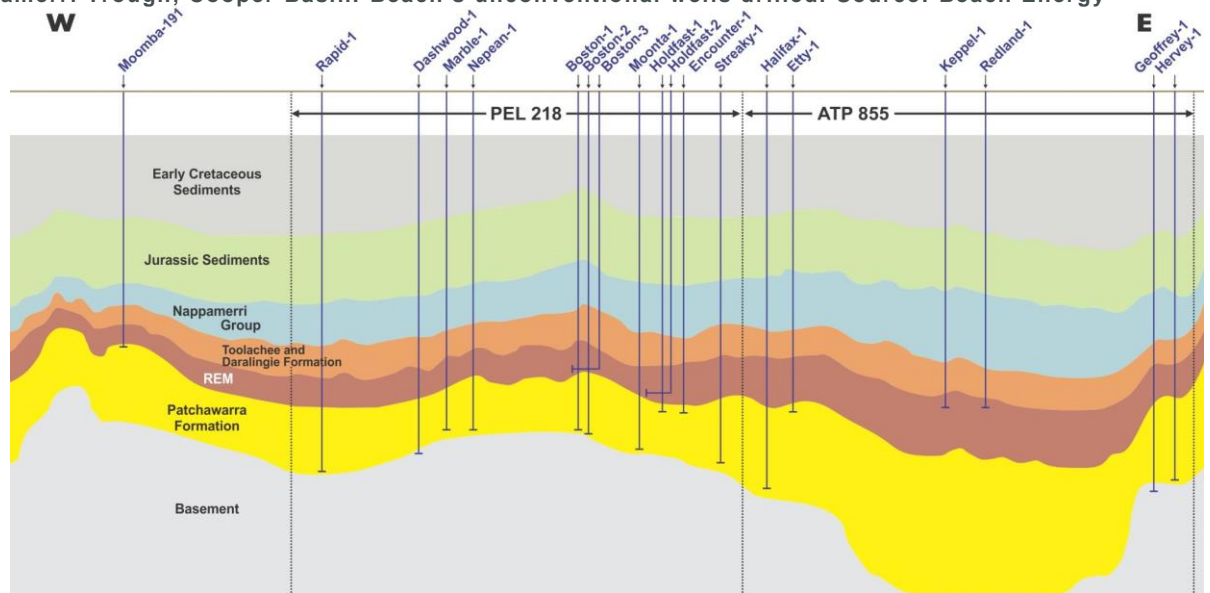


DEVELOPING UNCONVENTIONAL GAS

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Date 9 September 2014

The infant Australian unconventional energy industry has enormous potential given its very large prospective resources and the opportunity to learn from the US experience. Momentum is building and the rewards stand to be great but many issues need to be addressed. Blue Ocean Equities (BOE) recently attended DUG's (Developing Unconventional Gas) second annual conference in Brisbane, with a focus on the Cooper/Eromanga Basin which is at the forefront of exploration in Australia. Stocks that are well placed in the industry and have great investor appeal are highlighted in this paper.

Nappamerri Trough, Cooper Basin. Beach's unconventional wells drilled. Source: Beach Energy



MOMENTUM BUILDING

The shale gas phenomenon has been underway in Australia for some four years as E & P companies threw themselves into it. Expectations were high for the first two years as drilling established the existence of oil and gas but interest has waned more recently as well testing and flow rates disappointed. However, lessons are being learned and momentum is building.

NO STRAIGHT ROAD TO SUCCESS

The road to success is laden with many potential twists and turns and certain road blocks in some directions. Many issues need to be addressed, a few being: **costs; capital; geology; markets; equipment; technology; expertise; regulatory; infrastructure; and social issues.**

SELECTED STOCKS

- **New Standard Energy (NSE):** Foot in the Cooper and Eagle Ford.
- **Beach Energy (BPT):** Leader in the field
- **Senex Energy (SXY):** Multiple play types
- **Armour Energy (AJQ):** Vast acreage, NT, Qld
- **Strike Energy (STX):** Coals are looking good

UNCONVENTIONAL OIL AND GAS

BOE recently attended **DUG's (Developing Unconventional Gas) second annual conference in Brisbane**, organised by US energy publishing group, Hart Energy. The focus was on the Cooper/Eromanga Basin which is at the forefront of unconventional exploration in Australia. It was primarily a trade event but was of great investor interest; many listed energy companies were represented from Australia and globally. A strong US presence pervaded the conference including legend of the US shale gas industry Ian Stoneburner. Very few brokers and fund managers attended the conference.

GREAT REWARDS ON OFFER BUT ISSUES TO FACE

The unconventional oil and gas revolution has been led by the US, causing a 28% increase in US domestic gas production and 50% increase in crude oil over the past 6-8 years. Technically recoverable shale gas resources in Australia are estimated at over 430 TCF, the 7th largest in the world (EIA). Needless to say there is strong interest in Australia by the Australian energy industry players and US groups coming off success in their own country.

The infant Australian unconventional energy industry has enormous potential given its very large prospective resources and the potential to benefit from the US experience. However, the road to success is laden with many potential twists and turns and certain road blocks in some directions. Some of the main issues Australia faces are:

- **High costs** in all facets of exploration. Current drilling and related practices are being translated directly from conventional practices which are outdated and need to be tailor made with the latest technology. Pipeline tariffs are high.
- **Availability of capital.** Already, major companies have farmed into areas, providing capital to juniors. This will need to be maintained as well as other ways of sourcing capital.
- **Geology.** Do we have the right rocks and geological features? For example the Cooper Basin shales are deep, hot, lacustrine shales that differ from marine-based shales in the US. However, Australia has sufficient opportunities in many basins and play types for the creation of a viable unconventional upstream energy industry.
- **Markets.** The east coast market for gas has increased dramatically with the creation of an export LNG industry. Western Australia domestic and export markets are already well supplied.
- **Data collection and utilisation.** Operators will benefit from sharing information and utilising the experience of US players to help in developing the required expertise. Utilisation of available data and full open hole log data collection is critical.
- **Regulatory.** Both the South Australian and Queensland governments are responding with changes to title regulations and conditions but on going changes are needed.
- **Infrastructure.** The Cooper basin is well placed for oil but more problematic for gas. Canning, McArthur (NT) and other basins have limited infrastructure and access to markets.

- **Environmental.** Water usage and handling (fresh or otherwise), groundwater contamination, fugitive gas emissions, surface disturbances (reduced by pad drilling).
- **Social acceptance.** Work needs to be done by the industry on educating and working with other land owners and users and the public.
- **Technology, expertise and equipment.** The application of new technology in all practices and equipment is essential, across exploration, development and production; in particular, seismic, drilling, multi stage hydraulic fracturing and completions. Advances on these and other processes are required for Australian conditions.

GOLDILOCKS PRINCIPLE

The shale gas phenomenon has been underway in earnest in Australia for some four years as Exploration and Production (E&P) companies threw themselves into it, capturing investor imagination. Expectations were high for the first two years as drilling established the existence of oil and gas but interest waned over the ensuing two years as well testing and flow rates disappointed.

A lot has been learned over the past four years to the great benefit of the E & P companies still in the game. Those companies that understand and apply the **Goldilocks Principle** in terms of the pace in which they proceed stand to gain the most. It is critical that progress happens not too slow, not too fast but just right. Those companies that have the right understanding and the capability to deliver stand to make enormous gains.

SELECTED COMPANIES

Highlights from the conference were:

NEW STANDARD ENERGY (NSE)

- **Foot in both camps, Cooper and Eagle Ford**
- **\$0.12, Mcap \$46m, Cash \$9m, US\$45m Debt facility drawn to US\$9m**

NSE has the appeal of having a foot in both US shale gas and the Australian Cooper basin. Immediate cashflow and development activities are on offer in its Eagle Ford, Texas position of 5,641 net acres, 7 producing wells and 50-60 additional well locations. Production is targeted to increase to 2,000 boe/d by end 2015 while acreage acquisition can be expected.

Medium term exploration, appraisal and development of its 52.5% of PEL 570 in the Cooper Basin is focussing on basin centred gas and wet gas plays.

A third area of operation, onshore Canning, WA provides substantial potential longer term, where it has a 25% interest and is partnered by global majors ConocoPhillips (46%) and Petro China (29%).

Successful mid cap US shale oil producer, Magnum Hunter has taken a 17% shareholding and will offer its expertise to NSE in both its Australian and US operations as well as guidance in its plans to broaden its operations.

BEACH ENERGY (BPT)

- **Leader in the field**
- **\$1.56, Mcap \$2,010m, Net Cash \$284m**

BPT heads the mid cap oil and gas sector with a market cap of \$2.0 B. It has extensive acreage in the Cooper Basin including the Nappamerri Trough unconventional shale gas and basin centred gas (BCG) gas plays. In FY14 BPT was the largest onshore oil producer following the success of Western Flank Cooper oil exploration and development.

Earnings and cashflow has lifted to a new level as demonstrated in FY14 results and a PER of 8.5x, driven by high levels of oil production.

Upcoming events to watch will be: testing of vertical unconventional wells in Qld with new drilling equipment from the US; SACB JV gas production ramp up; results as they come to hand from an intense exploration and development program.

BOEQ formally rates BPT as a BUY with a \$2.10 target

SENEX ENERGY (SXY)

- **Conservative multi play type approach**
- **\$0.56, Mcap \$637m, Cash \$77m, No debt**

SXY is a young yet conservatively managed E&P company with exposure to both conventional and unconventional oil and gas through a major acreage position in the Cooper and Surat Basins.

It is growth-focused, having doubled reserves to 26MMboe since FY11 and production from almost nothing to a still modest 1.4MMboe. Further growth can be expected as SXY's management team implements its growth strategy, targeting a more than doubling of reserves and production over the next four years.

A highlight will be the upcoming exploration program in JV with Origin Energy, commencing this year with a new rig from the US.

ARMOUR ENERGY (AJQ)

- **Vast acreage, vast potential NT, QLD Gulf**
- **\$0.095, Mcap \$29m, Cash \$7m**

AJQ is a micro-cap play in the lightly explored, yet very prospective gulf regions of Northern Territory and North West Queensland where it has a huge acreage position across multiple basins.

There is potential value to be added through farming out large exploration acreage and early development of small scale gas supply to local mines and industry. Conventional through to unconventional opportunities exist, in particular the very high Total Organic Carbon (TOC) content of 11% Lawn/Riversleigh sands in permit ATP1087.

The company had early success with the Glyde-1 discovery of >3 mmscf/day in August 2013.

STRIKE ENERGY (STX)

- **Coals are looking good**
- **\$0.11, Mcap \$91m, Net Cash \$4.0m**

STX is focused on the development of a substantial gas resource in the Southern Cooper Basin from its permit interests PEL 94, 95, 96, in JV with Beach Energy.

Significant success has come from the drilling of three wells, Le Chiffre 1, Klebb 1 and Davenport 1 in these southern PELs, discovering gas in the deep coals of the Patchawarra. Appraisal drilling, fracking, completion and initial flow testing have confirmed that the Patchawarra coals host a potentially large, low cost gas resource with high deliverability.

GSAs with Orica, Austral Bricks and Orora provide security of sales while highlighting industry's concern about future short supply.

STX has a work plan ahead of it to establish proof of concept by carrying out the necessary technical feasibility leading on to commercial feasibility, FID and first gas in 2017.

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