

Onshore Brunei Exploration: Two Decades since the Last Spud - A New Look into an Old Area

Dr. Trent Rehill
Vice President Geosciences
Kulczyk Oil Ventures
Suite 1170, 700 4 Ave. SW
Calgary, Alberta T2P 3J4
trehill@kulczykoil.com

and

Amiruddin Razali
Project/Technical Lead
BNPC (Brunei National Petroleum Company)

Recent resource estimates for the Northwest Borneo Basin exceed 10 billion barrels of oil and 46 trillion cubic feet of gas. Brunei lies at the heart of this prolific basin. Exploration for oil and gas in the onshore areas of Brunei started more than a century ago when the first recorded well, Ayer Berkunchi, was drilled in Brunei bay. Early explorers primarily conducted geological field operations and mapping. In those pioneering days, numerous surface hydrocarbon seeps were noted and a drilling campaign was undertaken leading to the 1914 discovery of oil at -559m in the Belait field. Eight more wells were drilled in southern Brunei with varying degrees of success until 1929 when the giant Seria oil field was discovered followed by Jerudong in 1939. In 1991, a milestone in Brunei oil producing history was reached when production from the Seria field passed one billion barrels of oil, ranking it as one of the world's giant oil fields.

According to reports published by BSP, the single SW-NE trending anticline extending from Miri in the southwest to Seria to Bubut/Danau in the northeast, characteristic of the Northwest Borneo Basin petroleum play, has produced in excess of 1.3 billion barrels of oil. Yet, despite evidence of significant accumulations of hydrocarbons and nearby world class oil and gas export/refinery facilities onshore Brunei, there has been little concentrated, onshore exploration efforts since 1988. Even the 48 wells drilled since then have been shallow by modern standards and did not benefit from modern seismic data.

Immediately to the east of the prolific Miri-Seria Anticline is the Belait Anticline which follows a similar SW to NE trend. Over the past two years, this anticline trend has been the focus of the current onshore work programs, resulting in the acquisition of over 600 km² of 3D seismic and nearly complete coverage of onshore Brunei with modern gravity and aero-magnetic data. The evaluation of these data has helped define and characterize this prominent anticline across much of Block M and southern Block L.

The renewed modern exploration efforts by Kulczyk Oil Ventures, BNPC and JV partners (Tap Oil, AED Oil, QAF Brunei, China Sino Oil Company and Jana Corp) have culminated in the drilling of 4 wells in 2010 and the recent commitment to the Phase 2 Exploration Period.