

## Its All About The Eagle Ford Shale

### Investment Highlights

- We are initiating coverage on AZZ with a Speculative BUY recommendation and a price target of \$0.62/sh based on a risked valuation of the potential resources in its Eagle Ford shale acreage.** The following is a brief note highlighting the investment opportunity prior to imminent fracking of the Frances Dilworth No. 2H and Donnell 457 No. 1H wells. The fracking of these wells and subsequent production testing will provide highly anticipated data on the production capability and condensate yield of the Eagle Ford shale located in AZZ's acreage. Successful testing will support resource estimates across the permits of 1.38tcf and potentially provide substantial upside in the share price.
- Its all about the Eagle Ford.** The Eagle Ford shale is an emerging shale play in the US with robust economics due to a considerable condensate yield. Wells in nearby acreage operated by local Petrohawk have achieved initial production in excess of 10mmscf/d due to condensate yields of over 100bbbls per mmscf/d, with the trend appearing to increase in the direction of AZZ's permits. The prospectivity of the shale has seen recent positions secured by ConocoPhillips, Pioneer Resources and St Mary Land and Exploration in addition to other major players including Petrohawk, Apache, Anadarko, Murphy Oil, Swift Energy and Rosetta Resources.
- A solid footing in the Eagle Ford.** AZZ has amassed interests in over 32,586 acres in the Eagle Ford shale and over 350 potential drilling locations. The company was an early mover in the Eagle Ford, and its average acreage cost of US\$400 per acre is attractive relative to the US\$3,000 per acre being paid in November 2009. Independently certified resources across its Yellow Rose and Bluebonnet acreage are estimated at 1.14tcf on a net 2C basis.
- Testing of the Frances Dilworth No. 2H and Donnell 457 No. 1H wells has potential for substantial upside.** Successful testing of the wells will support resource estimates and provide a significant price catalyst. We anticipate fracking to commence this month with production results available in early December.

#### Directors

Name	Position
James Cruickshank	Chairman & Chief Executive Officer
Matthew Gentry	Director & Chief Operating Officer
Gregory Shoemaker	Director & Chief Scientist
Vicky McAppion	Director & Company Secretary
Mark Clohessy	Non-Executive Director

#### Substantial Shareholders

Name	Shares (m)	%
HEP Oil GP. L.L.C	24.0	9.9
Yandal Investments Pty Ltd	12.2	5.1

13 November 2009

12mth Rating		BUY
Price	A\$	0.37
Target Price	A\$	0.62
12m Total Return	%	67.0

RIC: AZZAX		BBG: AZZ AU
Shares o/s	m	241.4
Free Float	%	100.0
Market Cap.	A\$m	89.3
Net Debt (Cash)	A\$m	1.7
Net Debt/Equity	%	1.6
3m Av. D. T'over	A\$m	0.30
52wk High/Low	A\$	0.40/0.04
2yr adj. beta		0.94

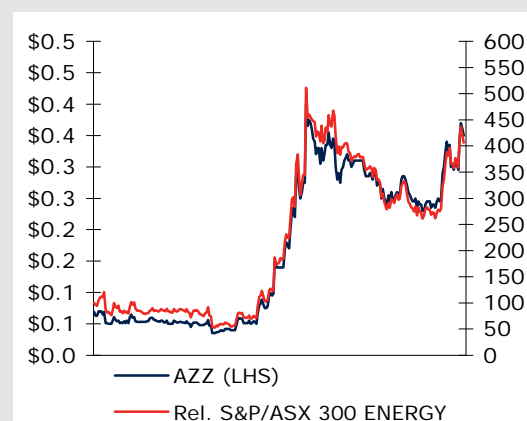
#### Valuation:

Methodology		NPV
Value per share	A\$	0.62

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*Disclosure: Patersons Securities was the Lead Manager to the \$10m Institutional Placement and \$4.2m SPP in August 2009. It was paid a fee for these services.*

#### 12 Month Share Price Performance



Performance %	1mth	3mth	12mth
Absolute	50.0	26.3	421.7
Rel. S&P/ASX 300	49.8	15.4	329.1

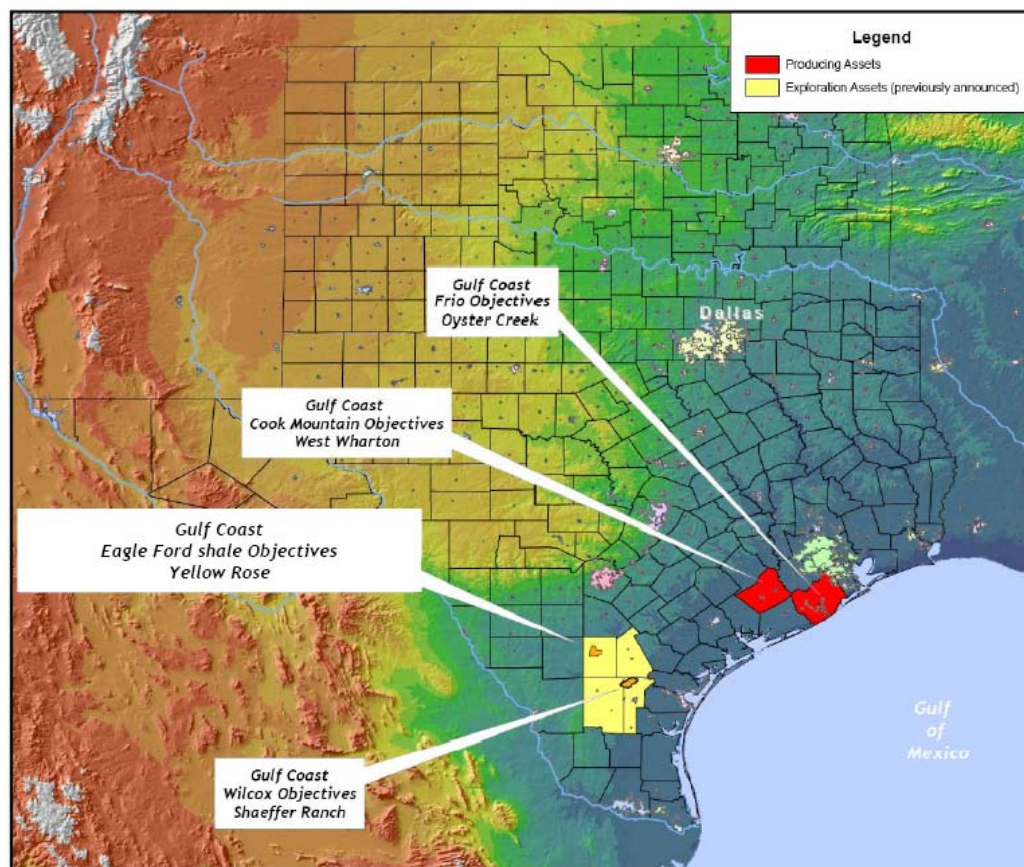
## Company Overview

Antares Energy Limited (AZZ) is an oil and gas exploration and production company focused on the onshore Texas gulf coast region in the USA. Antares has interests in two producing assets (Oyster Creek and West Wharton) and two exploration plays (Shaeffer Ranch and its Eagle Ford Acreage) with the focus of the company now on the promising Eagle Ford shale which is prominent in its Yellow Rose, Hawkville Field and Blue Bonnet project areas.

The company has recently had success with the discovery of prominent Eagle Ford shale resource at its Yellow Rose project area. A large contingent resource has been estimated across the company's interests in the shale, with great anticipation surrounding the imminent fracturing of the Frances Dilworth 2H lateral well, located in the Yellow Rose Project area. The key attribute of the Eagle Ford shale is the high condensate yield which has been observed to increase in the direction of the project area. Flow testing of the well is anticipated to confirm this trend, which will ratify the current resource estimates of the field, based on results seen to date in wells drilled to the south-west of the company's acreage. An additional well, the Donnell 457 No. 1H, was completed recently in the Hawkville project area and is also likely to be fraced in November.

AZZ finished the September quarter with A\$9m in cash following a capital raising for \$10m. Subsequent to the quarter the company raised an additional A\$4.2m, via an oversubscribed Share Purchase Plan (SPP). The company has some 7.5m convertible shares outstanding with an interest rate of 10% and a 1:1 conversion to ordinary shares at \$2/sh which mature on the 31 October 2013. This position is being reduced on an ongoing basis via an on-market buy-back.

**Figure 1: Company Assets**



Source: AZZ Presentation – September 2009

## Assets Overview

### Producing Assets – Oyster Creek & West Wharton

AZZ producing assets include the Oyster Creek Project in Brazoria County and the West Wharton project in the Wharton County. AZZ has a 75% WI in the Oyster Creek project, operated by Slawson Exploration (25%) and is currently producing from the Harrison-2 well. Harrison-2 was brought into production in May 2008 and averaged 85bbls of condensate and 0.44mmscf/d for the Sep Q 2009. Production is currently from the lowest F41 sand with the Anomalina C sand to be tested at year end. Reserves for the field are estimated at 5bcf. A second well, Harrison-3 is planned for drilling.

AZZ has a 26.25% interest in the West Wharton project, operated by CICO Oil and Gas Company (12.5%) and is producing from a single well, Outlar-1, drilled in December 2007. The well averaged 105bbls of condensate and 1.87mmscf/d for the Sep Q. Reserves for the field are estimated at 4bcf.

### Shaeffer Ranch - Jim Wells County

AZZ has a 50% interest in the Shaeffer Ranch acreage, operated by San Isidro Development Company (SIDC-50%). The JV holds over 7,400 acres under a three year lease and is targeting a farm-out of interest in order to progress exploration. The Big Kahuna prospect, located in the project area is estimated at 100+bcf resource potential.

### Eagle Ford Shale Acreage

#### Overview

AZZ holds interests across a number of project areas targeting the highly prospective Eagle Ford shale. This includes the Yellow Rose, Bluebonnet and Hawkville (Petrohawk Term Assignment) areas. These are summarised as follows:

**Figure 2: Eagle Ford Shale Interests**

No.	Project	County	Acreage	Interest	Operator
1	Yellow Rose	McMullen	18,274	75.00%	SIDC
2	Bluebonnet	McMullen	5,754	87.50%	SIDC
3	Hawkville	McMullen	8,558	50%*	Petrohawk

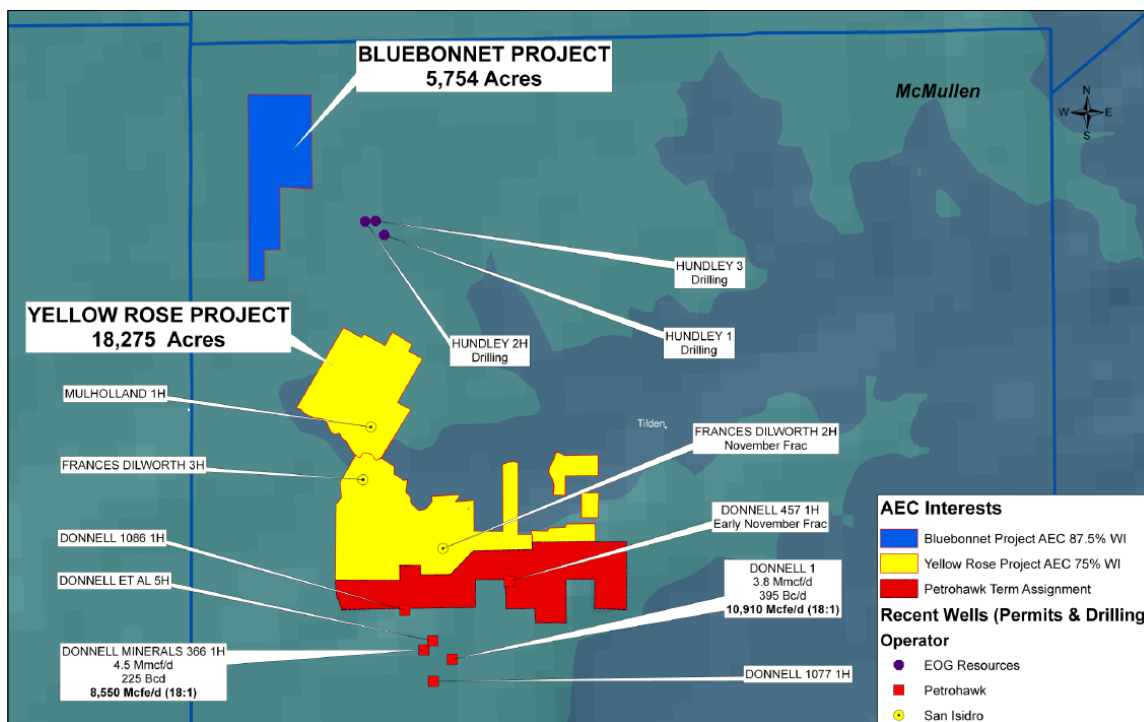
Source: Various

\* Terms of the Hawkville project area not known. We assume that AZZ maintain a 50% interest in producing wells.

The Yellow Rose project is operated by SIDC and contains the recently drilled Frances Dilworth No. 2 well. The well commenced in May this year targeting both the Edwards limestone and Eagle Ford shale plus some deeper secondary objectives. The well successfully encountered 140ft of net Edwards formation and 146 feet of net Eagle Ford shale. Production testing of the Edwards failed to meet a hurdle rate of 2mmscf/d so attention has turned to the more prospective Eagle Ford shale. Subsequently, a horizontal lateral into the Eagle Ford shale was drilled, namely the Frances Dilworth No. 2H lateral, along a total 3400 feet of gas filled Eagle Ford shale. The well is expected to be fraced and tested this month.

Last month, AZZ announced it has secured a 87.5% WI in an additional 5,754 acres at the Bluebonnet project, operated by SIDC.

**Figure 3: AZZ Eagle Ford Acreage**



Source: AZZ Announcement – October 2009

The Hawkville project consists of 8,558 acres which is operated by local Petrohawk Energy Corporation. All wells drilled on the permit are pursuant to a term assignment, whereby Petrohawk funds the drilling of all wells and AZZ receives an interest following full cost recovery by Petrohawk. The exact terms of the agreement are not known however we believe AZZ retains a 50% interest in the wells following recovery of drilling costs by Petrohawk. In July this year the Donnell 457 No. 1H was drilled on the permit by Petrohawk, a direct offset to the Donnell Minerals No. 1H well, drilled outside the permit area with an initial production rate of 3.8mmscf/d and 395 bopd (note that this is equivalent to 10.9mmscfe/d on an 18:1 basis). Hence there is much anticipation surrounding the fracturing and testing of the AZZ/Petrohawk Donnell 457 No. 1H, which is likely to occur this month.

### What is the Eagle Ford Shale

The Eagle Ford shale play is located in Gulf Coast region of South Texas, is an upper-Cretaceous aged deposit, ranging from 4,000 to 14,000 feet in depth, with thicknesses of 50 to 500 feet. The Eagle Ford shale is a slightly calcareous regional shale, which is gas-charged (circa 8300psi pressure, which is over-pressured), has both primary porosity and matrix porosity, and again is reliant upon fracture development to enhance permeability. It is now common to fracture stimulate deep shale wells in the USA.

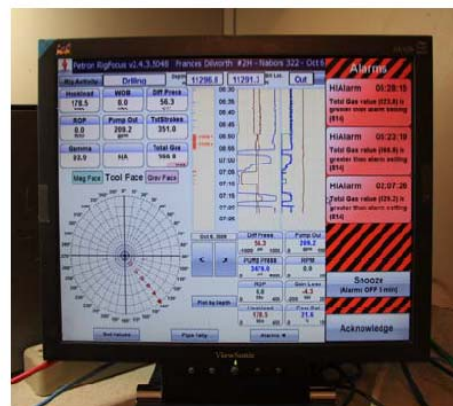
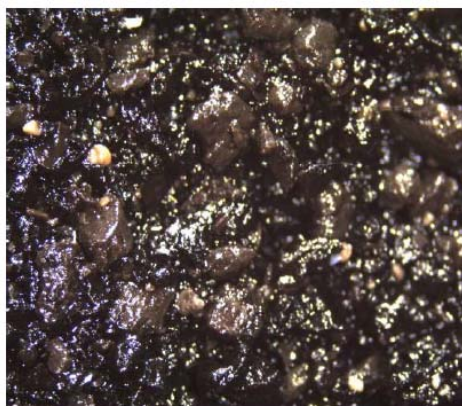
Early drilling results in the Eagle Ford shale have been very positive. Core analysis reveals very positive comparisons for the Eagle Ford in total organic content, porosity, permeability and gas in place relative to other producing shales. AZZ estimates that average ultimate recoveries per well could range from 4-7 bcfe, the midpoint of which trails only the Haynesville shale amongst the major shale plays. AZZ acreage cost in the Eagle Ford is about US\$400/acre.

Other characteristics of the Eagle Ford shale with align closely with the Haynesville include:

- Organic rich calcareous shale source rock for the prolific Austin Chalk
- Rock properties very similar to the Barnett & Haynesville shales
- Net pay/gross shale interval of near 100%
- Gas saturations in excess of 80%
- Above normal pressure gradient (~0.65 psi/ft) – leads to greater gas recovery
- Strong gas shows seen in wells drilled

With the recent success of Petrohawk, EOG Resources and now AZZ the Eagle Ford shale is fast becoming recognized as a major shale play to rival that of the Haynesville shale.

**Figure 4: Eagle Ford shale observed from Francis Dilworth # 2 well drilled by AZZ**



Source: AZZ supplied

### Development of the Eagle Ford Shale

The Eagle Ford shale is the key asset within the AZZ portfolio, offering substantially massive upside from successful delineation of the resource located within its acreage position. The company has a substantial working interest in 32,586 acres in the Eagle Ford and over 350 potential drilling locations. AZZ has been an early mover in the Eagle Ford, and its average acreage cost of US\$400 per acre is attractive relative to the US\$3,000 per acre being paid in November 2009.

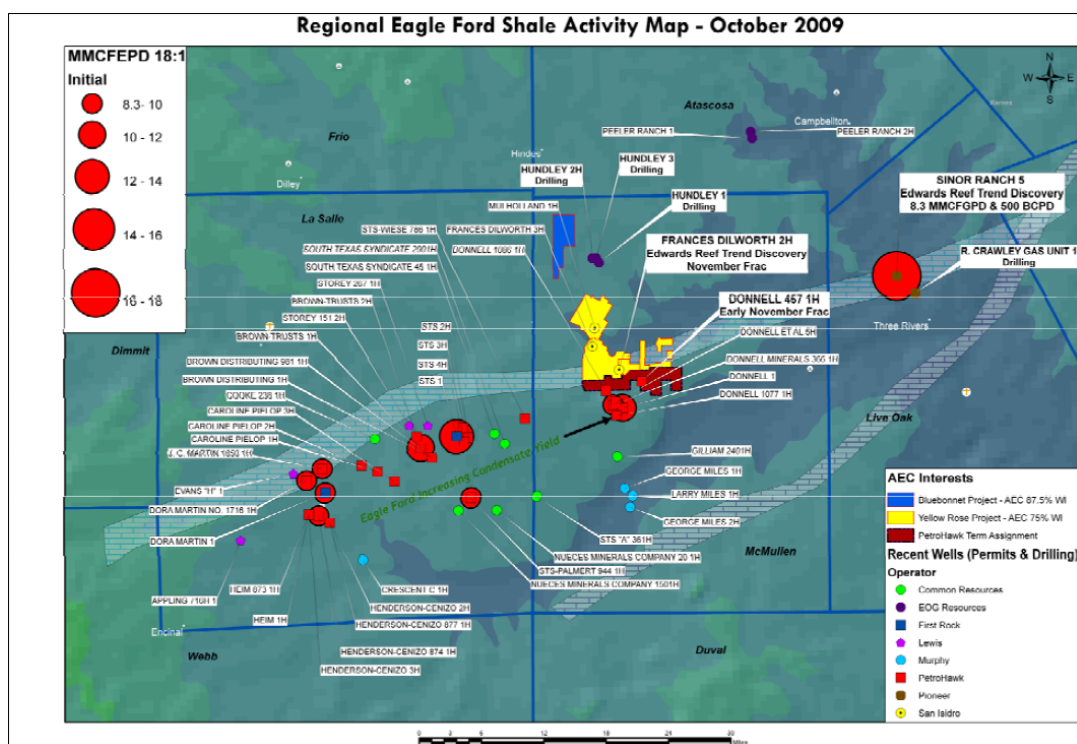
Eagle Ford players surrounding AZZ's acreage have reported results for 14 x Eagle Ford shale wells drilled and completed in 2008 and 2009, of which all flowed gas. The wells had an average IP rate of 8.8mmscfd with a range of 6–11mmscfd. In addition to the 14 reported wells, there are an additional 16 Eagle Ford wells currently drilling and awaiting fracture. The specific wells announced to date include:

- STS #1H with an IP rate of 9.1mmscfe/d
- Dora Martin #1H with an IP rate of 8.3mmscfe/d
- Dora Martin 1716 #1H with an IP rate of 9.7mmscfe/d
- Donnell #1H with an IP rate of 6.1mmscfe/d
- JC Martin 1850 #1H with an IP rate of 9.1mmscfe/d
- Henderson-Cenizo #1H with an IP rate of 9.1mmscfe/d

- STS Palmert #1H with an IP rate of 9.1mmscfe/d
- Donnell 1066 #1H with an IP rate of 6.1mmscfe/d
- Brown Trust #1H with an IP rate of 9.3mmscfe/d
- Sinor Ranch #1H with an IP rate of 11.3mmscfe/d
- Galvan Ranch #1H with an IP rate of 8.0mmscfe/d
- Briscoe Apache Ranch #1H with an IP rate of 7.1mmscfe/d
- Sinor Ranch #1H with an IP rate of 11.3mmscfe/d
- STS #241H with an IP rate of 9.1mmscfe/d

Recent wells have been drilled with horizontal laterals of about 3,500ft and have been fraced in up to fourteen stages.

**Figure 5: Regional Eagle Ford Activity**



Source: AZZ – September Quarterly Report

**Resource Potential**

The company has recently engaged NuTech Energy Alliance, Ltd. to undertake an independent estimation of the Contingent Resources of Antares Energy's Eagle Ford shale oil and gas assets in the Yellow Rose and Blue Bonnet project area based on the wells drilled in the Eagle Ford shale to date. The estimates were prepared in accordance with generally accepted engineering and evaluation principles as set forth by the Society of Petroleum Engineers. Assessment of the resource potential of the Eagle Ford acreage held by the company at its Yellow Rose and Bluebonnet projects estimates a net 2C contingent resource of 1.14tcf. In addition, the company estimates on a similar basis, a gross resource of 480bcfe at its Hawkville project from over 80 well locations of which we assume AZZ maintains a 50% interest. Hence, based on these figures we are currently valuing AZZ based on a net interest in 1.38tcf.

**Figure 6: Yellow Rose Certified Resource (Net)**

	1C (Low Estimate)	2C (Best Estimate)	3C (High Estimate)
GAS (BCF)	598	646	668
CONDENSATE (MMbbl)	29.9	32.3	33.4
TOTAL (BCFe)	777	840	868

Source: AZZ – September Quarterly Report

**Figure 7: Bluebonnet Certified Resource (Net)**

	1C (Low Estimate)	2C (Best Estimate)	3C (High Estimate)
GAS (BCF)	183	229	254
CONDENSATE (MMbbl)	9.1	11.5	12.7
TOTAL (BCFe)	238	298	330

Source: AZZ – September Quarterly Report

Based on Petrohawk findings to date indicative resource figures and well requirements can be estimated. Recovery per well is expected to be 4-7bcfe with an average estimated ultimate recovery (EUR) of 5.5bcfe. Well costs are estimated at \$4-6m with spacing estimated at 7 wells per section (1 section = 640 acres) which equates to 1 well per 91 acres. With well costs estimated at ~\$US5m an initial outlay will be required to move the project into production, however it is expected to be largely self-funding based on these estimates. Applying these figures across the entire 32,586 acres provides the following:

**Figure 8: Total Resource Potential**

	Gross Acres	Net Drilling Locations	Resource Potential (Tcfe)	Well Cost (US\$)	Estimated Ultimate Recovery
<b>Eagle Ford</b>	32,586	356	1.96	5	5.5bcf

Source: Patersons Estimates

## Other Issues

### Petrohawk Energy Corporation

Petrohawk is very relevant to AZZ with a dominant acreage position immediately adjacent to AZZ's interests and has proved the play with a number of successful wells. Petrohawk has acquired over 210,000 acres across the Eagle Ford shale in the LaSalle and McMullen counties. The company estimates a total of 7tcf of resource potential with ~1500 drilling locations. In its 2009 capital budget the company committed US\$120m to the drilling of 33 wells and in 2010 have allocated a budget of a further US\$350m. This includes wells to be drilled on the term assignment area at zero initial cost to AZZ. In addition, Petrohawk would be a likely acquirer of AZZ as it moves to strengthen its position in the play.

## Valuation

### Base Case Valuation

Our valuation for AZZ is currently based on a risked analysis of resource estimates across its Eagle Ford acreage plus an analysis of producing reserves at Oyster Creek and West Wharton projects. Our intention is to highlight the upside in the current share price using a heavily risked metric and potential for substantial longer term upside following successful delineation of the resource. Current resource estimates are based on nearby well results and successful testing of the aforementioned wells and subsequent ratification of resource estimates is likely to yield substantial upside going forward into a full field development.

**Figure 9: Base Case Valuation**

<b>Valuation</b>	<b>A\$m</b>	<b>A\$/sh</b>
Producing Assets	26	0.11
Eagle Ford Acreage	140	0.58
Corporate	(15)	(0.06)
Other	0	0.00
Cash	13	0.05
Debt	(15)	(0.06)
<b>Total @ 10% Discount Rate</b>	<b>150</b>	<b>0.62</b>
<b>Price Target</b>	<b>150</b>	<b>0.62</b>

Source: Patersons Estimates.

Our valuation is based on the stated 2C resource estimates for Yellow Rose and Bluebonnet plus in house resource estimates of 480bcfe for the Hawkville project (assumed 240bcf net). We have risked these net resources at 20% and valued them at \$0.50/mcfe in the ground. The risk weighting reflects uncertainty surrounding the productivity of the Eagle Ford shale across the total permit area, however will be largely de-risked post production testing. Our in ground metric represents an NPV/mcf of less than 10% of the likely revenue at US\$5/mcfe and is therefore conservative. Note that \$0.5/mcfe is effectively the same as valuing the gas at \$0.5/mcf and condensate at \$9/bbl in the ground, assuming a 100bbl to 1mmscf/d ratio.

### Price Catalysts

Going forward there are a number of price catalysts and value drivers likely to impact the AZZ share price. These are discussed below:

- 1. Eagle Ford shale fracking results** - Fracking results from the Eagle Ford shale will provide the primary catalyst for the stock's performance. The company released drilling results on two of its most recent wells and now awaits the results from its planned fracking in December.
- 2. Project development.** Subsequent to successful testing of the Eagle Ford shale in its permits, AZZ will likely push ahead to develop the shale. Further wells will provide additional catalysts.
- 3. Petrohawk activity.** AZZ is essentially free carried through the drilling of wells in the Hawkville project area with Petrohawk recovering costs from initial production. Petrohawk has committed US\$120m to the drilling of up to 33 wells in the Eagle Ford shale, some of which will be in the JV area. We would anticipate that Petrohawk and AZZ push ahead with drilling activity to secure permitted area by production. This requires 1 well per section.
- 4. Reserves development** - The anticipated aggressive increase in drilling activity, and its effect on production, should differentiate the stock. As of mid-2009, Antares's proved and probable reserve base of 4bcfe does not include the Eagle Ford. We expect reserves to increase substantially as the Eagle Ford is developed.

**5. Natural gas price rebound** - We would expect Antares's stock price to move favorably with the rebound in US gas prices. US gas prices are currently trading at around US\$4.60 per mmbtu with Henry Hub futures pricing anticipating a rebound to US\$7 per mmbtu in 2010.

**6. Land acquisition multiples paid for Eagle Ford shale acreage** - 2009 has seen a dramatic increasing in the leasing costs of land which are prospective for the Eagle Ford shale. Antares acquired the majority of its Eagle Ford land position for US\$400 to \$500 per acre. Recently land on the Eagle Ford trend has been transacting at up to US\$3000 per acre (Petrohawk acquisition of Swift energy acreage, Nov 2009) as drilling and flow results confirm the commerciality of the play and could provide the catalyst for the stock's performance. In the Haynesville shale which is the preeminent shale play in the United States acreage is currently trading at values of up to US\$25,000 per acre. Note that US\$3000 per area applied to AZZ's net acreage underpins \$0.28/sh in value, not including value for the producing assets.

**5. Continuing Success by Eagle Ford Neighbors** - As Eagle Ford success continues around the acreage held by Antares the success is likely to prove up the concept across the region and could provide the catalyst for the stock's performance. The major players to watch are as follows:

**Figure 10: Eagle Ford Shale Players**

Company	Ticker	Market Cap	Eagle Ford Acreage	Stated Resource Potential	Eagle Ford Presentation
ConocoPhillips	NYSE:COP	\$64B	300,000	Not disclosed	<a href="#">E&amp;P Overview</a>
Apache	NYSE:APA	\$29B	450,000	Not disclosed	<a href="#">Annual Report</a>
Anadarko	NYSE:APC	\$25B	350,000	6 Tcfe	<a href="#">EnerCom Conference</a>
Murphy Oil	NYSE:MUR	\$11B	100,000+	3.4 Tcfe	<a href="#">Annual Meeting</a>
Petrohawk	NYSE:HK	\$6B	210,000	7 Tcfe	<a href="#">2<sup>nd</sup> Quarter Results</a>
Pioneer Natural Resources	NYSE:PXD	\$3B	310,000	Not disclosed	<a href="#">2<sup>nd</sup> Quarter Results</a>
St. Mary Land & Exploration	NYSE:SM	\$2B	225,000	3.2 Tcfe	<a href="#">EnerCom Conference</a>
Swift Energy	NYSE:SFY	\$600M	82,000	Not disclosed	<a href="#">IPAA Conference</a>
Rosetta Resources	NASDAQ:ROSE	\$600M	35,000	650 Bcfe	<a href="#">EnerCom Conference</a>

Source: AZZ Presentation – September 2009

## Risks

1. **Failure to demonstrate productivity of Eagle Ford shale** – This is the primary risk for the stock. Our current valuation assumes a 20% risking on our valuation to allow for this risk. However, the number of successful wells immediately adjacent to AZZ's acreage suggests that the shale should be productive across its permits. In addition the shale itself is known to be prevalent across the acreage due to 3D seismic in all permits.
2. **Access to Infrastructure** – Delays in tying wells to local pipelines is a general risk and detracts from underlying value. However due to the location of the fields and proximity to adjacent projects the risk is minimal.
3. **Increasing Costs** – This is a general risk with the current low drilling costs likely to increase with a market recovery. The high production margins due to the condensate yield minimize this risk.
4. **Gas Prices** – Once again the high condensate yields mitigate low gas prices with profitable liquids production in its own right.
5. **Capital Requirements** – The large number of wells required to develop the play will require a large capital component. While it will be largely self-funding in the long term an initial outlay would be required to move the project into production.

## Investment Summary

- AZZ has a strategic interest in more than 32,000 acres of the highly prospective Eagle Ford shale in Texas with net resources of more than 1.3tcf. The key to the shale is the production rates and its high condensate yield with yields ~100bbbls per mmscf/d.
- The shale has proved highly productive in adjacent acreage operated by local Petrohawk. Wells drilled to date have demonstrated an average IP rate of 8.8mmscfed with a range of 6–11mmscfed. In addition to the 14 reported wells, there are an additional 16 Eagle Ford wells currently drilling and awaiting fracture.
- The fracking and testing of the Frances Dilworth No. 2H and Donnell 457 No. 1H wells is scheduled to commence this month with results available in December. While 3D seismic demonstrates that the Eagle Ford is prevalent throughout its permits the testing will confirm the productivity of the wells and the condensate yield and ratify resource estimates. This is likely to provide a significant price catalyst due to AZZ's substantial acreage position and net resource.
- The Eagle Ford shale is attracting great interest in the US with a number of majors looking to secure acreage positions. This interest, together with increasing data on the play will drive AZZ going forward.

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