

SHALE GAS REVIEW CASE STUDY

Robert L Bayless, LLC
Onshore Australia

AWT DISCIPLINES

Facies Analysis

Petrophysics

Geology

Geochemistry

Geophysics

Shale Play Critical Parameters

Parameter	Source Rx Thickness Ft	Depth Ft	Lithotype	TOC wt%	Porosity %	Maturity Ro	Play Area Acres	Clay Content	Silice Content	Deposition	Proven HC System
Value	N/A	0-11,000ft	Siltified siltstone	Lean	NA	0.75-1.8	NA	Low	High	Shallow-water marine	none
Rating	●	●	●	●	●	●	●	●	●	●	●

AWT WORKSCOPE

Upon identification of available acreage, AWT was engaged by Bayless to complete two unconventional hydrocarbon prospectivity studies:

- An assessment of a large basin in onshore Australia, with focus on unconventional potential of the shallower Cretaceous formations. The following activities were undertaken:
 - Development of depth and thickness grids
 - Literature review of previous studies on Cretaceous hydrocarbon potential
 - Evaluation of over 100 wells to assess hydrocarbon shows, Total Organic Content (TOC), thermal maturity and lithology
 - Production and analysis of geologic cross-sections with attention to specific source-rock indicators from wireline logs
 - Maturity analysis to look at thermal maturity with depth of burial
 - A final report to synthesise the findings
- An assessment of an onshore basin in Western Australia to determine the unconventional hydrocarbon potential to host significant gas or oil plays. A literature review of the geology illustrated the extent and geometry and source rock formations. It also provided information on kerogen type, organic content, thermal maturity and structural elements of the basin. The findings were presented in a report including an overview of stake-holders and past exploration in the area

PROJECT BACKGROUND

Bayless is an independently owned North American Petroleum Exploration Company. Their aim is to bring their extensive experience in Shale Gas from North America to Australia. In order to initiate this move, Bayless undertook to identify the leading geological support company for unconventional gas in Australia. Engaging AWT International (AWT), Bayless wished to assess all areas in the upcoming government petroleum gazettal rounds for shale gas prospectivity.

Location:
Onshore Australia

AWT ADDED VALUE

Based on the results of the study, Bayless accepted AWT's recommendation that the study areas were highly prospective and wished to pursue exploring the areas. To this end, Bayless committed to acquiring as much acreage as possible in these regions during the next gazettal rounds – potentially adding significant resource potential to their exploration portfolio. Bayless used AWT's report to justify establishing an Australian registered and based entity.