

OIL AND GAS EXPLORATION AND DEVELOPMENT IN THE YELLOW SEA

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With ever increasing demands for resources caused by global economic development, there has been a severe shortfall in petroleum resources on land. Therefore, men have turned their eyes to the sea that is rich in oil and gas potential.

Geographically, the Yellow Sea is encompassed by the coasts of China's Liaoning Province, Shandong Province and the northern part of Jiangsu province as well as the Korean Peninsula. It is separated from the Bohai Sea by Miaodao Island and Chanshan Island in the northwest and joins the East China Sea in the south with a shared line linking Qidong Mouth on the Yangtze River Estuary and Jeju Island of the Republic of Korea (ROK), covering an area of around 380,000 square kilometers. The Yellow Sea is divided into two sections by the line linking Chengshan Mount on the Shandong Peninsula and Baengnyeongdo Island to the west of the Korean Peninsula, namely the South Yellow Sea and the North Yellow Sea, covering an area of 80,000 square kilometers and 300,000 square kilometers respectively.

The Yellow Sea waters include both the North Yellow Sea Basin and the South Yellow Sea Basin with a number of Mesozoic and Cenozoic sedimentary basins in its neighboring area. The basin group in the North Yellow Sea waters is comprised of the Anju Basin near the West Korean Bay, the Bohai Bay Basin, the Jiao-Lai Basin and the

Yanbian-Yanji Basin in the Yalu River Area. As for the basin group in the South Yellow Sea waters, it mainly includes the Northern Basin of the South Yellow Sea, the Southern Basin of the South Yellow Sea, the Northern Jiangsu Basin, the Mountains Basin and the Heishan Basin.

I. The current state of exploration in the North Yellow Sea

The Democratic People's Republic of Korea (DPRK) conducted large-scale geophysical prospecting and drilling work in the eastern part of the North Yellow Sea Basin with the purpose of identifying oil and gas resources. In 1980, the DPRK started to mark some zones in the eastern section of the North Yellow Sea and opened the marked sections to international tenders in an effort to cooperate with western oil companies in oil and gas exploitation. As a result, several oil wells were drilled in the area.

The DPRK carried out quite a number of studies into the geological condition of the oil reserves in the central and eastern part of the North Yellow Sea Basin, such as the formation and evolution of the basin, its stratum structure, its tectonic and sedimentation characteristics as well as its combination of sluice reservoir and covering rock.

In general, exploration by the DPRK in the central and eastern part of the North Yellow Sea Basin has reached a high level and the DPRK is speeding up the exploration and exploitation of oil and gas resources in the area. Some of the DPRK's exploration work is carried out in areas over which China and the DPRK have a dispute.

II. The current state of exploration in the South Yellow Sea

In 1968, a scientific research ship of the US Navy, Hunter, conducted a seismic magnetic survey in the Yellow Sea and drew sections of four major areas. In 1969, US

oceanographer K.O. Emery and his colleagues issued a research paper, *The Geographical Structure and Hydrological Features of the East China Sea and The Yellow Sea*, which acknowledged that oil and gas might exist in the sedimentary basins in the Yellow Sea.

On 1 January 1970, the ROK formulated a law on the development of seabed mineral resources and identified concession zones. The legal principle applied in defining the concession zones was based on a “median line” presumed unilaterally by the ROK. However, considering the lack of delimitation of an agreed maritime boundary in these zones, the two sides had disputes over the exploration and exploitation of oil and gas resources in the area.

The U.S. Gulf Oil Corporation was the first company to win an offshore petroleum mining concession from the ROK, even though part of the western section of the area reaches to Chinese waters. In disregard of political troubles, Gulf Corporation was rather hasty in launching exploration in the concession zones and drilled two test wells from February to June in 1973. In response, the Chinese government issued a statement on 15 March 1973, opposing the move of the ROK.

On 16 March of the same year, the ROK issued a statement expressing its willingness to negotiate with China over delimitation of maritime boundaries. However, given the situation then existing, it was impossible for the Chinese Government to negotiate with the ROK Government. Gulf Oil Corporation was put in an embarrassing position. On the one hand, there was the pressure from ROK calling for continued drilling, and on the other strong opposition from China. Moreover, the US State Department also asked Gulf to shift its operations to areas close to the coast of the Korean Peninsula. Therefore, while

the company had to cap the two wells drilled, it had no intention to withdraw from the concession zones.

The aftermath of the dispute over the Yellow Sea lingered on for years until 1976. In 1975, J.B. Harrison, General Manager of Zapata Exploration Company, Gulf Oil Corporation's small partner, decided to take the US administration's advice and quit the controversial operation. In April 1977, with the expiration of the two concession contracts, Gulf Oil Corporation officially abandoned the two concession areas. Besides Gulf Oil, two other foreign oil companies, Shell and Texaco also acquired concession zones from the ROK. Exploration was conducted for some time, but the outcome was not so positive. Upon protests by the Chinese Government, the two companies immediately stopped their exploration activities.

It is reported that in recent years, the ROK has reactivated its exploitation of oil and gas resources in the South Yellow Sea waters. However, due to the fact that the maritime boundary between China and the ROK in the South Yellow Sea is yet to be delimited, disputes still exist in terms of the oil development zones in the South Yellow Sea. At present, China has conducted some oil and gas prospecting in the western section of the South Yellow Sea. The results of these researches and studies suggest that there might be a certain amount of oil and gas reserves in the Northern Basin and the Southern Basin of the South Yellow Sea.