

The road to Dorado: factors leading to a play-opening hydrocarbon discovery

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SUMMARY

This presentation describes the events leading up to the Dorado oil discovery made by Quadrant Energy and Carnarvon Petroleum in late 2018.

Key words: Dorado, Triassic, Bedout, Quadrant

INTRODUCTION

On July 16th, 2018 Carnarvon Petroleum – a small exploration company based in West Perth, went into a trading halt, pending the announcement of the Dorado-1 exploration results. The Dorado-1 objective was an untested structural-stratigraphic play of Lower Triassic age about 160 km north of Port Hedland.

Carnarvon owned a 20% non-operating stake in the well and surrounding acreage, but as their operating partner Quadrant Energy were privately-held, Carnarvon were the main source for public information about the exploration program. Several days earlier on the afternoon of July 12th, the well had entered the primary objective, a sandstone named the Caley Member, and found a 96-metre section with excellent reservoir characteristics full of hydrocarbons. Downhole testing three days later recovered light oil samples from the Caley and confirmed a light oil discovery with excellent reservoir properties.

When the announcement was made two days later and Carnarvon share trading resumed, the world changed for both

companies. Carnarvon's share price shot up, and Quadrant – whose owners were secretly in the advanced stage of negotiations to sell the company to Santos – began to come to terms with the implications of the result. Meanwhile, there were three additional secondary objectives yet to drill beneath the Caley, all of which ended up also containing hydrocarbons. The small exploration team at Quadrant were juggling real-time evaluation of additional discoveries at Dorado, urgent questions from shareholders about value, and a second drilling well called Phoenix South-3. It was an exciting time.

It was also the culmination of over five years of effort by a joint venture led by the Quadrant Energy (formerly Apache) technical team. The focus of this talk is not on the technical details of the discovery or the way forward for the Dorado play; rather, it is to tell the organic story of the exploration program leading to Dorado. It is a tale of Australian value creation through pure exploration, with a rich mix of technical diligence, perseverance, commercial agility and serendipity, all during a sharp downturn for industry which made exploration expenditure difficult to justify.

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