting foreign oil companies grow rich on our soil," says Bur Maras, ex-president and director of oil services and production company Lekom Maras and who was recently elected to the Indonesian parliament where he will focus on oil and gas-related issues.

"But the truth is, by lowering the revenue split, we could encourage more production and grow rich together."

Defenders of the policy argue that when set against fairly generous cost-recovery measures, which can be capped as high as 85%, the overall effect isn't nearly as bad as it seems. Nevertheless, the authorities are said to be considering increasing the normal oil split on offer to private operators to 25%.

Explorers might be relieved, but the move would merely bring the country more

in line with standard international practice. Moreover, the concession will have to be set against new plans to impose taxes on imported machinery used in the production process.

Reform aimed at domestic industry is considered an equally pressing issue. The centerpiece of the changes is the restructuring of state-owned oil company Pertamina. Although eclipsed by Caltex and CNOOC, amongst others, as Indonesia's largest hydrocarbon producer, its vast vertically integrated structure and symbolic status as the international face of the country's most economically important industry give it huge political clout.

Following the introduction of a new oil and gas law in 2001, Pertamina has already completed Stage One of the transition, having become a limited liability company in 2003. It aims to be fully privatized by 2006. Company insiders say reform will involve cutting employment levels from the current 24,000 to 17,000, sell-offs of marginal oil-fields and moving toward private financing. The company is eyeing a major bond issue in 2006-07.

But if Pertamina accounts for such a small proportion of local oil production, would reform be of merely symbolic significance? Not necessarily. For a start, it should dramatically improve sentiment towards a company that has long been dogged with allegations of corruption and inefficiency.

In 1999, auditors uncovered losses of



American Don Voelte became president of Woodside Energy in April 2004.

US\$4.7 billion in a period of just two years, while in September 2004, a director in the company's finance unit was suspended under fraud allegations involving US\$20 million. If these numbers are true, then the financial significance to the local hydrocarbon industry of a better-run Pertamina could be huge.

Operational reform of the company could be equally powerful. Ironically, Pertamina's

**The New Australian Oil producer in Indonesia**

Lion Energy is an emerging junior oil producer holding assets on Seram Island in Eastern Indonesia and recently involved in the Cooper Basin in South Australia, through its 100% owned subsidiary Entak Energy Ltd.

A positive cashflow from the Oseil field development combined with an extensive exploration wells programme in the months to come make **Lion Energy** an attractive company to both investors and operators willing to get involved in Indonesia.

With a professional management and a specific knowledge of the Indonesian Oil Industry, **Lion Energy** offers its reliability and significant results for further collaboration.

Lion Energy Ltd.  
Suite 33, 168 Melbourne Street, North Adelaide SA 5006  
Tel: +61 8 8239 2868 Fax: +61 8 8239 1744  
E-mail: admin@lionenergy.com.au Web: www.lionenergy.com.au

*from Exploration to Production*

Listed on the Australian Stock Exchange, Queensland Gas Company is focused on becoming a major gas producer in Australia through its extensive coal seam gas resources in Queensland's Surat Basin.

With 540 tcf of 3P gas reserves already certified in the Surat Basin, QGC is set to commence development of its first producing gas field at Berwyndale South in 2004. First gas sales from the Berwyndale South field are expected early in 2005.

Queensland Gas Company  
Level 13, 100 Edward Street, Brisbane QLD 4000, Australia  
Tel: +61 7 3004 1000 Fax: +61 7 3012 8411  
E-mail: qgc@qgc.com.au Web: www.qgc.com.au



## Project Success on a global scale



Based in Perth W.A. Global Project Group has established themselves as a company with proven success in project management, project development and commissioning management within the Oil and Gas sector worldwide.

GPG offers effective management capability combined with a necessary desire to succeed. Drawing from the latest technology and quality resources, GPG can ensure each project is completed successfully.



Global Project Group  
130 Hay Street, Subiaco  
PO Box 21 Subiaco Western Australia 6904  
Tel: +61 8 9381 6300  
Fax: +61 8 9381 6122  
E-mail: [information@globalpg.com.au](mailto:information@globalpg.com.au)  
Web: [www.globalpg.com.au](http://www.globalpg.com.au)



**Woodside takes a conservative view of oil prices, says Keith Spence, chief operating officer.**

current problems stem in large part from its downstream business. In order to fulfill domestic supply contracts as production from its own fields declines, the company is now forced to import crude at high prices and then sell it at highly subsidized prices at the fuel pumps.

Although the government of course pays the subsidy, it does so only a month in arrears and without interest, thus squeezing Pertamina's cash position. As the shortfall in domestic supply has grown, the problem has snowballed. Downstream Pertamina accounts for 80% of the company's expenditure, but only 20% of its revenues.

The stranglehold this has put on exploration investment is one factor in Indonesia's declining production numbers. The government hopes liberalization of the downstream sector in 2005 will encourage foreign investment and alleviate the problem. Failure to do so would leave the government forced to bite into the fuel subsidy, thus aggravating social tensions.

### Australian incentives

In Australia, whose attractive climate, easy lifestyle and low-corruption reputation justifiably class it as one of the world's most desirable expatriate hang-outs, a trio of regulatory and fiscal issues is cited as major de-

velopment barriers. Firstly, the fiscal regime is alleged to provide insufficient incentives for firms to explore, especially in offshore areas.

APPEA has been lobbying for changes to the Petroleum Resource Rent Tax, a profit duty levied at 40% and recently, some concessions have been made: the federal government's 2004 budget introduced a 150% tax break for exploration in frontier areas.

"I think it's a very good measure and the government should be applauded for it," says Phil Aiken, head of BHP Billiton. But while welcomed by the industry, it's only likely to benefit the larger companies, whose operations are increasingly moving elsewhere.

Industry efforts to get the government to consider a flow-through share scheme similar to that successfully introduced in Canada in the early 1980s have so far fallen on deaf ears. "Every time we make a cogent case, the government says we're whining and we've got gas," says Saunders at APPEA. "But the lead time involved in replacing the oil industry with gas-to-liquids—in terms of project approvals and developing markets for LNG—just doesn't equate."

The second problem is the slow pace of the approvals process itself, often severely complicated by long-running battles over land rights between operators and local indigenous groups. There are estimated to be as many as 12,000 claims currently caught up in the native title process in Western Australia.

"To get permission to drill can take something like eight, 12 or 15 months, which is a great disincentive, particularly to the small-to medium-size companies that are less risk-averse than the big guys but who are the ones likely to get out there onshore and find something," says Saunders. Work on implementing recommendations of a recent review on streamlining the approvals process is ongoing.

Finally, Australia's fragmented system of national, state and regional government means companies often have to comply with a myriad of unaligned sustainability policies, with authorities at all levels keen to display their environmental credentials.

### Solutions

But aside from these issues of regulation,

---

***"We don't care about geography. Distance is dead. We look for where we can add value."***

***John Doran, Roc Oil***

---



what other solutions might the industry look to? There was hope that high oil prices would kick-start renewed vigor in the exploration process. But the effect has been fairly limited. One reason is a lack of belief that high oil prices will last.

"We are looking to build a robust business, so we take a very conservative view of where oil prices are going," says Keith Spence, chief operating officer of Woodside Energy.

Another reason is more complex. With oil prices high, the majors are provided with a huge incentive to ramp-up production as quickly as possible to make some extra cash. Why beef-up lengthy exploration projects when the current opportunity cost of not maximizing existing production is at a record high—especially if you believe that energy prices will soon fall back? Since oil production in both Australia and Indonesia is in decline, it makes sense that the major producers might be more focused on their activities elsewhere.

If that's true, it suggests that Australian marketing efforts in particular might benefit from a change of tack. The current climate should promote the interests of smaller explorers, including those with either very little existing production, or even none at all. That's because financing conditions should have improved significantly, not only because the level of investor interest is high, but also because there's now less competition for funds from the bigger players.

By exploiting that process, local industry could carve out an international niche and exploration given fresh impetus. Attractively, it would turn the apathy of the majors to its own advantage.

Ironically, it's a strategy that would neatly support the current industry dynamic. The number of small, publicly listed independent explorers in Australia has mushroomed in recent years. There are now some 81 oil and gas companies listed on the Australian Stock Exchange—the majority with a market capitalization of under A\$250 million (US\$180 million) and have been in business for less than a decade. It's translated into an impressive, pioneering spirit.




The Goodwyn gas and condensate field was discovered in 1972.

For foreigners, it means a large number of joint-venture opportunities for companies of a similar size that might be interested in diversifying their exploration plays. Most players are looking for companies that adopt a similar outlook to risk.


Moreover, there is a list of recent success stories striking enough to grab investors' attention:

- Local explorer Hardman Resources' successive oil discoveries in offshore Mauritania from 2001 saw its market capitalization rocket to A\$1 billion in April this year;
- Junior oil company Roc Oil made the first-ever commercial oil discovery in the offshore Perth Basin in 2001, followed with a further discovery in 2003 and the area is now set to become Australia's fourth offshore oil producing region;
- ARC Energy's share price has risen tenfold since 2001 follow-




## Besmindu Group

**Oilfield - Fabrication and Maintenance  
- Sales and Rental**




**When  
Quality and Delivery  
is The Priority**





AFIRM  
REGISTERED  
FIRM  
SICOM

Besmindu Utama Semesta, Jakarta, Indonesia (API Spec Q1,7,5CT)  
 Besmindu Borneo Semesta, Balikpapan, Indonesia (API Spec Q1,7,5CT)  
 Besmindu Andalas Semesta, Duri, Indonesia (API Spec Q1,7,5CT,6A)  
 Besmindu Kemaman Semesta, Kemaman, Malaysia  
 Besmindu Materi Sawatama, Jakarta, Indonesia



Website: [www.besmindu.com](http://www.besmindu.com)

<b>Jakarta</b>	: +62-21-88320915	<a href="mailto:jakarta@besmindu.com">jakarta@besmindu.com</a>
	: +62-21-88335710	<a href="mailto:ptbms@cbn.net.id">ptbms@cbn.net.id</a> [Rental]
<b>Balikpapan</b>	: +62-542-765958	<a href="mailto:balikpapan@besmindu.com">balikpapan@besmindu.com</a>
<b>Riau</b>	: +62-765-596495	<a href="mailto:duri@besmindu.com">duri@besmindu.com</a>
<b>Kemaman</b>	: +60-9-863-2160	<a href="mailto:besmindu@tm.net.my">besmindu@tm.net.my</a>

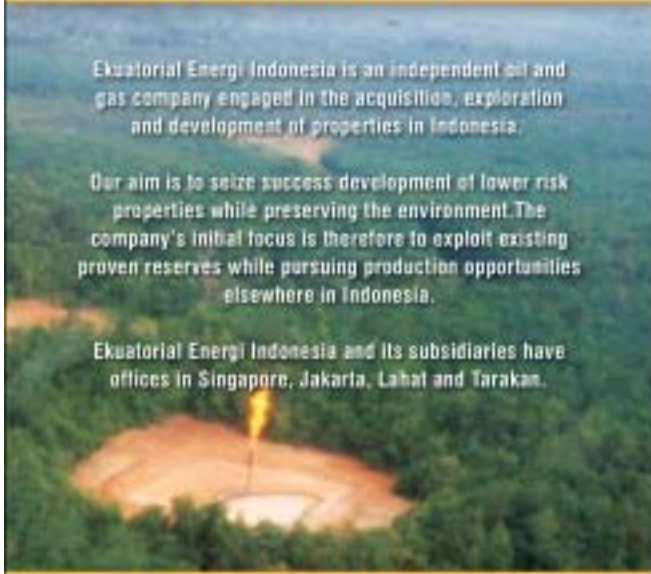



## Low Risk, High Profits

Ekuatorial Energi Indonesia is an independent oil and gas company engaged in the acquisition, exploration and development of properties in Indonesia.

Our aim is to seize success development of lower risk properties while preserving the environment. The company's initial focus is therefore to exploit existing proven reserves while pursuing production opportunities elsewhere in Indonesia.

Ekuatorial Energi Indonesia and its subsidiaries have offices in Singapore, Jakarta, Labai and Tarakan.



**Ekuatorial Energi Indonesia, Inc.**  
 Menara Ravindo 8th Floor, Jalan Kebon Sirih Kav. 75  
 Jakarta - 10340, Indonesia.  
 Tel: (62-21) 392 8084 Fax: (62-21) 392 8086

ing oil successes in the onshore Perth Basin; and

- Innamincka's Christmas Eve 2003 gas discovery in the Cooper/Eromanga Basin saw its share price triple within a month.

Roc Oil chief executive John Doran says one of the advantages of being a small company is the opportunistic approach one can take to exploration activities. "We don't care about geography. Distance is dead. We look for where can we add value."

That type of approach means being able to exploit small, but niche, market intelligence that can deliver rapid shareholder value. Roc now holds assets in Africa and China, as well as in Australia.

Potentially, too, success stories like these can trigger buyouts that might rejuvenate interest from the majors in the region.

### TACs

Such possibilities are much more limited in Indonesia, where the financial markets are less developed and the number of publicly listed exploration companies is small. In fact, there are just two: PT Medco E&P, which recently acquired Australian explorer Novus Petroleum's assets—including blocks in the U.S.—and Energi Mega Persada, a recently listed producer with assets in East Java and the strategically important Malacca Strait.

Hilmi Panigoro, head of Medco's holding company Medco Energi, says one problem is a lack of understanding among local finan-

**[Indonesia is] the only OPEC producer witnessing sustained production declines on field maturity grounds.**

cial market participants. "There's no real benchmark for an E&P in Indonesia. It's very difficult for us to explain our findings to the market," he says.

Some local companies have even considered listing in Singapore or Malaysia, where the market is less thin.


But with some slight differences, there is a mirror-image process to the emergence of the Australian juniors that offers numerous opportunities for smaller investors. The most prominent are the technical assistance contracts (TACs). Typically, these involve small companies operating in areas palmed-off, but still controlled by, Pertamina and are now marked as mature or declining.

Since production is already established—normally at a few thousand barrels per day—they are seen as low-risk enterprises. Some are staffed by expatriates looking to establish a foot in the door and subsequently graduate to more risky exploration plays.

"Our strategy is to get the investment we need to bring production up to higher levels, generate more cash, then use it to begin to explore elsewhere," says Greg Fletcher, head of the exploration arm of Lekom Maras, which operates both a TAC and a sister contract—a joint operating body—in West Java and South Sumatra.


There are currently some 30 relatively new TACs in operation and no more will be issued. With an abundance of declining fields, however, such operations are seen as performing an important role in extending and revitalizing the country's hydrocarbon production.


Of course, should more and more opportunities be seen available in frontier areas, it seems unlikely that small companies could bring the large-scale capabilities—nor perhaps the technology—to be able to deal with the financially demanding task of deepwater exploration, for example. But that's not to say that the authorities are not missing a trick by failing to give more encouragement to the juniors. The region may not be in fashion with the majors, but there's plenty of spare acreage to go round. □



**PATRAINDO PT. PATRAINDO NUSA PERTIWI**  
DCTG THREADING & OIL TOOLS

**Our Strategy is Based upon Reliability and Integration in Supporting Business for Oil & Gas Industry.**





**Products and Services:**

- Threading of Pipes for 1-1/4" to 13-3/8"
- Repairing and Fabricating of Pipes and other Oil Tools & Equipments such as body shoe, body collar, hanger, gate valve, cross-over, blast joint, etc.
- Licenses: API-5CT, Tenaris Premium Connections, Fox Connection

**Head Office:**  
Graha Elreusa 12th Floor, Jln. TB Simatupang No. 18, Glandak, Jakarta Selatan, Indonesia 12563  
Phone: (62-21) 78831074, 78831075 Fax: (62-21) 78831076  
E-mail: kantarpusat@patraindo.com

<p><b>Batam Plant:</b> Jln. Tidak Rata Anggar Pulau Batam - Indonesia Phone: (62-778) 412144, 412147 Fax: (62-778) 412148 E-mail: guantbatam@patraindo.com</p>	<p><b>Balikpapan Shop:</b> Jln. Muzawarman No. 91 Batakan, Balikpapan, Indonesia 76116 Phone: (62-542) 762029, 762194 Fax: (62-542) 762394 E-mail: guantbalikpapan@patraindo.com</p>
--	--

## Voyager Energy, Growing Fast



Based in Perth and listed on the ASX (code: VOY), Voyager Energy is a fast growing oil and gas explorer with a focus on the Perth Basin of Western Australia. The company's early success at Cliff Head offshore, and Jingga onshore will establish a strong production base to establish a good production base over the next 18 months, with subsequent growth dependent on ongoing exploration success and asset acquisitions.

Today, as the largest acreage holder in the Perth Basin and intending to operate its core projects in the near future Voyager Energy is one of the emerging growth stories in the Australian Oil and Gas market.



•Unit 4, 73 Troy Terrace Douglas Western Australia 6008 •Telephone: +61 (0) 8 9388 6722  
•Facsimile: +61 (0) 8 9388 6733 •www.voyagerenergy.com.au •info@voyagerenergy.com.au

# NATURAL GAS OPPORTUNITIES

*Two major players are seeking to consolidate their positions in the global LNG industry, while the Australian east coast looks to replicate the U.S. success in coal-seam gas.*

**W**ith worries over potential liquid supply shortages failing to recede and increasing environmental concerns about crude, global interest in the gas industry is booming. U.S. gas prices at the wellhead have spiked dramatically—from US\$2.50 at the beginning of 2002 to more than US\$5.50 by mid-2004—providing extra incentives for producers to get supplies to market.

The U.S. Energy Information Administration (EIA) predicts global consumption of natural gas is likely to grow by an average of 2.2% per year during the next 20 years—outstripping the 1.9% growth expected in oil usage and the 1.6% expected in coal. The EIA predicts natural gas will account for 25% of total world energy

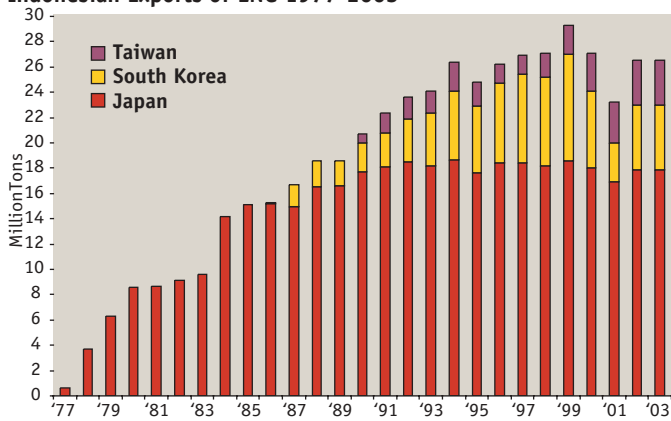
consumption by 2025.

The spillover effects are being acutely felt in the market for its more transportable offshoot—liquefied natural gas (LNG). Global LNG exports increased 35% between 1997 and 2002. The global network of LNG processing terminals has expanded significantly in recent years, too. A total of 66 production trains were in place by the end of 2003.

Global LNG liquefaction capacity is expected to rise more than 40% to 9.4 trillion cubic feet (Tcf) between 2003 and 2007 and equate to 10% of global natural gas consumption. Moreover, with production in industrialized markets expected to grow slowly in relation to their consumption, not only will the export market probably expand in volume terms, but in geopolitical importance, too. U.S. imports of LNG, which were 540 billion cubic feet (Bcf) in 2003, are expected to leap to 2.2 Tcf by 2010.

The ability to secure reliable supplies of natural gas has the potential to become a key foreign policy objective worldwide. As far as producing countries go, Australia and Indonesia are among the few global players with both the resources to command worldwide interest and first-mover advantages.

**Indonesian Exports of LNG 1977-2003**



Source: BP

## Indonesian gas

The first gas discovery in Indonesia was in 1971 by Mobil (now ExxonMobil) in the Arun Field in Aceh at the westernmost tip of the archipelago which is now perhaps best known for the strong local independence movement that has gained ground in recent years. The Arun find was followed a year later by Huffco's (now Vico) Badak Field discovery in East Kalimantan in the center of the country.

With no domestic demand for gas and no pipelines to support international sales, the need to monetize the resources in the poverty-stricken nation pushed the government to build liquefaction plants—the first a two-train plant in Bontang to support the Badak discovery, the second a three-train plant in Arun.

The marketing effort was relatively straightforward. Resource-starved Japan quickly signed long-term contracts from both plants and the first shipments were made in 1977 and 1978. In the first two years of the deal, total exports amounted to 4.3 million tons. By the mid-1980s that number had mushroomed to 15 million per year.

As global gas markets expanded, diversification opportunities opened up. Additional, smaller LNG shipments to South Korea began in 1986, and to Taiwan in 1990. By 2003, sales to Japan totaled some 17.9 million tons, sales to South Korea, 5.1 million and to Taiwan, 3.5 million.

At 26 million tons in 2003, worth a total of US\$5.6 billion, Indonesia now accounts for around one-fifth of all global LNG exports—as much as the entire Middle East put together. It's a remarkable statistic for a country still struggling to manage its own domestic energy needs.

## Australian gas

In Australia, the LNG industry had a slightly more recent birth. Its pioneer was local operator Woodside Energy, whose earlier failed attempts to make liquid discoveries in the Gippsland Basin in Vic-



Indonesia's Arun Field is a huge source of LNG for Japan and other Asian nations.

toria pushed it to acquire a vast, 367,000-square-kilometer area off the country's North Western coast in 1963, stretching more than halfway toward the island of Timor. For the immense development costs, Woodside gained financial backing from a host of venture partners, who in the early stages included Burmah Oil Co. and Royal Dutch/Shell.

It turned out to be a wise investment. The first gas discoveries were made in 1971 and siphoned off to the domestic market. The first LNG contract wasn't struck until 1985—a 20-year deal with Japan. Shipments began in 1989 and the sector has barely looked back since.

"We're in our 20th year for domestic gas from the NWS and our 15th year for LNG," says Keith Spence, chief operating officer of Woodside Energy. "We can look forward to another 15, easily."

The importance of what is now referred to as the North West Shelf (NWS) venture as a showcase for Australia's hydrocarbon capabilities is well deserved. Now equally owned by Woodside, BHP, Royal Dutch/Shell, Chevron Texaco, BP and Japan Australia LNG, the venture contains a proven reserve base of 20 Tcf. Its three liquefaction trains have a capacity of 7.5 million tons per year.

A fourth train—currently near completion—will lift annual capacity a further 4.2 million tons. Not only does the NWS project rank as Australia's largest natural re-

---

## **In July 2003, the [Australian] North West Shelf project completed delivery of its 1,500th LNG shipment to Japan.**

---

source and engineering schemes (project investments have totaled A\$12 billion since 1984), but as Australia's only existing liquefaction plant, it alone was responsible for the country's A\$2.9 billion (US\$2.2 billion) of LNG exports in 2003. Japan buys some 93% of Australia's LNG. Spot-market destinations have included the U.S., Spain and South Korea.

In a burgeoning industry, the two countries' achievements to date give them more than just bragging rights. Perhaps most obviously, they have given them a head start in establishing a sophisticated infrastructure that will lower the marginal costs of future projects. This should allow the participants to devote more of their cash to exploration efforts to increase projects' potential.

By comparison, countries such as Russia and Egypt, which own large proven gas reserves, have remained preoccupied with

their oil prospects and therefore slower to give LNG a kick-start. Moreover, being able to point to a reliable track record makes the marketing job a lot easier.

Australia in particular enjoys playing on an accomplished record of timely cargo delivery. "We've never missed a beat," says Spence of Woodside, the NWS project's operators. "All of our cargoes have been delivered within the window. We trade on our reliability." In July 2003, the NWS project completed delivery of its 1,500th LNG shipment to Japan.

### **Can they stand the heat?**

Nevertheless, with competition among global LNG suppliers intensifying and a bunch of existing long-term supply contracts expiring in the next five to six years, the trick now is to find new markets.

On one level, this looks fairly straightforward. Demand for energy in the Asia region is spiraling. China, India and South Korea all have plans to build new LNG regasification terminals. And being on their doorstep has considerable advantages.

Shipping times from Western Australia to key markets in Asia, for example, average around half of those possible from the Middle East. Not only does this provide a cost advantage, but additional security of supply.

"Korea, for example, tends to run its supply a lot leaner than Japan," says Spence. "Having a reliable supplier like Australia is quite attractive for them."



**APEXINDO**

## Your Dependable Partner

We are Indonesia's largest national onshore & offshore drilling contractor that has been serving both prominent local and international clients domestically as well as abroad for the last two decades.

Throughout our services, we have consistently put health and safety of our employees and other stakeholders, in addition to protection of the surrounding environment, as our number one priority.

**PT Apexindo Pratama Duta Tbk**

**Head Office:**  
Medco Building 2nd-3rd Floors  
Jl. Ampera Raya No. 20  
Cilandak, Jakarta 12560  
Tel: +62 21 780 4766 Fax: +62 21 780 4666  
PO Box 7457 JKS III PJKT 12047

**Branch Office:**  
Jl. Jend Sudirman  
Balikpapan Permai Complex  
Blok L No. 10-12, Balikpapan 76114  
Tel: +62 542 410 258 (Hunting)  
Fax: +62 542 411 768

Website: [www.apexindo.com](http://www.apexindo.com) E-mail: [investor-relations@apexindo.com](mailto:investor-relations@apexindo.com)

Potential for large-scale sales to the U.S. West Coast was highlighted by Australian Prime Minister John Howard's visit to California Gov. Arnold Schwarzenegger in June 2004 in an attempt to win approval for BHP Billiton's plan to build a floating offshore LNG receiver terminal 14 kilometers off the Los Angeles coast for potential Australian LNG supplies.

Phil Aiken, head of BHP Billiton and who also attended the Schwarzenegger meeting, says not only is the project attractive from a safety, environmental and cost-effectiveness point of view, but it has a promotional significance. "The government has backed our bid since it is very much about selling Australia abroad."

A host of plans to increase local production capacity are afoot too. In Australia, there are five major developments under way. First, the wrapping-up of an A\$25-billion (US\$18-billion) export deal in 2002 to supply NWS LNG to China's Guangdong terminal from 2005 has prompted plans for construction of a 4.2-million-ton-per-year-capacity fifth processing train in the NWS project. A final decision on this is set for the first half of 2005. The deal fought off competition from both Indonesia and Qatar.

Second, ConocoPhillips is currently developing a liquefaction plant in the northern city of Darwin to exploit the estimated 3.4 Tcf of gas at the Bayu Undan Field. Sales of 3 million tons to Japan will start in 2006. The project also involves the construction of a subsea pipeline connecting the plant to the field some 500 kilometers away.

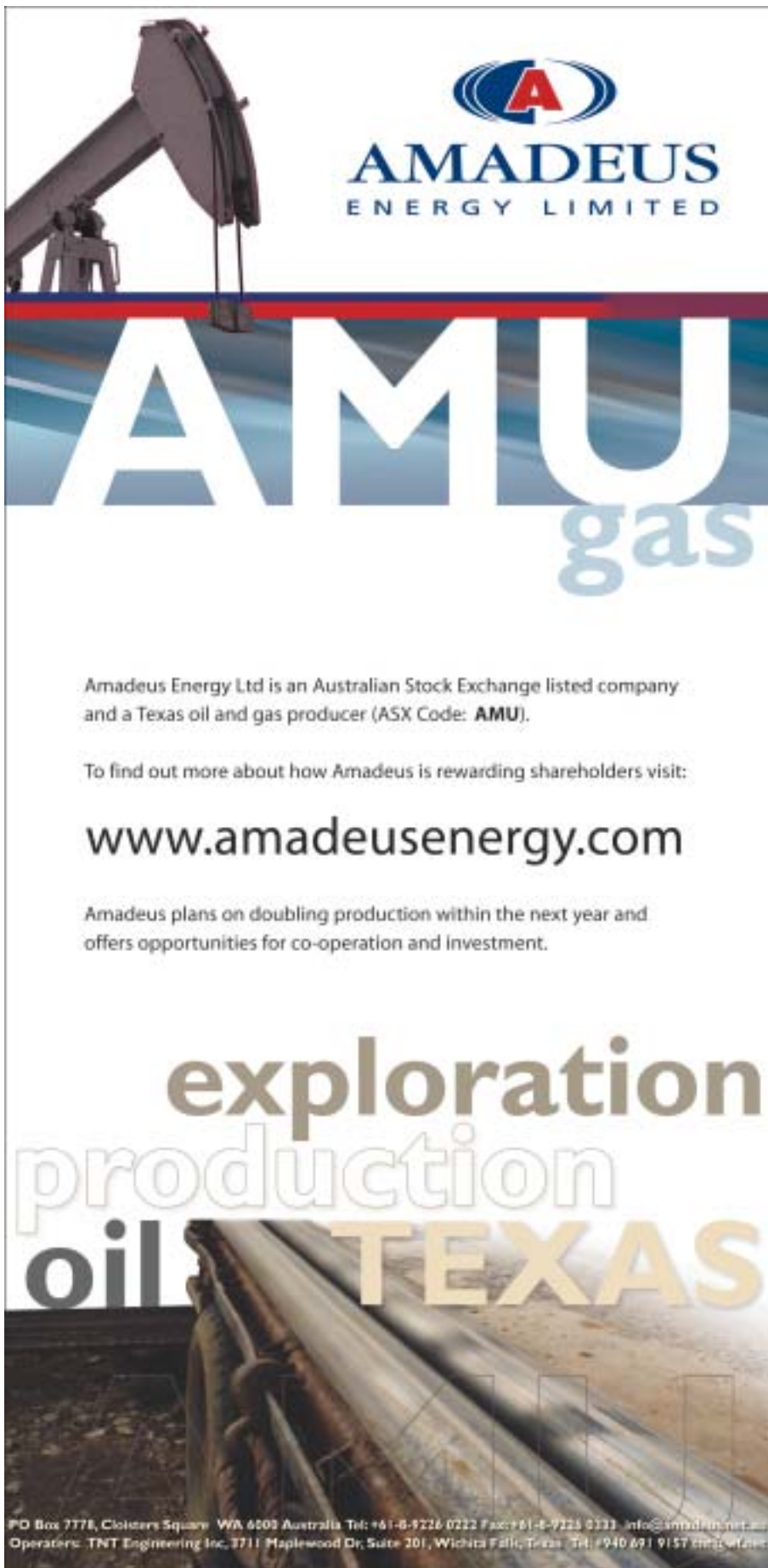
Third, ChevronTexaco's proposals for a processing plant on Barrow Island—a Class A nature reserve—are currently awaiting federal approval. If successful, it would pave the way for the development of the huge Gorgon gas field, which contains a proven 12.9 Tcf and a potential 40 Tcf, making it one of the largest discovered in Australia.

Fourth, a Woodside-operated A\$5-billion project to develop the Greater Sunrise gas field has been proposed, but seems to be grinding to a halt. The governments of Australia and East Timor have yet to agree on maritime boundaries in the Timor Sea, where the resources are located.

Finally, BHP Billiton has just announced proposals to develop a further LNG processing train—this time serving what it believes is an 8-Tcf reserve in the Scarborough Field offshore Western Australia.

In Indonesia, the list of proposed major projects is fewer in number, but of similar scale. Tentative proposals for a ninth production train at Bontang would add an extra 3 million tons of capacity, although much of this would offset declining production at Arun. The two most significant new projects are the proposed plants at Tangguh in the Eastern part of Papua and at Donggi in Central Sulawesi.

The BP-led Tangguh project has proven reserves of 14.4 Tcf and will supply 7 million tons per year from two processing trains to South Korea, China and the U.S., starting in 2008. The Pertamina-led operation at



**AMADEUS**  
ENERGY LIMITED

# AMU

gas

Amadeus Energy Ltd is an Australian Stock Exchange listed company and a Texas oil and gas producer (ASX Code: **AMU**).

To find out more about how Amadeus is rewarding shareholders visit:

## [www.amadeusenergy.com](http://www.amadeusenergy.com)

Amadeus plans on doubling production within the next year and offers opportunities for co-operation and investment.

# exploration

# production

# oil TEXAS

PO Box 7778, Cloisters Square WA 6600 Australia Tel: +61-8-9226 0222 Fax: +61-8-9226 0223 info@amadeusenergy.com  
Operators: TNT Engineering Inc, 3711 Maplewood Dr, Suite 201, Wichita Falls, Texas TX 79391 USA Tel: +940 691 9157 email: info@tnt.com

Donggi has a proven 3.4 Tcf, with additional potential of 18 Tcf. Some of this has been earmarked for sales to Mexico and the U.S. West Coast. But the viability of the Donggi project as a whole remains under review pending additional reserve certification and further sales contracts.

#### Forecasting

So the industry seems enthusiastic and the market potential is obvious. Where might the glitches arise? First, global competition is biting. As the number of producers expands, global supply may increase faster than regasification capacity. That means downward pressure on selling prices.

Countries that have existing long-term contracts currently enjoy a decent profit margin, but then face a shock when the next round of bidding begins. According to Purnomo Yusgiantoro, Indonesia's minister of energy and mineral resources and current president of OPEC, the country was undercut in a bid for a recent Taiwanese LNG contract by an offer from Qatar at a price lower than Indonesia can supply gas domestically.

Australia's relatively high construction and labor costs make its problems particularly severe. The countries that benefit will include not only those with established infrastructure and easy market access, but those with the largest reserves that can offer big contracts at low average costs.

Second, capacity constraints have become increasingly problematic in Indonesia.

---

**While Western Australia focuses on the potential for LNG, the east coast is eyeing the prospects for another gaseous energy source—coal-seam gas (CSG).**

---

Normal declines at the Arun Field mean there is no longer enough LNG to supply local fertilizer plants and fulfill existing supply contracts with Japan and South Korea. The short-term solution will be to purchase extra cargoes from abroad. In the medium-term, shipments are likely to be diverted from beefed-up production in Bontang. Any additional closures could compromise the country's reputation for security of supply.

Third, there are a host of government and regulatory issues that need to be overcome. In Australia the main concerns are related to a lack of incentives for exploring in deep water, often treacherous areas, and the often cumbersome and lengthy process of securing native title agreements with indigenous inhabitants.

In Indonesia, recent developments have not helped the view that the regulatory environment is opaque and the authorities sometimes untrustworthy. State-owned producer Pertamina refused to extend Exxon-Mobil's contract at the Cepu oil block in Central and East Java, which the company took over when it was considered marginal in 1999. The company made a significant discovery in 2001, and claims it needs to bring the estimated 700 million barrels of oil and potential 1.25 Tcf of gas onstream to achieve a return on its investment. Pertamina, however, has refused to renew its contract beyond 2010—a move backed by the government. While more royalties will now be recouped by the state, most observers believe the move may undermine investor confidence over the medium term.

Finally, as China emerges as a major trading power, regional geopolitical issues have become increasingly tricky and have the potential to jeopardize growth in international gas sales. Australia could find itself isolated if, for example, it were to support U.S. foreign policy in its diplomatic stance on independence in Taiwan. A more immediate test of foreign relations is likely to be the achievement of an agreement over gas resources with East Timor, which is currently trying to negotiate rights to more of the lucrative acreage around what is currently a joint-development area in the Timor Sea.

#### Coal-seam gas

While Western Australia focuses on the

**AWT**  
ADVANCED WELL TECHNOLOGIES

### Need a Technical Partner in Asia Pacific?

Strategically located in Perth, Western Australia, AWT has accumulated an impressive regional and international track record in both onshore and offshore operations, providing innovative solutions in the following areas:

- Integrated reservoir definition
- Field development and rejuvenation planning
- Production technology, artificial lift and sand control
- Drilling project management
- Well test management, planning and supervision
- Completions and subsides engineering design and installation
- Well services planning and implementation
- Production chemistry and operations support
- Competency-based training and knowledge management systems

**Advanced Well Technologies**  
1050 Hay Street, West Perth, WA 8005  
Tel: +61 8 9327 3400 Fax: +61 8 9327 3444  
E-mail: awtadmin@awtgroup.net Web: www.awtgroup.net

AWT is your ideal partner in the Asia Pacific region, offering its strong regional knowledge, experience and proven technical expertise to optimize your results and reduce your costs by effective asset management.

potential for LNG, the east coast is eyeing the prospects for another gaseous energy source—coal-seam gas (CSG). As the world's fourth-largest coal producer, locals have been optimistic about the prospects for the region for some time. The gas is found attached to the micropores of a coal seam and held in place by the surrounding water pressure, which is removed during the extraction process. Its applications are the same as those for conventional gas.

Currently, in Australia at least, it's an industry still in its infancy. Centered on the states of Queensland and New South Wales, production is estimated to be around 25 petajoules (PJ) per year, although that equates to some 25% of Queensland's total gas consumption.

But there is a considerable amount of excitement surrounding its potential. Part of that enthusiasm is based upon evidence from abroad that the resource can be effectively produced and marketed. In the U.S., CSG production doubled between 1992 and 2002 and now accounts for some 7% of total natural gas supply.

That has helped dilute criticism that CSG, with its typically low flow rates and subsequent need for a large number of wells for commercial application, is unlikely to prove cost-effective. Local exploration efforts are driven by integrated power firm Origin Energy and a host of smaller companies, including Arrow Energy, Queensland Gas, Sydney Gas and Comet Ridge.



A few Australian companies, including Hardman Resources, now operate offshore Mauritania.

Grant King, Origin Energy managing director, says the industry has now reached a critical mass that enables long-term production contracts to be signed—a problem that has put a stranglehold on exploration activity and on customer interest in the past.

“CSG is a scale business,” says King. “It's relatively difficult to market a single CSG project to a customer, since they want high levels of reserves certification to compensate for the fact that it is less well understood.”

Origin estimates Queensland's CSG proven and probable reserves stand somewhere around the 1300-PJ mark, which would be enough to supply the state's market for 13 years. Potentially, Origin claims, some 25,000 PJ are recoverable.

One advantage that the industry has is that the location of the principal reserve bases is close to some of Australia's largest markets—including Brisbane and Sydney with a joint population of 5 million. The reduction in potential distribution costs helps

**ESI**  
PT. EXLOG SARANA INDONESIA

**The Efficient Alternative Solution Services**

- Gas Package – PortADrill
- Portable Mudlogging – ESILBase
- Petroleum / Geothermal Mudlogging – WIMS
- Geological and Engineering Consulting Services
- Geothermal Production Wireline Logging
- Analog and Computerized Drilling Rig Instrumentation (Petrone Sole Agent)

**PT. EXLOG SARANA INDONESIA**  
Jl. Duren Tiga Raya No. 12 AB, Jakarta 12760, Indonesia  
Tel: +62-21-79193904, 79193905, 79193733, 7943155  
Fax: +62-21-7943156 E-Mail: esiaf838@indo.net.id

**LEKOM MARAS**

**Your secure investment opportunity in Indonesia**

Lekom Maras Oil and Gas is a young dynamic Indonesian exploration and production company undergoing an expansion phase through aggressive acquisition of oil and gas properties in Indonesia. The company is inviting potential investors to participate in presently held properties and future acquisitions.

Investment opportunities are available in the Bangadua Field in West Java and Dewa, Raja and Abab fields in South Sumatra. Bangadua has well developed infrastructure and potential for sizeable oil and gas reserves. Gas production is anticipated to commence in late 2004. The South Sumatra contract area is a producing oil and gas property with substantial easily developed proven reserves plus prospects with significant additional reserve potential.

**P.T. Lekom Maras**  
Ratu Prabu Building 2nd Floor, Jl. Simatupang Kav. 20  
Cilandak Selatan 12560 Indonesia  
Tel: (62-21) 7884-9090 Fax: (62-21) 7884-9094  
E-mail: bangadua@pacific.net.id Contact: Greg Fletcher



## Innovatively Australian. Global in Perspective.

Woodside is Australia's pre-eminent upstream oil and gas company with a 50-year history backed by one of the world's premier LNG developments, the North West Shelf LNG Project.

As operator of the North West Shelf, Australia's largest resource project, we've been delivering LNG to Japan, the United States, Korea and Spain for the past 15 years. We're now set to deliver gas to China's first LNG project.

We produce more than 40% of Australia's oil and gas. As well as our homeland, our interests span the United States and Africa. We're backed by world-class reserves, quality assets, low-cost operating efficiencies, and a culture built on innovation and leading-edge technology.



[www.woodside.com.au](http://www.woodside.com.au)

## ...[LNG] capacity constraints have become increasingly problematic in Indonesia.

mitigate the extra risks and higher production costs typically associated with CSG extraction.

Government support has also been significant. Sentiment towards the industry has been given a boost by a state government decree that requires that by the start of 2005, 15% of all of the electricity sold in Queensland must be derived from gas or renewable energy. Sydney Gas' Camden gas project—a 300-well project 50 kilometers southwest of Sydney—was awarded “state significant status” by the New South Wales government, which effectively fast-tracked the project to protect it from floundering under an administrative burden.

It now has long-term sales contracts with distribution company AGL worth more than A\$450 million (US\$321 million). The next step, says executive chairman Dominic Martino, is to increase drilling activity in the company's vast land-holdings. “We want to be one of the fastest growing companies in Australia.”

There is little doubt that as of now, it is in the gas sphere that Australia and Indonesia hold their comparative advantages. However, as the international gas market continues to take off and other suppliers begin to join in, neither country can expect an easy ride.

“Because of the projected shortfall in liquid supply, the government has an interest in these gas developments getting up,” says Spence.

Indeed it does. But not just in the public sector, private industry too. □

## Your Partner in Well Intervention

### SERVICES

- Wireline services
- Well testing services
- Early production facility
- Gaslift design and installation
- Dip tube system for manubore completion
- Casing and tubing inspection services with multi finger caliper
- Real time and memory production logging tool
- Perforation, E-line or Slick-line
- Hot hole logging services up to 600° F
- Permanent downhole gauge installation and services
- Drilling and production fishing services
- Mechanical gauges and EMR calibration and services
- Wellhead maintenance services
- Data acquisition services
- Echometer services for fluid level measurement



Well Intervention Services

<p><b>Head Office</b> 2, Victoria Building, St. 1 Corner, Market Street, 1700, Adelaide Phone: +61 8 821 09 000 Fax: +61 8 821 09 000 Email: <a href="mailto:info@wellservices.com.au">info@wellservices.com.au</a></p>	<p><b>Branch Office</b> 7, Macdonald Street, 50 Beverly Hills, South Australia 5097 Service/Production/Installation Phone: +61 8 821 710 000 Fax: +61 8 821 710 000 Email: <a href="mailto:adelaide@wellservices.com.au">adelaide@wellservices.com.au</a></p>	<p><b>Production</b> Unit, Avonville Industrial Park (220) Clarington Industrial Estate (200) 4, James &amp; Eddy St, St. 1 Clarington, West Coast, Queensland Phone: +61 7 4999 000 Fax: +61 7 4999 000 Email: <a href="mailto:central@wellservices.com.au">central@wellservices.com.au</a></p>	<p><b>Training Center</b> 2, Sebring Close, St. 1, Inverloch, 1 Phone: +61 3 527 0840 Fax: +61 3 527 0840 Email: <a href="mailto:training@wellservices.com.au">training@wellservices.com.au</a></p>
---	---	--	---



# THE SERVICE SECTOR

*Firms in the Australian service sector are increasingly looking beyond national boundaries, while Indonesian companies struggle with access to capital.*

Australia and Indonesia might be together in witnessing declining oil production, but the two countries' relative differences are much more visible in the hydrocarbon-support sector. A few big engineers and a bunch of slickly-run smaller firms can no longer rely on the Australian market to deliver growth. In Indonesia, the predominance of small companies means there are few complaints about potential work volume, but more about the resources needed to get it.

The Australian engineering, procurement and construction (EPC) scene is dominated by three major local players: Worley, Thiess and Clough Group. All are multidisciplinary, but regard the hydrocarbon sector as core to their business. For example, Thiess, which began in Australia more than 70 years ago and now has an annual turnover of A\$3 billion (US\$2.1 billion), intends to be especially active in the pipeline construction sector, while also exploiting its strong overseas presence.

"We have 4,000 employees in Indonesia. We think that overall the market is worth a potential A\$3 billion," says Roger Trundle, Thiess managing director.

Locally, big, set-piece opportunities are now fairly few and far between. The giant Gorgon gas development off Western Australia, involving the production of a 70-kilometer subsea pipeline and LNG processing facility on Barrow Island, is one. The project is currently in approval stage but is considered a significant opening for local contractors. It is expected to generate some 3,000 jobs during the construction phase, a further 600 once in operation and attract A\$11 billion (US\$7.9 billion) in investment. At least 10% of the project's workforce is expected to be staffed locally.

While Australia's biggest companies might be expected to get involved in flagship projects such as these, their large capabilities are also evident in their capacity to develop new technologies helpful for local conditions. In conjunction with engineers Arup, Clough Group has developed a novel gravity-based oil-platform solution of major benefit in the rough seas in, for example, the Bass Strait.

"You don't get a lot of weather breaks there, so your window of opportunity for installation needs to be fast," says David Singleton, managing director and chief executive of Clough Group. The solution is akin to an upturned bucket, placed on the sea bed and from which the water is drained out, leaving the structure kept in place by suction.

"Normally a platform like that would take three months to install. This one took six hours," says Singleton. "It has applications elsewhere, not just in Southern Australia. Down here, the jobs can be challenging. But you get into that sort of innovative thinking if you do one thing constantly and do it well."

Otherwise, the domestic service sector overall can't be described as vast. But what there is is a fairly selective bunch of small, highly capable companies that are generating a strong reputation in the local market.

Indeed, many see their biggest challenge as dealing with the absence of a critical mass of local business that can satisfy ambitious growth targets. Cameron Manifold, managing director of Perth-based engineers and project support group Advanced Well Technologies, explains, "We've almost trebled our headcount in the past year but work in Australia has been pretty much saturated."

That growth has come from a mixture of the country's relatively new breed of junior explorers and from more established names such as Halliburton and Schlumberger. The combination of a young, mobile labor force, international partners and the adoption

of cutting-edge technologies, says Manifold, should help the company continue its expansion into Asia.

Meanwhile, a similar confidence in international ventures is visible elsewhere. Local project management company Global Project Group has already successfully ventured into Korea and Vietnam, while Icon Engineering has operated further afield, in both the U.S. and the U.K. As markets in the emerging energy sector in the Asia-Pacific region mature, their possibilities for further successes look strong.

## Fragmentation and finance

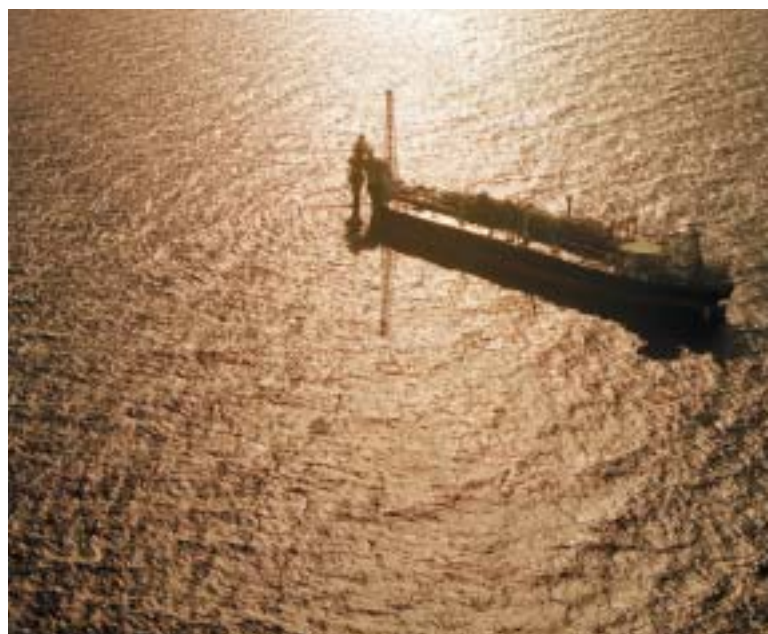
By comparison, the level of diversity in Indonesia's service sector is large, and its problems run deeper. EPC capacity is dominated by three local engineers, ReKayasa, Tripatra and IKPT. All have offshore capabilities and are run along international lines.

"We are one of only six LNG contractors in the world," says Raysoeli Moelock, president and chief executive of IKPT. The presence of proficient, large-scale project capabilities in the domestic market, as well as local knowledge, makes entry into the Indonesian market a fairly tough task even for some of the global contracting giants, especially when such projects are at a premium.

But in fact, the Indonesian EPC sector is fairly unique in housing firms with global operations and capabilities. In other areas, such as wellhead engineering, equipment supply or drilling services, there is a much larger field of small players.

There are good reasons for that fragmentation. Recent history has been tough. It's not just a question of product demand or ambition, but many companies have found it difficult to expand, owing to broader economic difficulties. The economic crisis triggered in late 1997 was a catalyst for many firms to leave the business or dramatically scale down their operations.

The problem was not so much the 700% devaluation of the rupiah against the dollar, "since most of our sales are priced in U.S.



Just a few big players tend to support most engineering projects offshore Australia and Indonesia.

dollars, the movements in the exchange rate actually dramatically improved our output prices in relations to our costs,” says Benjamin Dwiyanto of equipment supplier Besmindo.

Sales volume proved resilient, too, he says. “Those oil companies pulling out of the country wanted to sell their equipment, but they had to fix it first. Our repair business boomed.”

It wasn’t even the short-term damage inflicted to oil-sector output, since production remained virtually untouched. The biggest problem, explains Hertriono Kartowisastro, president director of drilling contractor Apexindo, was the liquidity crunch that followed as the banking sector imploded. “Turnover of short-term loans became more difficult for some companies. It became very difficult to get finance.”

The legacy of the banking crisis has left its footprint on industry in general to this day. As far as local industry goes, the number of large-scale, developed support compa-

nies is small. Elnusa, which is a large, diversified, service-sector offshoot of state oil company Pertamina, and Apexindo, a US\$100-million-market-cap subsidiary of Medco Energi, are two of the very few local companies with deep enough pockets to be able to focus on the cost efficiencies that financing on better terms might bring, rather than on the challenge involved in obtaining the cash itself.

For most companies, it’s a different story. “Local banks typically charge 10% interest for loans denominated in U.S. dollars,” says Indra Wardhana of well-testing firm Dimas Utama, which has a turnover of US\$7 million per year. That means companies can’t be bailed out by relatively high local inflation rates, so the real interest rate remains high.

Equally significant, of course, has been the medium-term damage the 1997-98 crisis has done to Indonesia’s reputation as an economically and politically stable place to do business—a problem that is just becoming overcome with the recent orderly com-

pletion of the country’s first-ever directly held presidential elections. Those perceptions of risk have meant that looking to overseas banks has been a little easier.

Borrowers typically get penalized for being Indonesian. “Foreign banks look for collateral we don’t have. They also typically add a 5% risk premium when lending in Indonesia or to Indonesian companies,” says Wardhana. The problem has forced companies to look for more innovative solutions. “We formed a regional partner in Singapore to get cheaper financing. We can now get 4% to 5% from Singaporean banks.”

### Security issues

Financing issues aside, what else is restricting development? Security issues have undoubtedly scared off some foreign firms and with them, local ability to import knowledge. And for those companies already operating, labor laws can be extremely arduous while labor is cheap. Average labor costs per hour in Indonesia are estimated to be around US\$0.50. For expatriates accustomed to greater flexibility, the need for reform is palpable.

“The protectionism provided to an employee is quite great,” says George Walker, president director of EPC contractor PT Trans Bakrie. The problem is particularly acute in the oil and gas sector, where revenues are lumpy.

“If you suddenly have to make people redundant, payout is linked to length of ser-

**“We formed a regional partner in Singapore to get cheaper financing. We can now get 4% to 5% from Singaporean banks.”**

*Indra Wardhana, Dimas Utama*

**PT. OILINDO DINAMIKA INTERNATIONAL**  
**ODI**  
**JAKARTA**

**Quality, Reliability, Efficiency,  
and the Best Service to Our Customers**

Established in mid 1992 to provide electric submersible pump system to the Indonesian oil and gas industry, PT. Oilindo Dinamika International has rapidly expanded its business to provide a wide range of services and state of the art drilling and production equipment technology in Indonesia (control panel, power cable, variable-speed motor controller, field service and accessory items).

Benefiting of an impressive track record of international suppliers and manufacturers PT. Oilindo Dinamika is today looking for further suppliers willing to take advantage of its reputation and knowledge of the Indonesian oil and gas market.

**PT. Oilindo Dinamika International**  
 Golden Gate Building 3rd floor, Jl. Radio Dalam Raya No. 5-7  
 Kebayoran Baru, Jakarta Selatan 12140, Indonesia  
 Tel: (62-21) 722.5783 (Hunting) Fax: (62-21) 720.7903  
 Website: www.oilindodinamika.com E-mail: rathie-pss@itrg.olsa.net

**AMITY OIL LIMITED**

**Creating Shareholders Wealth  
through Discoveries**

Amity Oil is an Australian based, international oil and gas exploration and production company with a present focus in Turkey, onshore USA and Australia.

Today Amity produces gas from 3 onshore fields in Western Turkey and has an active exploration program in Oklahoma, Texas and Western Turkey.

The company is also attempting to commercialize the giant Whicher Range gas field onshore southern Western Australia to capitalize on the attractive and growing gas market.

**Amity Oil Ltd.**  
 2nd Floor, 18 Richardson Street West Perth, Western Australia 6005  
 Tel: (08) 9324 2177 Fax: (08) 9324 1224  
 E-mail: mail@amityoil.com.au Website: www.amityoil.com.au

vice and is very much larger than in other countries. Typically someone with 10 years service would end up with two years of pay. You have to consider whether it's cheaper to keep them on or let them go." Although in principle this sustains the head count, in reality it damages profitability and can discourage firms from hiring in the first place.

Given the relatively high number of small oil companies (such as TACs) focused on low-scale recovery in marginal and declining fields, the presence of small local service firms suits the upstream market. And locally, Indonesia's declining oil production is seen as opening up a new door at the same time that another closes.

"It may be bad for exploration interest, but we expect to benefit from more attention being paid to extraction," says Ermin Nasution, president and chief executive of Welltekindo, which has 70% of the wire-line-services market in Indonesia.

That process should also bring opportunities to adapt newer technologies, which are crucial to lower costs and make continued exploitation economic. It's a process already under way.

"In the past few years, I've seen a new inventory of tools and fit-for-purpose technol-



ExxonMobil's giant Arun gas field in Aceh, Indonesia.

ogy for use in brownfields being introduced that say, five years ago wasn't the focus," says Steve Orr of Schlumberger Oilfield Services in Indonesia. The Oil & Gas Technology Indonesia trade event in 2005 is expected to be packed.

There remain gaps in the market too. Tommy Short, president director of submersible pump suppliers Oilindo, says, "We can operate in market niches. In the past, big companies have bought smaller ones, but then stopped supplying some of the equipment the industry has needed. We want to find products we can sell on a long-term basis."

For foreign companies wanting to ex-

plot those opportunities, some difficulties arise out of market protection issues. Most procurement is done by tender, but it's not a free-for-all. All purchases made by either Pertamina or PSC participants must be made through a locally registered company—unless, that is, those products or services can be sourced more cheaply abroad or not found at all from local suppliers. In most cases, then, it's essential for overseas companies to establish relationships with local players.

It seems likely that attracting international attention will play a key role in the two countries' service-sector development. The Australian government's ability to revive large-scale projects will be one factor determining whether or not growth in its domestic service-sector companies is to be sustained indigenously.

And growth in Indonesia could hinge on the extent to which new products for drilling and extraction can be introduced into local markets. If both fail, unlocking the door to new and expansive projects will remain a challenging task. Success, however, could add a new dimension to the industry and therefore reinforce better prospects for production. □

**BEACH PETROLEUM**

## Long Established Success

Beach Petroleum Ltd. is a publicly listed oil and gas company, based in Adelaide, South Australia.

Beach holds interests in exploration and production tenements within Australia and Papua New Guinea. The Company's activities are primarily focused upon the Cooper/Eromanga Basin of South Australia and Queensland where it holds interests in 9 exploration areas and 4 oil production joint ventures.

In 2002/03, we produced approximately 2,700 barrels per day. If you are interested to take part in our long established success, please contact us.

**Beach Petroleum Ltd.**  
 Level 1, 25 Congham Street, GLENSIDE SA 5065, A/CN 007 617 969 AUSTRALIA  
 Tel: +61 8 8338 2838 Fax: +61 8 8338 2336 E-mail: info@beachpetroleum.com.au  
 Website: www.beachpetroleum.com.au