

A wholly-owned subsidiary of Lodestone Energy Limited (ASX:LOD)

### Technical Presentation March 2011







# Surat Gas: Key Highlights



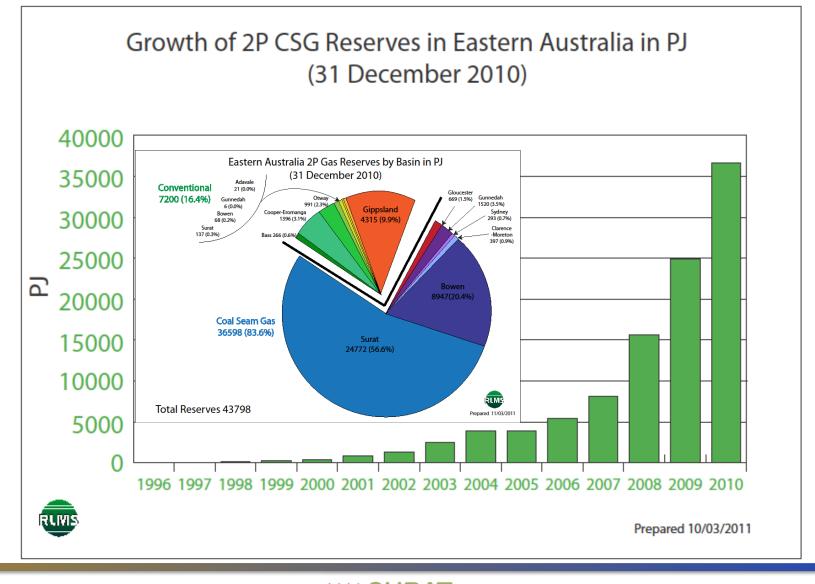
- Four ATPs more than 20,000 sq km
- Traversed by, or near to gas pipelines
- Prospectivity review completed by MBA Petroleum Consultants
- Unconventional and conventional petroleum targets
- Permian and Jurassic coal seam gas targets
- Shale gas plays
- Conventional oil targets







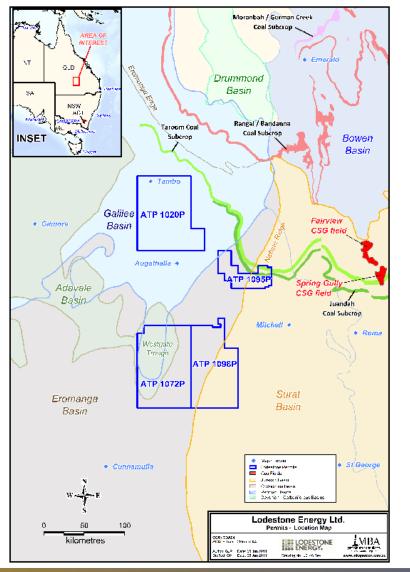
# **Gas Reserves in Queensland**







# Surat Gas: Strategic Acreage



- More than 20,000 sq km close to pipeline infrastructure
- Breakthrough in seismic reprocessing has brought to light the geometry of very large, unexplored downfaulted basins
- Favourable sedimentary history with abundance of source rocks from Devonian to Jurassic
- Favourable structural and sedimentary traps and host rocks
- **Favourable** maturation conditions to generate conventional oil & gas plays
- Favourable settings for unconventional CSG and shale gas plays





## **Surat Gas Acreage: Unconventional Targets**

- New Bandanna CSG targets: As a result of MBA's review of seismic data, new CSG leads have been identified in coals of the Late Permian Bandanna Formation, providing some of the most prospective and appealing CSG leads in ATP 1020. The Bandanna Formation hosts highly productive CSG fields in the adjacent Bowen Basin (eg. Fairview and Spring Gully CSG fields).
- Jurassic CSG targets: The company is also searching for CSG targets hosted within the Jurassic Birkhead Formation along strike from the Surat Basin. MBA has advised that reprocessed seismic data highlights areas of possible increased coal development, particularly in structural lows. These areas will be the target of future exploration.
- Shale gas targets: Deeper graben fill sequences within the permits are also expected to be prospective for shale gas, particularly within Black Alley Shale and pre-Permian section.







## **Surat Gas Acreage: Conventional Targets**

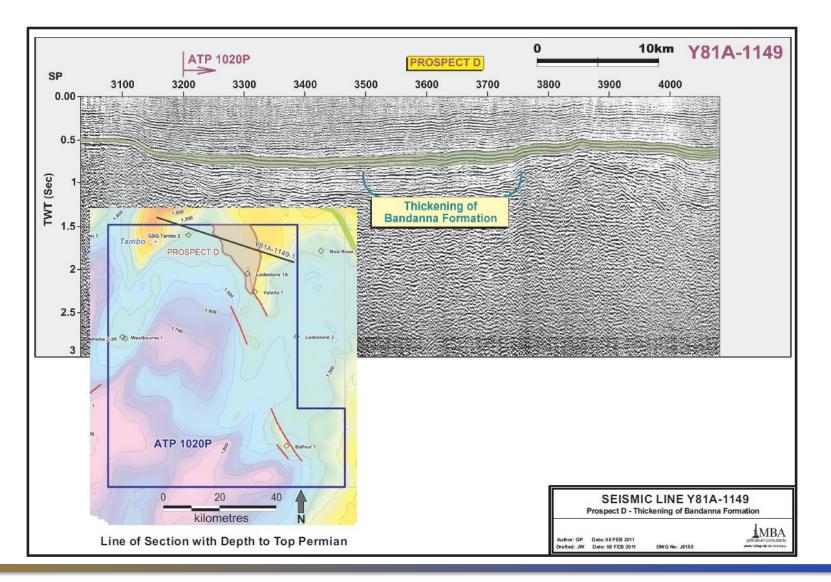
- Hydrocarbon Generation: Deep graben fill sections are expected to be the most productive units within the permits. MBA's review of all available seismic and drilling data suggests that such grabens may host mature source rocks dating from the Devonian, and reservoirs, seals and structural trapping mechanisms. These sequences lie within the present-day hydrocarbon generation window and therefore have the potential to be productive for oil and gas. Core and cuttings descriptions in historical wells around ATP 1020 note the presence of sealing units and numerous reservoir rocks with excellent porosity. Results from historical wells also shows that the graben-fill stratigraphy in ATP 1020 hosts Permian coals.
- Gilmore Gas Field-type setting: Deep graben sequences may host conventional and/or shale gas/oil plays similar to the successful Gilmore Gas Field. The Black Alley Shale identified is likely to be the most prospective target unit, although MBA has identified a number of other specific encouraging leads.







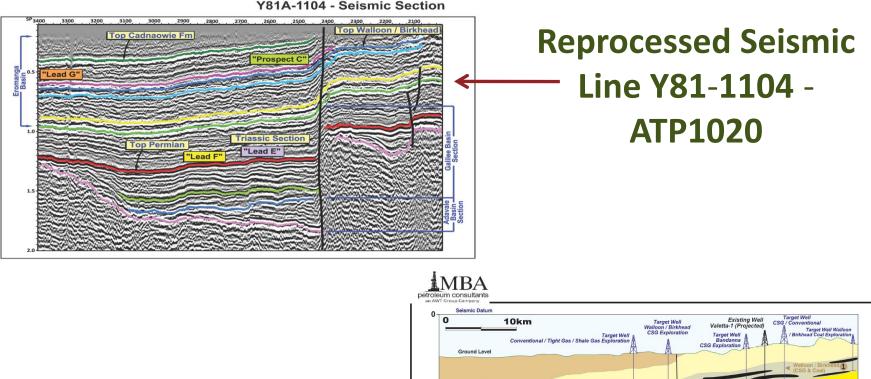
## New CSG Target: Bandanna Coals in ATP1020



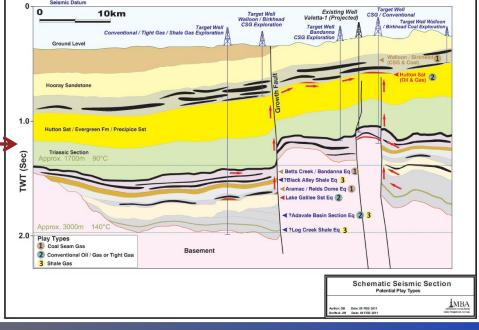








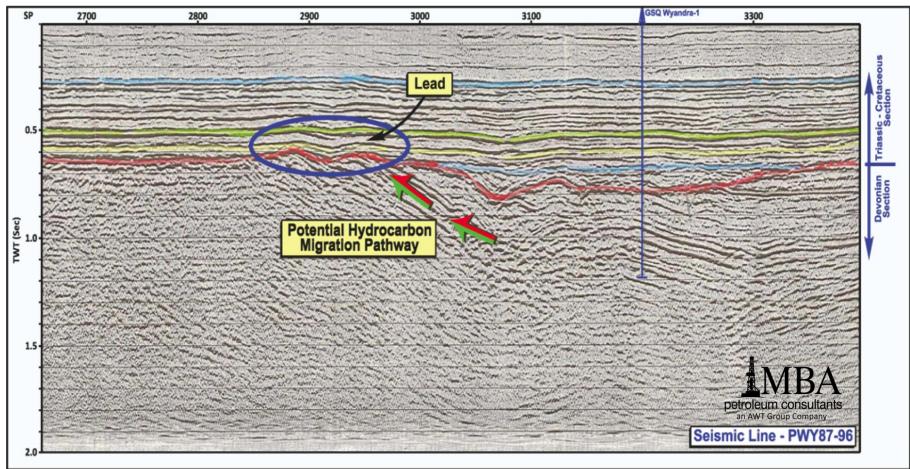
Schematic of Same Line Showing CSG, Gas and Oil Plays







## **Conventional Oil and Gas Leads: ATP 1072**



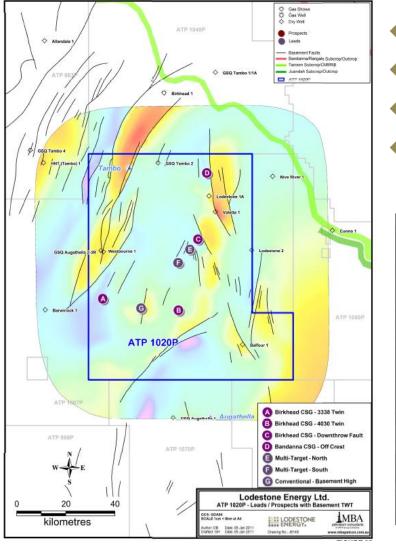
MBA Petroleum Consultants notes the Devonian to Carboniferous Drummond Basin equivalents dip in a manner that would allow hydrocarbon migration upwards into structures into the overlying Eromanga Basin sequence providing oil and gas drilling targets.



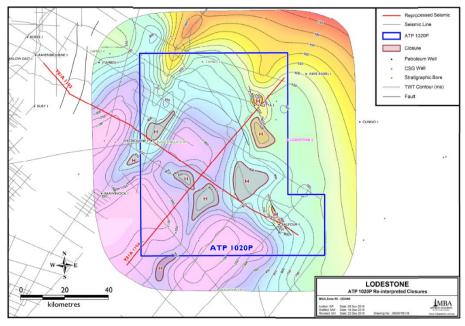
## SURAT



# Selected Prospects and Leads - ATP 1020



- CSG: Jurassic coals
- CSG: Permian (Bandanna) coals
- Conventional petroleum targets
- Multiple targets







# **Partnering Approach**

 Lodestone has had preliminary discussions with potential partners for its petroleum projects

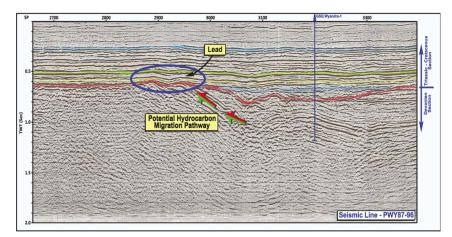
- The Company has recently received expert advice that has yielded new conventional oil and gas targets and unconventional targets (including CSG)
- Next steps include strategic partnering of our petroleum assets and/or spin-off of Surat Gas
- Commercial options may include the separate ASX listing of Surat Gas

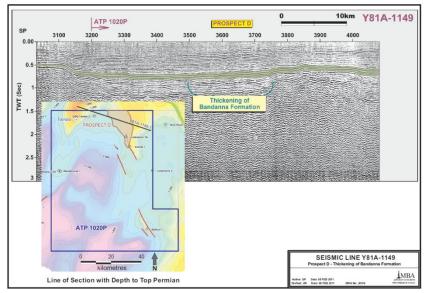






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#### **Further Information:**

The results of the recent review by MBA are currently being included in a technical information package being prepared for potential strategic partners and/or for use in possible spin-off documentation.

Interested parties may contact Lodestone Energy on +61 7 32296606.

