

# Oil & Gas Book

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### Massive Resource Potential

**ASX Code**  
ESG

**Share Price**  
74cps

**Valuation**  
100cps

**Market Cap (fully diluted)**  
\$520.3m (\$590.2m)

**Issued Capital (fully diluted)**  
703.1m shares (797.5m)

**Cash (as at 31 March 2008)**  
\$41m

#### Management

John Anderson (Chairman)  
David Casey (Managing Director)

#### Top Two Shareholders

Hillgrove Resources Ltd (22.5%)  
Merril Lynch Nominees Ltd (8.2%)

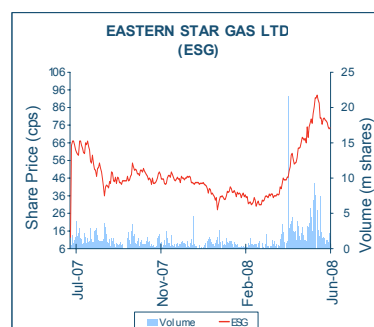
*Eastern Star Gas Limited ("ESG", "Company") has recently embarked on the largest coal seam gas ("CSG") reserves exploration and appraisal project ever undertaken in New South Wales ("NSW"). The current gross 2P reserve at its Narrabri project (ESG 65%) is 185 petajoules, with an impressive gross 3P reserve of 1,300 petajoules. ESG is aiming to convert the 3P reserve to 2P by the end of 2009. A significant reserve upgrade is also expected later this year.*

*CSG activity in Australia has been primarily focused in Queensland; however, scope is expanding rapidly to include NSW and other areas. ESG is well placed to advantage from this as it is fully funded and has secured MOUs, ensuring that it has a market for its product. This should provide a strong foundation from which to build possible LNG scale projects based on multi trillion cubic feet potential. We rate **Eastern Star Gas** as a **Speculative Buy**.*

### Investment Highlights

- **Reserves Upgrade Expected** – The Company is at the beginning of a large reserves exploration and appraisal project at its Narrabri acreage (ESG 65%), located in NSW. ESG is targeting gross 2P reserves of 1,300 petajoules by the end of 2009. 2 of 20 planned coreholes have been drilled to date and 2 of 4 multi-lateral pilot production wells are scheduled to spud shortly. This drilling activity should result in a significant reserves upgrade later this year, and provide certainty around expected flow rates and the development concept. Conservatively valued, ESG's share of 1,300 petajoules would be worth >105cps.
- **Recent CSG Deals Re-Rate Sector** – Recent deals in Queensland between Arrow / Shell and Santos / Petronas have valued CSG reserves at >\$2.50 per gigajoule for 2P reserves and ~\$1 per gigajoule for 3P reserves. Both of these deals were based on potential for a much larger resource and the gas being converted to LNG, which may trade at, or above, parity with oil in the future. These deals give an indication of what prices may be achieved for CSG acreage in NSW in 2-3 years once its infrastructure catches up to that of Queensland.
- **MOUs in Place** – ESG has MOUs in place for the sale of 1,300 petajoules of gas. It is no coincidence that this is also the 3P reserve number, as the reserve number is constrained by the MOUs. The establishment of the MOUs highlights the Company's approach to matching supply with demand and ensures a market for its gas.
- **2008 Resource Target 3,675 Petajoules** – The Company has recently reported a resource prediction at its Narrabri CSG acreage, based on coals located outside of the current reserves area. Recent coreholes drilled at Dewhurst have achieved results well above expectations and have confirmed the geological model. The target of 3,675 petajoules could be worth ~300cps to the Company.
- **Massive Potential and Achieving Milestones** – ESG is on the verge of proving up the development concept for its CSG acreage, via pilot production wells at Bohena and Biblewindi over the next few months. It is expected to announce a significant 2P reserve upgrade and a potentially massive resource, based on corehole drilling, this year. The Company has recently experienced a pullback in its share price, which we view as a pause before the next rally. We believe that the quality players in the CSG sector will continue to benefit from their future potential due to large resource positions. ESG has a quality management team with a solid business model. Success at its pilot production wells and reserve/resource upgrades are sure to result in share price appreciation.

#### Share Price Performance



Source: Iress

## Valuation

Our valuation of ESG is based on its current and projected reserve / resource upgrades, discounted for risk. We have used a conservative \$1 per gigajoule, which is consistent with prices achieved in historical deals for CSG, but well below recent deals associated with LNG potential in Queensland.

The Company also has an investment in Orion Petroleum, cash reserves of \$41m and owns 65% of the Wilga Park power station. ESG recently sold a 35% stake in the power station to Gstar Exploration Limited, which is the joint venture partner at Narrabri.

Table 1: Reserve / Resource Valuation

Prospect/Area	Location	Mean Net Recoverable Resource	NPV/GJ	POS*	Risked Value	Risked cps	Unrisked (High Case) cps
Narrabri – 2P reserve	New South Wales	120 GJ	A\$1.00	100%	A\$120m	15cps	12cps
Narrabri – estimated 2008 2P upgrade <sup>#</sup>	New South Wales	98 GJ	A\$1.00	80%	A\$78m	10cps	12cps
Narrabri – 2009 2P reserve target <sup>#</sup>	New South Wales	627 GJ	A\$1.00	50%	A\$314m	39cps	79cps
Narrabri – resource potential	New South Wales	2389 GJ	A\$1.00	10%	A\$239m	30cps	300cps
<b>Total</b>					<b>A\$751m</b>	<b>94cps</b>	<b>408cps</b>

Source: Hartleys Estimates, \*Probability of Success, <sup>#</sup>incremental numbers

## Valuation Summary

Table 2: Valuation Summary

Asset	Value (A\$m)	Value (cps)
Narrabri - reserves	\$512m	64cps
Narrabri - resource	\$239m	30cps
Cash	\$41m	5cps
Wilga Park Power Station	\$13m	2cps
Investments - Orion	\$4m	0.5cps
Overheads	(\$15m)	(2cps)
<b>Total</b>	<b>\$797m</b>	<b>100cps</b>

Source: Hartleys Estimates

## Conclusions

Eastern Star Gas has many of the key elements required for success, including strong management with extensive experience, large resource potential and a ready market for its product. The Company has experienced share price appreciation along with many others in the CSG sector; however, has experienced a pullback in recent weeks, which we view as an investment opportunity. ESG is poised for a re-rating if it can achieve success from its pilot production wells and additional increases in reserves and resources. We rate **Eastern Star Gas Limited** as a **Speculative Buy**.

## Glossary of Terms and Abbreviations

bbbl	barrel, the standard pricing unit for oil
mmbo	one million barrels of oil
mmbbl	one million (blue) barrels, equivalent to one million barrels
mcf	one thousand cubic feet, the standard pricing unit for natural gas in the US
mmcf	one million cubic feet of gas
mmcfe	one million cubic feet equivalent, includes liquids such as condensate
bcf	one billion cubic feet of gas
bcfe	one billion cubic feet of gas equivalent, includes liquids such as condensate
tcf	one trillion cubic feet of gas
GJ	gigajoule, one billion joules, the standard pricing unit for natural gas in Australia
TJ	terajoule, one thousand gigajoules
PJ	petajoules, one million gigajoules
bopd	barrels of oil per day
boc/d	barrels of condensate per day
cond	condensate
mmcf/d	millions of cubic feet per day
FID	final investment decision, the point at which significant capital expenditure is committed for a project
FPSO	floating production storage and offload vessel
CSG	coal seam gas
CBM	coal bed methane
CTL	coal to liquids
GTL	gas to liquids
LNG	liquefied natural gas
POS	probability of success
1P, 2P, 3P	reserves categories indicating level of certainty, 2P indicates a 50% chance that reserves will be higher than the stated estimate, 1P is a 90% reserves will be higher, 3P a 10% chance reserves will be higher
1C, 2C, 3C	resource categories, a lower level of certainty than reserves often based on less well control data
NPV	net present value
DCF	discounted cash flow
cps	cents per share

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## Hartleys Recommendation Categories

Strong Buy	Significant share price appreciation anticipated
Buy	Share price appreciation anticipated
Speculative Buy	Share price appreciation anticipated but is considered high risk
Accumulate	Buy in periods of weakness
Hold	Take no action
Reduce	Sell in periods of strength
Sell	Significant price depreciation anticipated

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ARQ has a beneficial interest in Adelphi Energy Limited ("Adelphi") of 32%. Hartleys has provided corporate advice within the past 12 months to Adelphi, for which it received fees.

Hartleys has assisted in the completion of part of a capital raising in the past 12 months for Strike Oil Limited, for which it received gross fees of \$17,500.

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