AmResearch
Sector Report
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OIL & GAS

Multiple EOR projects in the pipeline

(OVERWEIGHT)

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Rationale for report : Thematic Research

Investment Highlights

- Petroliam Nasional's (Petronas) exploration and production technology division head Dr Nasir Darman said that the group hopes to make the final investment decision for the enhanced oil recovery (EOR) projects at the Angsi, Guntong, Dulang, and Bokor fields this year, *The Star* reported today. He said that these are parts of 13 domestic EOR projects potentially worth RM36bil. According to him, Guntong is in the pipeline while the group hopes to make a commitment on the Angi chemical EOR (CEOR) project soon.

- *Upstream* reported that ExxonMobil has commissioned Technip for both conceptual studies and front-end engineering and design (FEED) on the planned production facilities for Guntong water-alternate-gas (WAG) EOR, which include a gas compression platform to be bridge-linked to an existing central processing platform (CPP).

- A tender is expected to be issued for the engineering, procurement, construction, installation and commissioning (EPCIC) of the Guntong production facilities this year. As this EOR project does not involve building a far more expensive CPP, we expect the Guntong EPCIC to cost below RM1bil. But the Dulang and Bokor fields require CPPs, which could cost over US$1bil each.

- Malaysia has 13 platform-based WAG EOR projects under study, out of which 8 are expected to be tendered for construction over the next 3 years. These WAG projects in Malaysia mostly stems from Petronas' EOR production sharing contracts with ExxonMobil and Shell, which were signed in 2008 and 2012 respectively. Recall that Exxon-Mobil had earlier pledged to redevelop Tapis, Seligi, Guntong, Semangkok, Irong Barat, Tabu, and Palas off Peninsular Malaysia.

- Shell's EOR PSC announced in early 2012 involves WAG EOR in the Baram Delta and CEOR in the North Sabah basin, potentially worth US$12bil ((RM40bil) over 30 years. WAG EOR has been considered for 6 of the 9 Baram Delta fields which were earmarked under Shell's WAG EOR contract. These are Bokor, Baram, Baronia, Betty, Tukau and West Lutong. *Upstream* reported that a tender for the integrated Bardegg 2 and Baronia CPP is currently in progress.

- So far, construction is nearing completion for the RM10bil Tapis EOR project, while 3 others - Guntong, Dulang and Bokor - are still undergoing FEED studies. The Dulang field, which contains a high carbon dioxide content of 70%, poses significant technical challenges. Shell could later choose 3 other fields - Tukau, West Lutong and Seligi - for FEED studies over the next 2 years. In addition to the EOR PSCs with ExxonMobil and Shell, Schlumberger has also been undertaking a WAG EOR study at the Samarang oilfield.

- For the Angsi project, we highlighted last week that UK-listed Petrofac is leading the race to secure a FEED study contract for Petronas' revised Angsi CEOR project off Terengganu which now involves platform-based CEOR. Petrofac hopes to minimise the use of the expensive chemical mixture used for the CEOR. For this project, we expect SapuraKencana Petroleum - the joint operator with Petrofac for the Berantai marginal field and fabricator of Petrofac's other marginal projects in Cendor and Sepat - to be the favourite to secure the larger portion of any EPCIC work from the Angsi CEOR project.

- We remain positive on the sector as the roll-outs of Malaysia's multiple EOR projects will continue to underpin the re-rating cycle. Likewise, we maintain our **OVERWEIGH**T call on the sector with our **BUY** calls for SapuraKencana Petroleum, Bumi Armada, Yinson Holdings and Alam Maritim Resources. Our have HOLD recommendations for Petronas Gas and Dialog Group.

TABLE 1 : SECTOR VALUATION MATRIX

Stocks	Call	Market capitalisation RMmil	Fair value RM/share	EV/ EBITDA x	PE CY14F x	PE CY15F x	Div yield CY14F %	Div yield CY15F %	ROE FY14F %	P/BV x
Alam Maritim Resources	BUY	1,064	2.05	22.2	13.4	10.6	0.2	0.2	14.1	0.1
Boustead Heavy Industries Corp	HOLD	621	2.40	17.5	17.0	9.6	-	-	19.6	0.2
Bumi Armada	BUY	11,453	5.15	(88.2)	17.7	18.2	1.1	1.1	11.8	0.3
Dialog Group	HOLD	8,541	3.40	27.3	29.8	23.1	0.9	0.9	18.2	0.2
MMHE	BUY	5,952	4.30	17.0	23.2	17.7	1.3	2.7	9.6	0.4
Petronas Gas	HOLD	47,133	24.30	16.0	28.6	26.6	2.6	2.7	15.9	1.5
SapuraKencana Petroleum	BUY	25,946	5.70	9.8	17.2	15.3	0.3	0.3	13.3	0.3
Yinson Holdings	BUY	2,200	10.30	14.0	19.6	16.2	0.3	0.3	18.4	4.0

Source: AmResearch

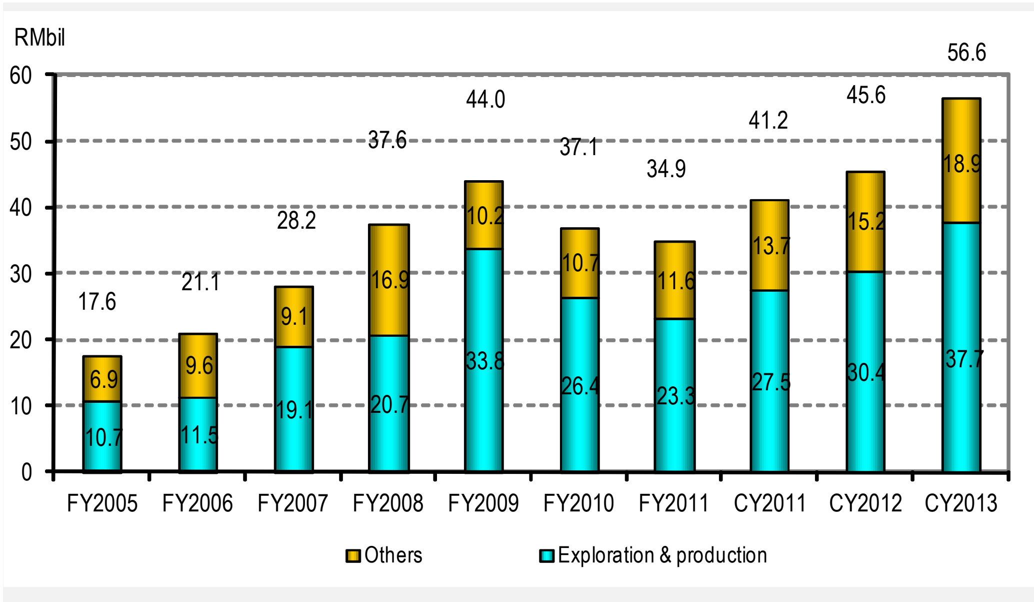
PP 12246/05/2013 (032379)

TABLE 2 : UPCOMING OIL & GAS PROJECTS

EPCIC jobs	Location	Scope of works	RMmil	Likely bidders
Upstream				
Exxon-Mobil's enhanced oil recovery	Rejuvenation of Tapis, Telok, Seligi, Guntong, Semangkok, Irong Barat, Tabu and Palas oilfields off Peninsula, Sabah & Sarawak.	Central processing platforms, gas compression systems, process equipment, MOPU, tender rigs, offshore vessels.	10,000	MMHE, SapuraKencana, Wah Seong, Bumi Armada, Alam Maritim
Carigali-Hess' North Malay gas project- fast track basis	North Malay basin (Blocks PM301 and PM302), near JDA	Central processing plafform, 8 well head platforms, 200km pipeline	16,000	MMHE, SapuraKencana, Wah Seong, Bumi Armada, Alam Maritim
Shell's deepwater Malikai project	Malikai field, off Sabah	Fabrication of tension leg platform, installation of pipelines and facilities	5,000	MMHE, SapuraKencana, Wah Seong, Bumi Armada, Alam Maritim
Petrronas Carigali's EOR projects	Dulang, Semarang, Bokor	3 Central Processing Platforms for enhanced oil recovery.	5,000	MMHE, SapuraKencana, Wah Seong, Bumi Armada, Alam Maritim
Petronas' 1mil tonne FLNG	Kimanis gas field	1st floating liquiefied natural gas carrier	6,000	Technip-Daewoo, MMHE
Murphy Oil, 1.5mil tonne FLNG	Rotan, off Sabah	2nd floating liquiefied natural gas carrier	9,000	JGC Corp, Toyo Engineering
Shell Malaysia's EOR projects	Baram Delta, off Sarawak and North Sabah	Enhanced oil recovery proejcts	38,000	MMHE, SapuraKencana, Wah Seong, Bumi Armada, Alam Maritim
25 marginal field projects	Peninsula, Sabah & Sarawak	New risk-sharing contract from Petronas.	52,500	SapuraKencana,Dialog Group, Petra Energy, Scomi Marine, Puncak Niaga, UMW Oil & Gas, Bumi Armada
Petronas' umbrella tender for shallow water jobs	Peninsula, Sabah & Sarawak	5-year Hook-up & Commissioning, maintenance contracts.	10,000	SapuraKencana, Dayang, Alam Maritim, Perdana Petroleum
Downstream				
Petronas' Refinery & Petrochemical Integrated Development and other mutlinationals	Pengerang, Johor	Refinery, petrochemical projects	120,000	Dialog, SapuraKencana, Muhibbah Engineering, Ranhill, KNM
Tank Terminal Projects	Southern Johor- Pengerang, Tanjung Bin, Tanjung Langsat	Tank terminals for crude oil, petrochemicals, LNG.	10,000	Dialog, MMC, Benalec, Muhibbah Engineering, Ranhill
LNG Regassification plants	Malacca, Lahad Datu, Pengerang, Lumut	LNG Regassification plants	12,000	Dialog, Muhibbah Engineering, Ranhill
Malaysia LNG Train 9	Bintulu, Sarawak	3.6 mil tonne increase to MLNG's liquefaction facilities	10,000	JGC Corporation, Chiyoda-Saipem
Petronas' Samur ammonia/urea plant	Sipitang, Sabah	Fertilizer plant	4,500	Muhibbah Engineering, Ranhill
Total			**308,000**	

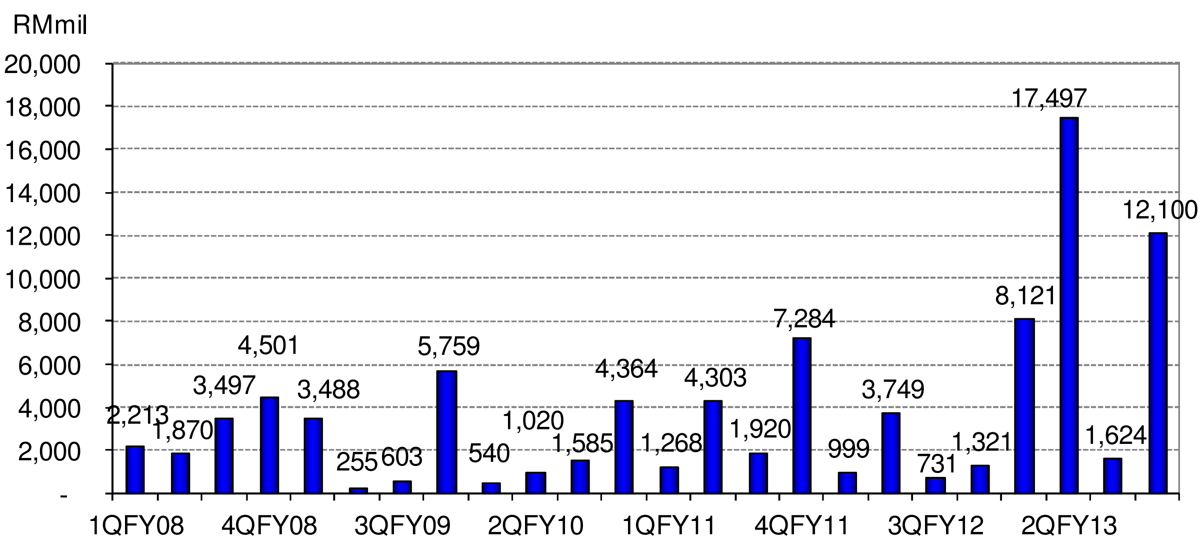
Source: AmResearch, various sources

CHART 1 : PETRONAS' CAPEX



Source: Petronas

CHART 2 : OIL & GAS NEW ORDERS FOR MALAYSIAN PLAYERS



Source: Petronas

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