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China's Offshore Oil Development Policy and Legislation: An Overall Analysis

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CHINA'S OFFSHORE OIL DEVELOPMENT POLICY AND LEGISLATION: AN OVERALL ANALYSIS*

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I. General Introduction

Petroleum is a primary energy source for modern industries. It is an important material for chemical industries as well as a vital

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strategic material. It is cheaper, easier to transport and more efficient. Since the 1970's, oil has become not only the primary source of energy in the world industrial structure; it is also being used as a political weapon affecting the international politics and economic relations between nations. It has been more than a hundred years since oil was first discovered, but its becoming the principal source of energy in the energy structure occurred only recently, about a decade or two ago. At present, oil represents 48% and 45% respectively of the world energy production and consumption[1] and therefore still ranks first in the overall energy structure. Given the present level of technology and economic feasibility, the world's recoverable oil reserves are estimated to be 87.3 billion tons which can be exploited for 28 years.[2] Of course this does not mean that the earth contains just that much oil but is referring to that portion of the reserves that is known and recoverable. The earth's potential oil reserves are estimated to be 270 billion tons.[3]

However, due to the uneven distribution of oil resources on the earth, the Middle East region alone accounts for about 57% of the world's total oil reserves. The eight countries, i.e. Saudi Arabia, the Soviet Union, Kuwait, Iran, Iraq, the United Arab Emirates, the United States, and Libya actually make up 68% of the world's total oil reserves. Also, half of the world's proven oil reserves are concentrated in a few super oil fields, such as Ghawar (Saudi Arabia), Burgan (Kuwait), Rumala (Iraq), etc. about 37 oil fields in all.[4] What is ironical is the fact that the big oil producers which are mostly developing countries do not consume too much oil while the industrial countries which do not produce too much oil are the big oil consumers, and they alone take up about 80% of the world's oil consumption.[5]

China has been an oil-producing country since the 1960's. Chinese oil production increased at an average rate of 24.6 percent from 1963 through 1974.[6] Production reached the plateau in 1979 producing

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1. Cai, *The World's Petroleum Prospects*, People's Daily (Chinese version), (Beijing), Feb. 18, 1981, at 7. People's Daily is the Chinese Communist Party organ published in Beijing and circulated worldwide. It usually reflects the official view of the Chinese Government. Unless otherwise indicated, the People's Daily and the People's Daily Overseas Edition is the Chinese version published in Beijing.
2. *Id.*
3. *Id.*
4. *Id.*
5. *Id.*
6. S.S. HARRISON, S.S., CHINA, OIL, AND ASIA: CONFLICT AHEAD? 13 (1977).

108 million tons of crude oil and ranked the ninth among the major oil-producing countries of the world.[7] However, China's oil prospects are not as rosy as was predicted a few years ago by oil analysts. Various figures, such as 400-million, 440-million, and 450-million tons were then projected for oil production by 1980, 1985, and 1988 respectively, and the projected annual growth rate ranged from 11% to 20%.[8] According to Chinese official statistics, China produced 124.8 million tons of crude oil in 1985, 23.5 million tons more than 1981, an annual average growth of 5.3 percent over the five year period.[9] The total crude oil production for 1986 was 130.57 million tons, an increase of 4.6% over that of 1985[10] and made China the world's 6th largest oil producer. However, China is a big country with a population of more than one billion people. It is suffering from a chronic shortage of energy to support its modernization program. Reports in the public media are calling for a drive to save energy in industry as well as in agriculture and daily life. Various oil-saving methods were proposed at the National Energy Conference convened in Nanking in 1980.[11] The Chinese media carried numerous articles calling for saving on oil, and replacing oil with coal, as domestic oil production is still low compared with some countries in spite of the fact that a certain portion of oil is being exported,[12] and there is still a shortage of proven oil reserves. One editorial said that there was no prospect of a big increase in oil production in the near future and that China must resolutely implement the coal-centered energy policy.[13] No major change in China's energy structure is in sight.[14]

This emphasis on coal-centered energy policy is significant in three aspects. First, it is an indication of a shortage in energy supply for domestic industrial development and transportation. Some factories were forced to operate half-day or stop production, and imported foreign technology has not been fully utilized because of energy

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7. Die Zeit, (West Germany) May 23, 1980, *reported in* Reference News (Cai-kao Xiao-Xi), (Beijing), June 7, 1980; People's Daily, April 16, 1982, at 2. (The Reference News is a tabloid paper published in Chinese in Beijing for internal circulation in China and covering reports published in the foreign press around the world.)
8. HARRISON, *supra* note 6, at 19.
9. China Trader Weekly Bulletin, Jan. 27, 1986, at 4.
10. People's Daily, Overseas Ed., Sept. 5, 1987, at 6.
11. Guan-Ming Ri-Bao, Jan. 23, 1981, at 4.
12. China exported 28 million tons of crude oil in 1986. People's Daily, Overseas Ed., Apr. 18, 1987, at 2.
13. People's Daily, Feb. 18, 1981.
14. 4 Intertrade, June 1987, No. 9 at 14.

shortages.[15] This also, partly at least, accounted for the cancellation of some purchase contracts with foreign businessmen a few years ago because there was not enough energy supply for such imported factories. Although China's coal and oil deposits are believed to be enormous,[16] they have not yet been fully explored, not to speak of their recovery which will involve advanced technology and substantial investment. The realization of China's pledge to build "some 10 more oilfields as big as Taching by the turn of the century"[17] seems remote and fraught with formidable obstacles.

Secondly, this coal-centered energy policy emphasis is an attempt to correct the leftist line pursued by the radicals in the late 1960's and early 1970's on China's energy policy. The so-called "Gang of Four" downgraded the importance of foreign technology and investment to China's industrial development and stigmatized the export of oil to earn needed foreign currency as a "traitorous act." It was during this period that China turned the coal into oil-centered energy policy. Many factories were switched from coal into oil-burning furnaces resulting in the consumption of a large amount of crude oil. The Chinese government has since been trying to switch back by looking for alternative fuels, such as mixtures of coal and oil or water[18] in order to save oil for other purposes. There is no doubt that China is facing the threat of an energy crisis. The Beijing-based Theoretical Information stated that what China needs most is energy, the lack of which is the most restraining factor in retarding the nation's modernization target.[19]

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15. Xue Mu-Quiao, Speech at the International Seminar on World Economy, *reported in* Guan-Min Ri-Bao, March 26, 1981, at 4. Currently there is more than 20% of industrial production capacity which cannot be operated due to shortage of electricity. People's Daily, Overseas Ed., Aug. 13, 1987, at 1.

16. *See infra* notes 22 and 23 and accompanying text.

17. Former Chinese Communist Party leader, Hua Kuo-feng's speech on May 9, 1977, in which he said that "The petroleum department must strive to build some ten more 'Taching Oilfields.'" *See* Chairman Hua Kuo-fengs's Speech at the National Conference on Learning from Taching in Industry on May 9, 1977, 20 PEKING REV. 15 (1977).

18. Mixtures of ground-up coal and oil or water are being experimented with in China. The greatest advantage this kind of mixed fuel can offer is that you do not have to convert the oil-designed boiler, and that would save a lot of money. *See* Guan-Min Ri-Bao, Jan. 18, 1981 and Newsweek (U.S.), May 18, 1981, at 32-33. According to recent reports released by China's Energy Saving Office, the reduction of the Nation's dependence on oil-fired power stations - mainly by swapping to coal - has been very successful. The office will continue to function until the year 2000. It is intended to transform oil-burning furnaces to use coal, mostly in electric power stations but also in heavy and light industries, such as steel and ceramics. China Daily Business Weekly, Jan. 7, 1987, at 1.

19. China Daily, March 12, 1987, at 4.

Thirdly, petroleum offers the greatest possibilities for China to earn foreign currency. By increasing oil output and adopting various oil-saving methods, China would be able to export more oil and earn more hard currency to buy foreign technology.[20]

In China coal is still a major source of energy and accounts for about 70% with oil ranging from 18 to 22% and hydroelectric power less than 2% in the overall energy structure.[21] These ratios will remain unchanged in the foreseeable future. According to the Beijing-based Theoretical Information, the total coal reserves are estimated at 1,440 billion tons and account for 13% of the world's total reserves—the third in the world. However, the per capita share of exploitable coal deposits is 101 tons, only 40% of the world's average.[22]

China's onshore and offshore oil potential is believed to be great. Western oil analysts estimated a total of onshore and offshore oil deposits to be around 72 billion barrels, of which 12 billion barrels are onshore deposits, and natural gas reserves are estimated to be 19,000 billion cubic meters.[23] Recoverable onshore reserve estimates were given as 20.3, 33.8, 40, 44.3 and 57 billion barrels[24] and recoverable offshore reserve estimate given as 30 billion barrels.[25] Some foreign oil experts stated that although China might not develop to be a new "Middle East," it would become the largest oil producer in Asia. By the end of the century the daily production target could reach five to seven million barrels.[26] China is believed to have about 3.5 million sq. km. of oil-bearing sedimentary rocks.[27] However, most have not yet been explored because of technological and financial problems. The dramatic drop in the annual production growth rate in the late 1970's and early 1980's was largely due to a shortage of new recoverable onshore oil reserves. This severe shortage of

20. In 1986 China exported a total of 28 million tons of crude oil. China Daily, Apr. 18, 1987, at 2. Losses due to lower oil prices in 1986 were estimated to be around US$2.5 billion. However, overall exports for the first 9 months of 1986 rose 14.8% to US$21.4 billion. China Trade Report, Jan. 1987, at 4.

21. People's Daily, Mar. 11, 1981, at 1.

22. China Daily, Mar. 12, 1987, at 4. Estimated coal reserves ranged widely. People's Daily, Overseas Ed., reported China's known coal reserves to be close to 4,000 billion tons. China currently produced a little over 800 million tons of coal annually and ranked second in the world. People's Daily, Overseas Ed., Sept. 1, 1987, at 1.

23. The Associated Press News Release from China, Mar. 28, 1980, *reported in* Reference News, Mar. 9, 1980.

24. Harrison, *supra* note 6, at 32.

25. *Id.* at 43.

26. Reuter News Release (Singapore), Mar. 1, 1980, *reported in* Reference News, Mar. 9, 1980.

27. *Id.*

proven petroleum reserves is fully borne out by the sharp contrast between the increase of oil production by 10-fold during the years 1965 to 1980 and that of proven oil reserves by less than 2-fold during the same period. This imbalance, which was the result of a high premium placed on development and low priority on general geological survey, is the main cause of the dramatic drop in oil production since 1979. The ratio of 1:10 is the number of drilling rigs used in geological survey and oil development. This tends to prove the severe dislocation in the overall planning of exploration and development of petroleum resources over the past decade.[28]

It has become evident to Chinese leaders that to reverse the downward trend in oil production China has to seek some other means of increasing its production. Although China's onshore oil reserves are believed to be abundant,[29] the rough terrain and harsh environment in China's remote west, where most oil reserves are believed to exist, make the exploitation extremely difficult and costly. In contrast, offshore oil resources are mostly located in shallow-water areas off the Chinese coast where the average depth of water range from 26 to 70 meters.[30] Thus, the cost for offshore oil development would not be more expensive than that of onland exploitation in China's inaccessible Northwest. Going offshore seemed to be the most feasible option for China after balancing the economic, political and strategic interests.

China claims to have more than 1.2 million sq. km. of offshore continental shelf.[31] China's extant known sedimentary basins favorable for potential exploration cover an area of about 5.5 million sq. km., with 4.2 million sq. km. on land and 1.3 million sq. km. offshore.[32] By October 1985, over 500 potential oil and gas bearing structures had been discovered offshore in which 102 exploratory wells were drilled, 37 of which are producers and 6 have produced at a rate of over a thousand tons a day.[33]

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28. Feng, *The Prospect for Our Petroleum Resources and the Task of General Survey*, People's Daily, Apr. 16, 1982, at 2.

29. China has an estimated 30 to 60 billion tons of oil reserves, of which land reserves account for about two-thirds. FOREIGN BROADCAST INFORMATION SERVICE [hereinafter FBIS], Apr. 12, 1982, at K10.

30. ZHANG LI-FENG, MARINE GEOLOGY 71 (Beijing 1980).

31. People's Daily, Apr. 16, 1982, at 2. The Chinese shelf spreads over a vast area with an estimated 1 million sq. km. located in water depths of less than 200 meters. Li, *China's Continental Shelf Oil Potential*, 16 OCEAN INDUSTRY 104 (Feb. 1981).

32. 3 Intertrade June 1986, No. 9 at 16.

33. *Id.*

Joint offshore exploration with foreign companies has achieved good results in some areas, such as Pearl river basin area and Yinggehai area. The joint Japanese and Chinese developed Chengbei oilfield in Bohai Bay started producing in October 1985.[34] China's offshore is generally regarded as the largest area of untapped offshore oil reserves in the world. Estimates of the resources vary greatly. Most of the estimates put the oil reserves in the range between 30 and 100 billion barrels.[35] Both Chinese and foreign geologists unanimously agree that oil resources in Chinese waters are very rich and that there are good prospects for oil exploitation.[36]

There are important considerations which prompted China to invest in offshore oil exploration and development other than those mentioned above. First, China's modernization program needs substantial foreign exchange, and oil offers the greatest possibilities for earning foreign currency through export in order to finance the import of industrial technology. Petrochemical industries can provide synthetic textiles and other finished products which can in turn be exported. Second, modernization carries with it burgeoning energy needs, in industry as well as in agriculture. Farm mechanization would not be feasible without diesel oil.

Thirdly, oil is an important strategic material and it is of paramount importance to develop this material on strategic and political considerations. As it is, China's oil production is still far from adequate.[37] Fourth, the security consideration prompted China to turn to offshore development. Most of China's major oil fields are located in the Northeast and Northwest where vulnerability to Soviet attacks is evident given the fact that more than 45 Soviet mechanized divisions are deployed along 3,000 miles of the Sino-Soviet border from Vladivosk to Mongolia. The shift to offshore oilfields will reduce this vulnerability.

Fifth, there is also the advantage in transportation as the offshore oil fields are close to the industrial centers, thus facilitating transport of oil both for domestic use and export. And, last but not least, the participation of foreign, especially U.S. oil companies in the offshore venture will reinforce China's position in the disputed sea area of the region where rival claims to offshore rights over petroleum

34. *Id.*
35. Brown, *Tough Terms for Offshore Oil*, CHINA BUS. REV. 34 (July-Aug. 1982).
36. FBIS, Jan. 7, at K4; Apr. 6, at K13, and Apr. 22, at K10, 1982.
37. People's Daily, Feb. 18, 1981, at 1; People's Daily, Overseas Ed., Aug. 13, 1987, at 1.

resources have been most intense, particularly in the South China Sea.[38] The involvement of foreign companies in China's offshore oil program will help China establish the legitimacy of its claims in this area.

It is against the above background that China, pressured by various economic and political factors as described above, finally decided on developing offshore petroleum resources as one of its important measures to cope with these challenges. China started offshore test drilling as early as 1968 in the Bohai Gulf, and about twenty exploratory wells had been drilled in the Gulf by 1976, not counting wells drilled in other offshore areas.[39] China is well aware of her limited technical capabilities, and it is virtually impossible to achieve on its own the goal of producing oil from the offshore seabed efficiently and in as short a time as possible without foreign technological investment.

China is now pursuing an "open door" policy for petroleum development, both onshore and offshore. By the end of 1986, it had been seven years since China started its cooperative oil development with foreign oil enterprises. During this period thirty-three contracts were signed with fifty-eight oil companies from 12 countries for offshore drilling covering 150,000 sq. km. It has conducted seismic belt-surveys in an area stretching out to 320,000 km., drilled 141 oil wells (oil and gas were discovered in 54 of them), and explored oil structures at 105 places (oil and gas contents were discovered in 31 places). Investment involved in offshore oil prospecting and development in the six years from 1979 to 1986 totalled US$2.42 billion and 400 million Yuan RMB.[40] In addition, 13 joint ventures were formed with foreign companies manufacturing support systems for the offshore development. Foreign expatriates working in oil companies based in China exceeded 820.[41]

Reports recently released by Chinese Oil Ministry indicate that oil reserves in the areas along the coast of Northern China account for about half the country's total reserves. The area is expected to furnish half of the national output by 1990 which is targeted at 105 million

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38. *See* Yuan, *China's Jurisdiction Over its Offshore Petroleum Resources* 12 OCEAN DEV. & INT'L L. 191 (1983) [hereinafter *China's Jurisdiction*]; *China's Offshore Oil Development: Analysis from Legal and Geopolitical Perspective*, 18 TEX. INT'L L. J. 107 (1983) [hereinafter *China's Offshore Oil*].

39. J. Willums, China's Offshore Oil: Application of a Framework for Evaluating Oil and Gas Potentials under Uncertainty 309 (1975) (Ph.D. Dissertation, MIT).

40. Beijing Rev., Mar. 16, 1987, at 29.

41. People's Daily, Overseas Ed., Dec. 25, 1986, at 1.

tons.[42] The area called the Bohai Economic Ring covers 200,000 sq. km. along the coast of the Bohai Sea and has more than 120 oil zones, which produced 371 million barrels of crude oil in 1986. China's five major oilfields—Shengli in Shandong Province, Liaohe in Liaoning Province, Huabei in Hebei Province, Dagang near the City of Tianjin and the offshore oil field in the Bohai Sea—are in this area.[43]

It was reported that ninety percent of China's crude oil output is in the eastern part of the country. The oil industry will focus one-third of its efforts on exploiting oil reserves in that area over the next few years to boost its output to 150 million tons by 1990.[44]

Oil exploration will also be accelerated in the Tarim Basin in Northwest China's Xinjiang Uygur Autonomous Region in an effort to discover new reserves during the five-year plan (1986-90).[45] Seven seismic survey teams of about 1,000 people have been sent to work in the desert where they have discovered several large uplifts. An official from the Oil Ministry said, "the Tarim Basin, which has good geological conditions for oil and natural gas, has attracted the interest of both Chinese and foreign oil companies."[46]

Foreign investment will necessarily involve technological, economic, and legal considerations. A well-balanced, sound national policy and law will give incentive to foreign investors to invest in China's oil venture, insure smooth implementation of development programs and attain its ultimate policy objectives. Necessary laws and regulations will have to be made to regulate the offshore operations and to ensure adequate legal protection to foreign investors who need a firm commitment from the Chinese Government in proper legal form to protect their interests before sinking their funds into the oil venture.

China promulgated the offshore petroleum resources law on February 10, 1982 entitled "Regulations of the People's Republic of China on the Exploitation of Offshore Petroleum Resources in Cooperation with Foreign Enterprises" (hereinafter cited as *Regulations*).[47] This is China's first ocean mineral code since the establishment

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42. People's Daily, Overseas Ed., June 20, 1987, at 1. China produced 375,000 tons of offshore oil in 1986, 281,000 tons more than in 1985. China Daily, Feb. 13, 1987, at 1.

43. China Daily, May 2, 1987, at 1.

44. China Daily, May 9, 1987, at 1; *see* People's Daily, *supra* note 42 & China Daily, *supra* note 42.

45. *Id.*

46. *Id.*

47. Regulations on the People's Republic of China on the Exploitation of Offshore

of the People's Republic in 1949. Thus its significance cannot be overemphasized. The *Regulations* establishes a broad framework of principles and guidelines controlling all aspects of petroleum operations on the continental shelf and the relationship between the Chinese National Offshore Oil Company (CNOOC) and the foreign entities in their cooperative venture spanning 15 to 30 years, and absorbing an estimated investment of 20 billion dollars over the next two decades.[48] The aim of the present paper is to identify and analyze the major policy issues involved in China's offshore oil development in light of the offshore oil regulations, recent policy statements and other relevant laws.

II. The Physical Characteristics of China's Continental Shelf

China's continental coastline begins at the mouth of the Yalu River on the Chinese-Korean border and ends at the Peilun River on the Chinese-Vietnamese border. It is very irregular and indented, and has a total length of more than 18,000 kilometers.[49] The seas facing China's coast include the Bohai Gulf (or Bay) in the North, the Yellow and East China Seas in the middle, and the South China Sea in the south. With the exception of the Bohai which is an internal sea, the other three seas are marginal seas of the West Pacific.

China's coastal areas are dotted with a myriad of islands numbering 3,416 in all, of which over two-thirds are in the coastal waters of the East China Sea. The coastlines of these islands including Taiwan run to more than 10,000 km. in length.[50]

China's total sea area is about 3.9 million sq. km.[51] The Bohai Gulf, the Yellow Sea and the East China Sea are all situated to the east of Chinese mainland, and they are sometimes collectively called the East China Seas. The South China Sea situated to the south of the mainland is the largest and deepest as well as most complicated in topography of all the four seas.

Petroleum Resources in Cooperation with Foreign Enterprises was promulgated on February 10, 1982 and came into force on the same day. People's Daily, Feb. 11, 1982, at 4. For a detailed analysis of the law, *see* Yuan, *China's Offshore Petroleum Resources Law: A Critical and Interpretive Analysis* 16 The International Lawyer 647 (1982) [hereinafter *China's Offshore Petroleum*].

48. U.S. News & World Report, Aug. 23, 1982, at 33.
49. Zhang, *supra* note 30, at 69.
50. Park, *Fishing under Troubled Waters*, 2 Ocean Dev. and Int'l L. 94 (1974).
51. Zhang, *supra* note 30, at 70.

China's continental shelf is considered to be one of the most extensive in the world. In the Bohai Gulf and the Yellow Sea the continental shelf extends to the entire sea area. In the East China Sea the shelf extends to most of the sea area, and only the South China Sea has a narrower continental shelf. The average water depth of the outer continental shelf edge is 140 to 160 meters where the shelf ends and the slope begins.[52] The continental shelf is the natural prolongation of China's land mass which gradually declines from the northeast toward the southwest, the average gradient being 0°02′ and its average water depth 45 meters. The topography of the continental shelf shows traits of continuity. According to the Chinese sources, about one million square kilometers of the shelf area are believed to contain rich oil and gas deposits and may prove to be one of the largest oil fields in the world.[53]

The Bohai is China's internal sea surrounded by the Shantung and Liaotung peninsula. It is the smallest of the four seas, having an area of 83,000 sq. km., the average depth being only 26 meters and the deepest being 78 meters near the Bohai Strait. Ninety percent of the Gulf area is less than 30 meters in water depth.[54] The sedimentary strata in the Bohai Gulf is several thousand meters thick, of which the sediments accumulated during the Tertiary period are considered to be the thickest. This strata is believed to bear abundant oil and gas deposits and regarded as one of China's important oil reservoirs. The seabed of the Bohai declines from the south, west and north sides toward the central shallow basin and the Bohai Strait in the east, and extends to the entire sea area.

The mouth of the Bohai Gulf is about 45 miles across, but there are quite a number of small islands studded around the mouth which cut the entrance into many openings, the widest of which measures 22.5 miles. The importance of the Gulf is self-evident because of its location in the industrial center of the country and its adjacency to the capital of the nation which is less than 100 miles away.

The Yellow Sea is a shallow region enclosed by Korea on the east and by China on the west and north, and is adjacent to the East China Sea on the south. It is seventy-five percent enclosed and relatively shallow with a large amount of land effluent in the water. The Yellow Sea derives the name from its orange color. It is a typical

52. *Id.* at 72.
53. *Id.* at 71.
54. *Id.* at 73-74.

continental shelf sea area of more than 400,000 sq. km., about five times as big as the Bohai. The bottom of the shelf is quite flat, the average gradient being 0°01'21''. The entire sea bottom is characterized by slanting toward the center on the west, north, and east sides with the Shantung Peninsula projecting into the sea, thus naturally dividing the Yellow Sea into two parts, the north and the south, at an average water depth of 38 and 46 meters respectively. Most of the water in the middle on the eastern side reaches depths of 138 meters at the deepest and 80 to 90 meters in its adjacency thus forming a dish-like basin. In the southern part of the Yellow Sea near the northern Kiangsu are many hidden shoals whose location and configuration vary with each passing year, the water depth here not exceeding 20 meters. It is extremely dangerous for navigation in this region.

Generally speaking, the Yellow Sea region has three shallow basins, one near Korea and the other two near Chinese mainland, and these basins have accumulated sedimentary strata as thick as 1,500 meters which contain enormous organic material and are therefore potential oil-bearing areas.[55] The continental sediments of the Yellow Sea are mostly terrigenous clastics (sand and silt) washed down into the sea by rivers of the Chinese mainland and the Korean Peninsula.

Of the four seas in China, the East China Sea is the second largest—about 750,000 sq. km. in size. It is bounded by China on the west and by Kyushu and Ryukyu Islands of Japan on the east and south, and faces Korea and the Yellow Sea on the north. Its continental shelf area is quite extensive, about 450,000 sq. km., and its shelf width averages more than two hundred nautical miles. It is regarded as one of the most extensive shelves in the world. Apart from the shelf there are the continental slope and the narrow sea bottom. The average depth is about 350 meters. The continental shelf of the East China Sea is wide in the north and narrow in the south, and gradually slants south-eastward, the average gradient being 0°01'17'' and average water depth 72 meters.[56]

The seabed topography of the West China Sea is quite similar to the land topography of the coastal area of southeast China. It gradually declines toward the southeast, at the end of which the seabed abruptly falls off with the water depth of less than 200 meters suddenly plunging to 1,000 - 2,000 meters, thus forming a long strip

55. *Id.* at 69-78.
56. *Id.* at 79.

of depressed ocean bed from the northeast to the southwest—that is what is called the Okinawa Trough which is 2,719 meters at the deepest.[57]

The continental shelf of the East China Sea can be generally divided into three terraces. The waters in the first, second, and third terraces are 20, 30-50, and 60-70 meters in depth respectively. The continental slope extends in a seaward curving arc and is very steep, at the gradient of 3° in general and 9°-10° in isolated cases. The continental shelf ends at the continental slope that abruptly drops to the bottom of the Okinawa Trough, reaching a depth of 2,700 meters at the deepest near the northeastern part of Taiwan.[58] The sediment of the seabed strongly suggests potential petroleum deposits.[59]

The South China Sea, where the Paracel Islands and the Spratly Islands are situated, is the largest and deepest of all the four seas. It is surrounded by the Philippine Islands in the east, China in the north, the Indo-Chinese and Malay Peninsulas in the west, and Borneo in the south. It has an area of 2.7 million square miles which accounts for two thirds of China's sea area.[60] The average water depth is about 1,140 meters and the average gradient 0°03'40''. The topography of the continental shelf is smooth and flat, the water depth of the shelf's outer edge is about 170 meters. The continental slope is spread out under the water depth of between 170 and 3,600 meters, reaching a depth of 3,600 meters at the sea bottom where the abyssal plain of the South China Sea begins. The water depth of the South China Sea is over 200 meters for the most part except for those waters contiguous to the land mass and the islands. Viewed as a whole, the South China Sea is a sea basin in its own right with edges relatively high and a deep sunken center. The continental shelf is 330,000 square kilometers in size, much narrower than that of the East China Sea and slopes gently. The deepest water depth in the South China Sea is 5,420 meters.[61] There are numerous coral reefs, sand banks, and shoals below the waters throughout the entire area,

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57. *Id.* at 80.
58. *Id. See also* Park, *Continental Shelf Issues in the Yellow Sea and the East China Sea*, Occasional Paper No. 15 of the Law of the Sea Institute. (Sept. 1972).
59. Committee for Coordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas of the Economic Commission for Asia and the Far East, 2 Tech. Bull., Technical Advisory Group Report 35 (1969).
60. Zhang, *supra* note 30 at 70.
61. *Id.* at 83.

and the disputed Paracel and Spratly Islands are just the emerged parts of these reefs and banks.[62]

The South China Sea is situated between the Pacific and Indian Oceans and has been an important part of the sea route from Europe to the Orient since the 16th century.

III. China's Offshore Jurisdictional Disputes[63]

In the Regulations of the People's Republic of China on the Exploitation of Offshore Petroleum Resources in cooperation with Foreign Enterprises,[64] China deliberately avoids being specific in its statement concerning its jurisdiction over the offshore petroleum resources. Article 2 of the above Regulations simply states:

> All petroleum resources in the internal waters, territorial sea and continental shelf of the People's Republic of China and in all sea areas within the limits of national jurisdiction over the maritime resources of the People's Republic of China are owned by the People's Republic of China.

The main problem involved in China's jurisdiction over its offshore resources is the identification and extent of its continental shelf. There are three countries bordering the Yellow and East China Seas. They are China, Korea, and Japan. The maritime jurisdiction in this area consists of three major issues, *i.e.*, territorial sovereignty over certain islands off the Chinese coast,[65] determination of baselines, and the legal status of troughs or trenches. Of these three issues, the toughest is that of the territorial dispute between China and Japan over the Tiaoyutai Islands (Senkaku Islands in Japanese), a group of eight uninhabited islets, of which three are barren rocks, all

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62. Cheng, *The Dispute over the South China Sea Islands*, 10 Tex. Int'l L. J. 265, 266 (1975).

63. For detailed discussion of this issue, *see* Yuan, *China's Offshore Oil Development: Problems and Prospects*, paper presented at the Proceedings of the 16th Annual Conference of the Law of the Sea Institute, at 455-64 (1982); Yuan, *China's Jurisdiction*, *supra* note 38, at 191-208; Yuan, *China's Offshore Oil*, *supra* note 38, at 107-26; Yuan, China's Sovereignty Over its Offshore Oil and the New Law of the Sea, paper delivered at the 2nd Workshop on the Geology and Hydrocarbon Potential of the South China Sea and Possibilities of Joint Development, *published in* the Proceedings of the Conference 525-32 (1985).

64. The *Regulations* were adopted at the Regular Session of the State Council on January 12, 1982 and promulgated by the State Council on January 30, 1982 [hereinafter *Offshore Regulations*].

65. China has territorial disputes over the Tiaoyutai (Senkaku) Islands with Japan in the East China Sea, and Korea and Japan have not yet settled their territorial dispute over Tokdo (Takeshima) Island in the Sea of Japan. P. Hahm, A Korean Perspective on the Law of the Sea 4 (1981) (unpublished paper); Park, *Oil Under Troubled Waters: The Northeast Asia Seabed Controversy*, 14 Harv. Int'l L. J. 212, 252 (1973).

situated on the edge of the continental shelf in the East China Sea, about 120 n.m. northeast of Taiwan. Although both sides have produced reams of historical documents to prove their sovereignty over the islands, ample evidence from historical records and events shows that Chinese reference to the disputed islands dates as far back as 1403 A.D., when the Tiaoyutai was first mentioned in a navigation record and the Tiaoyutai Islands had never been a part of the Ryukyus but were under Taiwan's jurisdiction prior to 1895.[66] The evidence thus far produced tends to tip the scale in favor of China. As the territorial dispute has always been a sensitive issue, neither party would give up on what it claims. The only feasible resolution is to shelve the territorial sovereignty issue and go ahead with a joint development program. This has been expressly indicated in Chinese leaders' talks in recent years.[67] The Sino-Japanese joint oil development has already taken place in the Bohai Gulf where China and Japan have cooperated in the exploration and development of oil in the southern waters of the Gulf, and their jointly developed Chengbei oilfield already started producing oil since October 1985.[68] Given the present relationship between China and Japan and the interdependence of each other in economic and technological cooperation, such joint efforts are likely to extend to disputed areas such as the Tiaoyutai Islands which have no economic value whatever by themselves except for possible oil reservoirs beneath the seabed.[69]

With regard to the determination of baselines, it should not pose any serious problem because most offshore islands in this region are quite close to the shoreline and follow the general direction of the coastal configuration except for a few isolated islands off the Hang Chou Bay, such as Tung Tao (the Eastern Island), the farthest one from the coast being 69 miles.[70]

As to the issue of Okinawa Trough in the East China Sea, it should not become a serious problem now taking into consideration the new development in the law of delimitation of continental shelf

66. Park, *supra* note 58; *see also* Cheng, *The Sino-Japanese Dispute over the Tiao-yu-tai (Senkaku) Islands and the Law of Territorial Acquisition*, 14 VA. J. INT'L L. 221, 253-60 (1974).

67. Ming Pao (Ming Daily), Apr. 29, 1983, at 1; Lauriat & Liu, *Pouring Trouble on Oily Waters*, FAR. E. ECON. REV. 21 (Sept. 28, 1979).

68. 3 Intertrade, June 1986, No. 9 at 16.

69. For further elaboration on the need for Sino-Japanese economic cooperation, *see* Yuan, *China's Offshore Oil*, *supra* note 38, at 107-26.

70. Allen & Mitchell, *The Legal Status of the Continental Shelf of the East China Sea*, 51 OR. L. REV. 789, 800 (1972).

as embodied in the UN 1982 Law of the Sea Convention. The question of whether the seabed of the Okinawa Trough constitutes a part of the natural prolongation of either state's coast would not become a stumbling block if and when both parties eventually ratify the 1982 LOS Convention. The Convention defines the legal continental shelf in a way that makes the submarine geomorphological features within 200 miles from shore almost irrelevant.[71] In addition, the extent of the East China Sea between China and Japan does not allow either party to claim 200 n.m. out to the sea because the width of the East China Sea from east to west is only 140-280 n.m.[72] Hence a median line solution will have to be considered under the new development in the law of the sea.

In the South China Sea, the potential conflict over access to this area's mineral resources is more acute and complicated because the territorial disputes involve many more countries.[73] The main dispute in this area is between China and Vietnam over the Xisha (Paracel) and Nansha (Spratly) Islands. China has embarked on a full-scale development of offshore oil resources on its continental shelf. However, it has not yet set a limit on its jurisdiction over the continental shelf, nor has it concluded any maritime boundary agreements with its neighboring countries. The involvement of the Soviet Union in the South China Sea complicates the situation in the area. The Soviet Union is attempting to extend its influence in the region through participation in offshore oil exploration and development. It accomplished its goal by entering into a joint exploration agreement with Vietnam in the Beibu Gulf (Gulf of Tonkin).[74] This action could be interpreted as Soviet support for Vietnam in its confrontation with China.

There is no ready solution to the China-Vietnam territorial dispute over the two islands in the South China Sea. However, a compromise might be worked out against the backdrop of Soviet rapprochement

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71. U.N. Convention on the Law of the Sea, arts. 57 and 76, 3 U.N. Conf. on the Law of the Sea, A/Conf.62/122 (Oct. 7, 1982).

72. Although it is 300 to 400 miles from north to south and 140 to 280 miles from east to west, the figures for the total area of the East China Sea vary with different authors. *Cf.* Allen & Mitchell, *supra* note 70 (480,000 sq. km.); Y.J. MA, LEGAL PROBLEM OF SEABED BOUNDARY DELIMITATION IN THE EAST CHINA SEA (Baltimore 1984) (290,348 sq. km.); or Zhang, *supra* note 30, at 79 (290,000 sq. km.).

73. Yuan, *supra* note 63.

74. An agreement was entered into between Vietnam and five Comecon partners - the USSR, Bulgaria, Czechoslovaka, Hungary and Poland - to help Vietnam explore for oil and other resources in this area for a period of 10 years from 1981 to 1990, Lauriat & Liu, *supra* note 67, at 19; *see also* 136 FAR E. ECON. REV. 74, 75 (May 28, 1987).

with China which has become increasingly evident since 1983. The visit of Ivan Arkhipov, first Vice-Chairman of the Council of Ministers of the Soviet Union to China in December 1984 and the rapid development of bilateral trade relations in recent years have clearly indicated the Sino-Soviet relations are on the mend and improving at a pace unprecedented since the breakup of relations in the late 1950's. With the above development in perspective, the Sino-Vietnamese relations are not likely to deteriorate any further in the foreseeable future.

IV. Foreign Investment in China's Offshore Oil Development

In the late 1950's when serious ideological and policy differences between China and the Soviet Union erupted into the open, the Soviets suddenly took repressive measures by tearing up hundreds of contracts, pulling out their experts and cutting back oil supplies, hoping in this way to bring China to its knees. But China did not bow to the Soviet pressure. On the contrary, China got a hard lesson. Never will China again rely upon a foreign power in its economic construction.

The term "self-reliance" has been much in vogue in recent years, not only in China but in Third World countries as well. Some say that China has been straying off the road of self-reliance since the death of Chairman Mao Zedong. The Chinese press has since been reassuring the masses that the present regime is following the teachings of Marxism-Leninism and Mao Zedong Thought in the socialist construction.[75] It does not make any sense to engage in such polemics if we are to ignore the stark reality that China cannot possibly achieve its modernization goal efficiently and in as short a time as possible without mass involvement of foreign investment and technology. The question is how to strike a balance between domestic and foreign interests and to what extent foreign technology will be imported without detriment to its own domestic industries.

China's ambitious offshsore program certainly is big business. Chinese and foreign oil companies have already sunk a total of some US $200 million dollars and 400 million Yuan into offshore pros-

75. *See Principles of Marxism Not Outdated*, 29 Beijing Rev. 26 (Dec. 1, 1986); Resolution of the Central Committee of the Communist Party of China on the Guiding Principles for Building a Socialist Society with an Advanced Culture and Ideology, *reprinted in* 29 Beijing Rev. 5 (Oct. 6, 1986 Supp.).

pecting and another US $480 million for initial development.[76] The seismic surveys covered eight large zones off the Chinese coast, totalling 400,000 sq. km. in the South China Sea and the southern part of the Yellow Sea.[77] The total capital requirement for the exploration and development of the South China Sea is estimated to be in the order of US $20 billion by the early 1990s. It is claimed that this figure is based on experience in the North Sea where the capital expenditure for each million barrels per day of production capacity amounted to roughly US $10 billion (in 1980 dollars).[78] An investment of this size plus sophisticated offshore technology have convinced Chinese leaders that it is almost impossible for China to undertake offshore exploration and development on its own. Chinese officials believe that current Chinese laws on joint ventures with foreign interests are adequate enough to assure the implementation of self-reliance policy though a high premium is placed on the maximum use of foreign investment and technology.

The principles of independence and self-reliance have been implemented through a series of regulations setting out the rights and obligations of the contractual parties and the controlling role of the Ministry of Petroleum Industry (MPI). In essence, the Ministry's role is to:

- determine forms of cooperation between the Chinese and foreign entities and designate the areas for cooperative development;[79]
- map out plans for offshore oil development in accordance with the long-term national economic program;[80]
- formulate operational and management policies;[81]
- examine and approve the overall offshore oil development program.[82]

It can be easily seen that the Chinese have full control over the key issues in the offshore oil exploration and development operations. As we know, the form of cooperation has a direct bearing on the host country's right over the management of resources and the sharing of revenues between the Chinese oil company and the foreign contractor. The development plan controls the pace and extent of off-

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76. China Daily, Feb. 13, 1987, at 1.
77. Li, *China's Continental Shelf Oil Potential*, 16 OCEAN INDUSTRY 4 (Feb. 1981).
78. *See generally* Woodard & Goodwin, *Supplying Offshore Services*, CHINA BUS. REV. 11 (Mar./April 1982).
79. Offshore Regulations, *supra* note 64, art. 4.
80. *Id.*
81. *Id.*
82. *Id.*

shore oil development and finally, formulation of operational and management policies directly affects the decision-making process. These provisions assure China of its independent role as a host country in exerting its sovereign rights and control over the exploitation of this critical, strategic material—oil.

The Chinese claim that the principle of self-reliance is the basic policy of any joint venture with foreign interests, and this is implemented in the present Offshore Regulations through a set of regulations providing for mandatory fulfillment of certain obligations on the part of the foreign contractor and preferential rights of the Chinese participants. The mandatory clauses include:

- transfer of advanced technology to the Chinese;[83]
- employment and training of Chinese personnel;[84]
- submission of technological, financial and administrative reports to the Chinese;[85] and
- participation of Chinese personnel in engineering designs.[86]

The preferential treatment includes:

- priority right of Chinese design corporations to undertake master and engineering designs under a subcontract with the foreign contractor;[87]
- priority right of Chinese manufacturers to enter into sub-contracts with the foreign contractor for the construction of facilities for offshore operations;[88]
- priority right of Chinese suppliers to provide equipment and material required to implement the petroleum contract;[89]
- priority right of Chinese service companies to provide onshore and offshore services under a service contract with the foreign contractor.[90]

However, these preferential rights are conditional upon the equipment and services being competitive in quality and price compared with those provided by other companies outside China.

A glance at the above provisions will convince prospective investors that China is determined to exploit its resources on its own by building up its own capabilities through the mandatory transfer of

83. *Id.* art. 12.
84. *Id.*
85. *Id.* art. 13.
86. *Id.* art. 18.
87. *Id.*
88. *Id.* art. 19.
89. *Id.* art. 20.
90. *Id.* art. 21.

technology and training of Chinese personnel. The process of gradual transition from dependence on foreign technology and personnel to full reliance on its own may be comprised of two or three stages, with each stage of foreign involvement decreasing until the Chinese are thoroughly conversant with the offshore technology and capable to operate on their own. The Sino-Japanese cooperative oil venture in Bohai Gulf provided a living example of such technology transfer.

The Chinese workers have now learned how to operate offshore drilling platforms by themselves. According to a recent report released by Xinghua News Agency, the Platform B in Chengbei oilfield in Bohai Gulf had been taken over by the Chinese for operation since September 1986.[91] The Offshore Regulations does not place any time limit on how long foreign operators will be in control of the development and production operations; and it simply mentions that they will be responsible for the operations until such time China National Offshore Oil Corporation (CNOOC) takes over the production operations when conditions permit.[92]

Since the Offshore Regulations is basically a framework law, a considerable portion of the terms and conditions will have to be worked out between the Chinese and foreign contractors on the basis of a model contract which goes with the package of other materials to prospective bidders for offshore projects. In addition, detailed rules and regulations will be promulgated from time to time by the MPI whenever necessary.

There are some crucial points that call for tough negotiation between the parties. One is the mandatory employment of Chinese personnel in all phases of exploration and development and, secondly, preferential treatment of Chinese equipment, materials, and services provided that price and quality are competitive. As offshore operations require highly skilled and experienced workers in order to attain maximum efficiency in development and production operations, foreign contractors are skeptical about whether the Chinese are capable to live up to their standard. Besides, the cost of training Chinese personnel could be staggering. The third concern for foreign contractors is the possible delay which might ensue as a result of using Chinese equipment and services, should such equipment and services prove inadequate or unreliable eventually. Although the Offshore Regulations provide for other options if the Chinese equipment and

91. People's Daily, Overseas Ed., May 24, 1987, at 3.
92. Offshore Regulations, *supra* note 64, art. 7.

services are not satisfactory or competitive in quality and service, this can only be proved after they are put to test. The Chinese manufacturers and service companies on the other hand are fully aware of this and are trying to reinforce their position and increase their reliability through establishment of joint venture enterprises with reputable foreign manufacturers.

The joint venture contract between CNOOC and Norwegian Geophysical Corporation on the establishment of a geophysical corporation was one such example.[93] Another example was the 15-year agreement for the construction of oil production platforms between China and a Paris-based marine engineering company.[94] There are many joint ventures of such type in China's oil business. These measures could have the effect of allaying to some extent the fears of foreign contractors about the capability of Chinese manufacturers and service companies to provide adequate service.

It seems to the author that in the initial stage Chinese involvement in the supply of offshore equipment would not be significant considering its current serious shortage of energy and transportation facilities, both of which impose severe constraints on its manufacturing capacity. On the other hand, the Norwegian experience tends to indicate that self-reliance takes time. The Norwegian oil and energy Minister said during an interview with a Chinese Newsmen Delegation in Oslo that Norway faced the same problems as China is now facing in regard to how to utilize foreign capital and advanced technology effectively without prejudicing its self-reliance policy. He noted that during the construction of the first oil well Norway could only supply 20% of the equipment needed with its own manufactured equipment. The percentage increased to 25% in the construction of the second oil well and 60% in the third, and only by then did they command the technology of deep sea oil development.[95]

Third, the mandatory transfer of technology is another tough issue confronting foreign participants. Article 12 of the Offshore Regulations provides that the foreign contractor "is obliged to transfer the technology and pass on the experience to the Chinese personnel." This includes design, software, and data gathered in exploration, all of which are given without charging royalties. The provision will involve the foreign contractor in a complicated mesh of legal com-

93. People's Daily, Sept. 16, 1982, at 5.
94. Green, *The Offshore Oil Contracts*, CHINA BUS. REV. 54 (Jan./Feb. 1982).
95. People's Daily, Oct. 6, 1982, at 6.

plexities under the existing patent, copyright, and other relevant laws because some of the technology used in China operations may be patented or copyrighted by companies other than the foreign contractor itself. There is also the problem of to what extent the Chinese can have access to the sophisticated offshore technology because such technology transfer to the People's Republic of China (PRC) is governed in the U.S. by the Export Administration Act of 1969[96] and the regulations promulgated from time to time by the Office of Export Administration,[97] which prohibit the export of technology and equipment to the PRC that might be of significance in military use. Although there have been steps of some relaxation in those restrictions in recent years because of the changing world situation and Sino-U.S. common strategic interests in Asia, the problem still remains.

Finally, the self-reliance policy necessarily implies Chinese control over the decision-making process which is to be implemented through the establishment of a joint management commission comprised of representatives from CNOOC and the foreign company and chaired by a CNOOC representative. This commission would have the authority to oversee the entire offshore operation and make operational, budgeting, and planning decisions.

The Offshore Regulations further provides that the foreign enterprise, as a party to the petroleum contract, shall provide "exploration investment, undertake exploration operations and bear all exploration risks."[98] The foreign contractor would bear the full brunt of risk investment in the exploration stage and could turn out to be a complete loser if no commercial oil field is discovered. According to the Offshore Regulations, China will invest and participate in the cooperative development only when an oil field of commercial value is discovered. Thus, in this oil gamble China would invariably be a "sure winner," and the foreign company a possible loser.

The foreign oil company gets in return assurances from the Chinese government that its investment, its share of profit and other legitimate rights and interests will be fully protected by law.[99] The foreign contractor may export the petroleum received as its share or purchased from the Chinese government, and remit abroad the invest-

96. 50 U.S.C. § 2401 (1976).
97. 15 C.F.R. §§ 368-99 (1979).
98. Offshore Regulations, *supra* note 64, art. 7.
99. *Id.* art. 3.

ment it recovers, its profit and other legitimate income according to law.[100] The revenues which the foreign oil company will receive from its sale of the crude will be taxed in the range of 50% under the Foreign Enterprise Income Tax Law promulgated in December 1981.[101] The tax would be creditable in the U.S. according to a recent ruling by the U.S. Internal Revenue Service.[102]

China adopts the profit-sharing formula in its cooperative venture with foreign interests, according to which the foreign oil company will be entitled to a fixed percentage of the "allocable profit oil," usually at the ratio of 51:49, with the host country's percentage nominally a little higher to match its status.

The above is an identification of various interests of the host country and the foreign contractor, with the host country taking a larger share of the profit. However, in order to properly assess the political and economic stakes involved in the oil venture in its true perspective, it is necessary to go a step further and look beneath the surface of things.

The real bargain for China lies in the exchange of natural resources for foreign investment and technology. From the Chinese point of view, the bargain was a painful decision and it took almost two decades for the reformers within the Chinese Communist Party to finally emerge a winner and that after endless political and factional struggles both within and without the Party. Former foreign trade minister, Li Qiang, categorically ruled out the possibility of foreign participation in the exploitation of natural resources in China when he said in 1974 that China "will never try to attract foreign capital or exploit domestic or foreign natural resources in conjunction with other countries."[103]

The petroleum resource, as distinguished from the fishery resource, is non-renewable and, once exploited, can never be recovered. Because of its strategic value and many advantages over other conventional

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100. *Id.* art. 8.

101. Income Tax Law of the PRC Concerning Foreign Enterprises, arts. 3 and 4, adopted at the Fourth Session of the Fifth National People's Congress on 13 December 1981. *Reprinted in* China Laws for Foreign Bus.

102. Brown, *Tough Terms for Offshore Oil*, CHINA BUS. REV. 36 (July/Aug. 1982).

103. Fountain, *The Development of China's Offshore Oil*, CHINA BUS. REV. 24 (Jan./Feb. 1980). Even when the offshore drilling had already begun, the struggle was still going on, an indication of the tough battle within the ranks of the Party. A glance at the People's Daily showed that the struggle between the radical and the moderate was still going strong in the early 1980s. *See* People's Daily, Sept. 7, 1981, at 5; Aug. 6, 1982, at 5, and May 13, 1982, at 1.

energy sources, oil is assuming a more and more important role in developing a nation's industries, upgrading the living standard of its people, and maintaining world peace and security. For Chinese leaders, the cooperative oil enterprise is impregnate with political risks, and its failure could mean a serious setback not only to their political life but also to the nation as well. Any balancing of interests without considering the above factor would not lead to a proper understanding of the political issues involved in the oil joint venture.

From the stance of the foreign oil company, the real concerns are whether there is sufficient oil under the Chinese seabed for commercial production, and how long the moderates can hold out in the factional struggle within the Party. This struggle is not going to die out in the foreseeable future. China's continental shelf is one of the last big, accessible (average water depth 45 meters),[104] and unexplored areas in the world. The working conditions in China's offshore areas are much better than in the North Sea. Prospects for oil reserves are excellent according to the most recent reports from China.[105] China claimed its potential oil reserves off China's coast to be in the range of 14 billion metric tons.[106] Western geologists are more conservative and put estimated oil reserves at about 78 billion barrels to be equally divided between onshore and offshore.[107]

In any case, the fact remains that seismic surveys and initial exploratory drilling along the Chinese coast fully attest to the expectancy of significant commercial oil and gas deposits in some of the largest unexplored sedimentary basins in the world. The most recent oil and gas exploration surveys conducted by Chinese geologists revealed enormous reserves of oil and gas both onshore and offshore, and Chinese oil industries are awaiting for the dawning of a golden oil era by the end of the century.[108] That probably accounts for the recent return of The Mobil Oil Corporation to China. Mobil certainly does not want to be a loser in China's offshore oil development venture.[109]

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104. Zhang, *supra* note 30, at 72-73.
105. People's Daily, Overseas Ed., Aug. 16, 1987, at 3.
106. This was the result of a 7-year extensive survey of China's coastal resources undertaken by Chinese geologists. People's Daily, Overseas Ed., Feb. 27, 1987, at 3.
107. U.S. News & World Report, Aug. 23, 1982, at 33-34.
108. People's Daily, Overseas Ed., June 20, 1987, at 1.
109. Mobil conducted geological surveys in the Zhujiang (Pearl River) Delta area in 1979 before China started the first round bidding. These included gravitation and magnetic seismic surveys in an area of 17,000 sq. miles. China Econ. News No. 27, July 20, 1987, at 2.

V. Policy Objectives of the Offshore Regulations

A. Maximum Utilization of Foreign Capital and Technology

The Chinese leaders, after three decades of economic experimentation and party struggle over the issue of participation of foreign interests in China's national economic construction, have at long last come to realize that isolationism would not lead China to modernization and prosperity. In this fast-developing modern world, no country can efficiently develop a national economy without the influx of foreign capital and technology. The most impressive examples are Japan, West Germany, Singapore, South Korea, Taiwan and Hong Kong. Chinese leaders, including the most powerful figure, Deng Xiaoping, have repeatedly assured foreign corporations that China's "open-door" policy will not change and outlined the following three basic principles governing the "open-door" policy:

- Adherence to self-reliance policy. The objective of importing foreign advanced technology is to reinforce self-reliance capability and develop national economy;
- To develop cooperation with Foreign countries in the economic, trade and technological fields on the basis of equality and mutual benefit;
- To counteract the foreign influence that is not in harmony with Chinese national conditions and prevailing social and moral customs.[110]

A perusal of the Offshore Regulations shows that China is counting on a windfall from oil business through maximum utilization of foreign capital and technology in the offshore oil development. International oil companies will foot all the bills for seismic surveys and exploratory drilling and do it at their own risk without any guarantee of recoupment.[111] The Chinese investment will not be involved until there are proven oil reserves on a commercial scale.[112] In addition, the foreign enterprise is required to use Chinese equipment and services if they are competitive in price and quality, train and employ Chinese personnel, and transfer technology to the Chinese

110. Vice Premier Wan Li reiterated the basic guidelines of the "open-door" policy at a meeting with the Egyptian Journalist Delegation on June 18, 1982. People's Daily, June 19, 1982, at 4.

111. Offshore Regulations, *supra* note 64, art. 7.

112. *Id.*

side.[113] This kind of cooperative venture, as China sees it, is the best way to absorb foreign interests into its own economy. The apparent benefits for the Chinese are: speed-up of economic construction; rapid upgrading of technology and managerial skill; and increase of employment.

China has launched a worldwide campaign for soliciting foreign investment for its modernization program. In the eight years from 1979 when China began implementing the open-door policy to 1986, China absorbed a total of US$16.2 billion in direct foreign investment in more than 7,000 projects, averaging almost 1,000 projects a year. In 1986 there were 1,492 projects valued at US$2.75 billion including Sino-foreign joint ventures, Sino-foreign cooperative enterprises and wholly foreign owned businesses. The actual amount of investment for 1986 was 10% higher than in 1985.[114]

Sino-foreign joint efforts pay off in offshore oil exploitation. Since China began to seek foreign assistance in developing its offshore oil in 1979, a total of approximately US$480 million has been spent on exploitation, of which approximately $230 million was invested by foreign companies and about $240 million by Chinese partners.[115]

According to the National Oil Corporation, 10 major oil and gas discoveries were made offshore in 1986, more than in each of the last few years. A total of US$310 million and 230 million Chinese Yuan RMB were invested in exploration. Over the last few years, 320,000 km. of seismic lines were shot, 141 wells sunk offshore and 54 wells have reported oil or gas finds. In the past six years, US$1.94 billion and nearly 400 million Yuan were used for offshore prospecting and another US$480 million for development.[116]

Thus, from a long-range perspective, this massive injection of foreign capital into Chinese economy will have far-reaching consequences both on Chinese economic structure as well as on political and social life. The Western influences and ideology will imperceptibly but inevitably reach into every nook and corner of the Chinese life. Although Chinese Communist leaders are determined to counteract this "bourgeois" influence through strengthening political control, its pervading effects can hardly be curbed. This is the biggest risk China has to face in the implementation of its open-door policy.

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113. Offshore Regulations, *supra* note 64, art. 12.
114. 30 BEIJING REV. 4 (April 6, 1987).
115. China Daily, Feb. 13, 1987, at 1.
116. *Id.*

The Offshore Regulations provides for mandatory transfer of technology to the Chinese and priority use of Chinese equipment and services where competitive.[117] For the Chinese, these provisions are the core of the Offshore Regulations and must be implemented rigorously and in their entirety. The terms and conditions concerning profit sharing in the cooperative venture are negotiable, but not the technology transfer clauses. The reasons are evidently based on a long-range objective of achieving technological independence and the basic policy of controlling and managing natural resources on its own. Thus, for the Chinese it is a question of strategic importance. China's aspiration to maintain its leading position among the Third World countries requires her to be not only politically, but also economically and technologically, independent and strong.

In order to become competitive in its manufacturing of equipment and services, China has over the years established a host of manufacturing and service companies for providing support services to the offshore operations.[118] The purpose of this type of joint venture is to reinforce China's technological capability and increase its reliability and competitiveness. In addition to these measures, China introduced tax-exempt and preferential treatment clauses into the Offshore Regulations for those equipment and materials that are imported for use in offshore oil exploration and production in order to speed up offshore oil development (Art. 10).[119] This provision could have a negative effect on another provision (Art. 20) calling for preferential treatment to Chinese equipment and materials if they are competitive in price, quality, and efficiency. The regulatory intent of Article 10 may stem from the desire to facilitate absorption of advanced technology by encouraging tax-free import of such technology.

From the above description, it is not difficult to see that the Chinese offshore industry will be heavily saturated with foreign capital and technology inside and out, and this would surely have a far reaching impact on China's political and economic infrastructure

117. Offshore Regulations, *supra* note 64, arts. 12, 18, 19, 20 & 21.

118. A dozen or so companies have been established in recent years. They were Logging Company of China, China Ocean Engineering and Service Corporation, China Offshore Design and Engineering Corporation, Nashan Development Corporation, China Corporation of Shipbuilding Industry, China Aviation Supplies Corporation, North China Helicopter Service Corporation, China Ocean Shipping Company, People's Insurance Company of China, China Petroleum Logging-Dresser Atlas Cooperation Service Company (Joint Venture), China Ocean Oil Services (Hong Kong Ltd.). *See* Denny, *Offshore Oil Service Companies of China: An Introduction*, (July 21, 1982) (for internal circulation).

119. Offshore Regulations, *supra* note 64, art. 10.

in the long run. The success of China's oil venture will in large measure determine the viability of China's open-door policy and other reforms. China has undertaken in recent years to modernize its industries. Chinese pragmatic leaders are anxious to show the world and the Chinese people that China can reap substantial benefits from Sino-foreign joint oil ventures. Thus, failure in this cooperative venture would have far-reaching adverse impact on China's move toward the "capitalist" road and would provide an opportunity for the leftists to launch an all-out attack on the current open-door policy.

B. Maximization of National Revenues

Since the Offshore Regulations are basically a framework law to be supplemented from time to time by detailed rules and regulations, it does not provide for the financial conditions for foreign participation and revenue sharing between the Chinese and foreign parties. The model contract[120] sent to foreign oil companies whose biddings have been accepted by CNOOC contains more detailed financial terms and is of course subject to negotiation. Because of falling oil prices and to attract more foreign investment in offshore development, China has recently announced a series of measures allowing for more flexibility in contract terms including a smaller proportion of its equity shares in cooperative projects, reduction of charges for contract blocks during the oilfield development period and lowering the costs of employing Chinese personnel by at least 30 percent compared with the standards in Southeast Asian countries.[121] All of these measures aim at assuring foreign partners of a fair profit in the joint venture.

In oil joint ventures, China has asked for one million U.S. dollars signature bonus plus 12.5% royalty and an additional 5% production tax.[122] China has adopted the Production Sharing Formula by which the foreign oil company will share a certain percentage of the crude oil produced. Under this formula, the 17.5% of annual gross output will go to the Chinese as royalty and payment of the Consolidated Industrial and Commercial Tax, and another 50% of annual gross

120. For detailed discussion of the model contract, *see* M.J. MOSER, FOREIGN TRADE, INVESTMENT AND THE LAW IN THE PEOPLE'S REPUBLIC OF CHINA 186-94 (1984) [hereinafter MOSER].

121. China Trader Weekly Bulletin, Sept. 28, 1987, at 1.

122. *Waiting for the Offshore Go-Ahead*, FAR E. ECON. REV. 65 (Oct. 1982).

production is to cover the "cost oil" which includes operating costs, exploration costs and development expenditures. The remaining 32.5% will be divided into "share oil" and "allocable profit oil" according to an x factor bid by the foreign oil company. The share oil goes to the Chinese side and the allocable profit oil is divided between the Chinese and foreign companies by 51:49 ratio.[123] The Chinese have developed a complicated formula of calculating profits by setting eight production levels to which a variable factor will be applied at each level:

Level 1: under 500,000 metric tons (MT)
Level 2: half to 1 million MT
Level 3: 1 to 2 million MT
Level 4: 2 to 3 million MT
Level 5: 3 to 5 million MT
Level 6: 5 to 7.5 million MT
Level 7: 7.5 to 10 million MT
Level 8: over 10 million MT

The percentage of allocable profit oil is in inverse proportion to output level, that is, the more oil you produce, the less percentage you will get as profit oil.[124] The model contract provides that the foreign contractor is free to export from China and sell on foreign markets all crude oil received by it, whether as "cost recovery oil," "investment recovery oil," or "allocable profit oil." However, the Chinese government reserves the right to regulate any such export sales by prohibiting transport by the foreign contractor to "destinations which impinge on the political interest of the People's Republic of China."[125]

The Chinese want to get involved in almost every aspect of the offshore operations and support services ranging from rig drilling to supplying food for the rough-necks. The purpose is three-part: earning hard currency, learning technology, and reducing the unemployment rate. China will also face tremendous expenditures in the joint venture. It was estimated that China would have to spend about US $20 billion by 1990 in order to fund its offshore program.[126] After all, whether this maximization of national revenues can be achieved

123. Brown, *supra* note 102, at 35; *see also* MOSER, *supra* note 120, at 187.
124. However, some changes are now underway in respect to these changes mentioned above. *See* People's Daily, *supra* note 21, at 1.
125. MOSER, *supra* note 120, at 189.
126. Murphy, *Industry Looks Forward to Chinese Oil Boom*, The Oil Daily, May 4, 1982, at B-3.

will depend in large measure on the size of the recoverable oil reserves under the Chinese seabed and the cost of extracting these resources. As it is, both factors are still indeterminate to the degree of certainty and cannot be accurately assessed until exploratory drilling is completed.

China's first round of bidding took place in February 1982. Since then foreign companies have invested US$2.1 billion in China's offshore, of which $470 million was spent on what turned out to be dry holes.[127] In the second round of bidding which began in November 1984, China signed eight contracts with fifteen corporations from five countries including Japan Petroleum Exploration Company, Esso China Ltd., Shell Exploration (China) Ltd., and Texaco Petroleum Maatschappij from the Netherlands.[128] The companies were awarded a total of 44,913 sq. km. in blocks in the basin at the Pearl River estuary and southern Yellow Sea.[129]

At present a total of 25 oil development contracts and geophysical survey agreements have been signed for China's offshore waters. Thirty-seven companies from 10 countries are cooperating with CNOOC. Thus far, 33 oil- and gas-bearing structures have been discovered, and two oilfields, one in the Sino-French joint exploration area and the other in the Sino-Japanese joint exploration zone, have already gone into production. Because oil finds in China's offshore have not been very encouraging as had been expected, Chinese oil officials are adopting more flexible approaches and are willing to negotiate on the basis of equality and mutual benefit.[130] Thus, whether China will be able to realize the objective of maximizing its revenues from offshore oil ventures still remains to be seen.

C. Selection of an Optimum Petroleum System

There are four principal types of petroleum system that have been used in the petroleum industry to govern the relations between the host country and the international oil companies: the concession (variously called 'permit,' 'license' or 'lease'), the joint venture, the production sharing contract (or service contract), and full state participation. In any type of these arrangements, an agreement is

127. Beijing Review article, *China Awards More Sea Oil Contracts*, 30 BEIJING REV. 9 (March 23, 1987).
128. *Id.* at 8.
129. *Id.*
130. *Id.* at 8; *see also* China Trader Weekly Bulletin, *supra* note 121.

necessary between the host country and the oil company whereby rights and obligations are created. However, it is a special type of contract, because one party to the contract is the state or a state agency which has "greater power and freedom of action than a private party and has international status that gives it special recognition abroad for juridical purposes."[131]

Of the above four systems, the concession system has the longest history and dates back as early as the 1920s when the international oil companies entered into the Middle East for exploration and development of petroleum resources pursuant to concessions granted by the sovereign. The concession created contractual obligations upon both parties. The oil company, being a concessionaire, was given the right to explore for, develop, produce, and dispose of petroleum at prices and rates of production determined by the company. As a compensation, the host government received in return royalty, or rents and bonuses. The concession usually ran for 50 or 60 years or more. The host country had no proprietary interest in the petroleum except for a small portion for domestic use.[132] Thus, the concession system is characterized by the oil companies exercising complete control over the resources of the host country.[133]

Although the concession system has historically played an important role in the development of petroleum resources in most petroleum producing countries which mostly belong to the third world, it has lost its past grandeur and fallen into disfavor since the latter part of the 1940s.[134] This is mainly due to the growing independence of the

131. P.H. Martin, Host Country Controls in the Petroleum Industry, paper submitted to the Regulation of International Business (April 12, 1974). As a juridical person of limited liability, CNOOC will be responsible only for its own acts, legally and financially, and is not backed up by its government securities so far as its financial liability is concerned. CNOOC will also not be held responsible for any legal liability caused by its subsidiaries. This idea was implicitly contained in the talk by a responsible official of CNOOC during an interview with New China News Agency:

> CNOOC is a state corporation of limited liability. Its regional companies are subordinate to the leadership of CNOOC. They are only responsible for the operation and management of exploration, development, and production activities within its region and for the fulfillment of the tasks as entrusted by the CNOOC.

Interview by the person in charge of the CNOOC with the New China News Agency, People's Daily, Feb. 17, 1982, at 2.

132. H. CATTAN, PRESENT TRENDS IN MIDDLE EASTERN OIL CONCESSIONS AND AGREEMENTS, IN PRIVATE INVESTORS ABROAD - PROBLEMS AND SOLUTIONS IN INTERNATIONAL BUSINESS IN 1969 135.

133. R.B. KRUEGER, WORLD PETROLEUM POLICIES REPORT, ENERGY LAW SERVICE, MONOGRAPH 13C No.3 (Feb. 1981), at 3 [hereinafter WORLD REPORT].

134. F. ROUHANI, A HISTORY OF O.P.E.C. 40 (1971); *see also* WORLD REPORT, *supra* note 133, at 4.

third world countries after World War II. They began to realize the importance and necessity of greater state participation and independence in management of petroleum resources, the vital strategic material for modern industries.

Against the above political and strategic background, the joint venture has come into vogue and replaced the concession as the principal method of controlling the relationship between host countries and oil companies. "The joint venture has become the rule and the traditional concession has become the exception" as H. Cattan aptly put it.[135] The joint venture system was first started in 1957 when Iran entered into an agreement with the Italian agency ENI and its subsidiary AGIP.[136] The joint venture can be defined as an agreement under which the host country or a national oil company and a private oil company agree to jointly develop and produce petroleum with the oil company assuming all risks and burdens of exploration. If petroleum is found and production begins, a separate operating company jointly owned by the state and a private company is formed to take over the joint venture operations. This separate legal entity is then authorized to produce and sometimes undertake the marketing of petroleum produced under the agreement. Costs and profits are to be shared according to each party's equity in the enterprise. Another form of joint venture is the establishment of a management committee composed of representatives of both parties to the agreement. The Chinese model contract calls for the formation of a joint management commission composed of representatives of both parties to the contract and chaired by a Chinese representative.

The third type of arrangement that has developed between host countries and foreign oil companies is the production sharing agreement or the service contract.[137] It differs from the joint venture in

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135. Cattan, *supra* note 132.

136. H. CATTAN, THE EVOLUTION OF OIL CONCESSIONS IN THE MIDDLE EAST AND NORTH AFRICA 129-32 (1967).

137. The difference between the production sharing contract and the service contract simply lies in the manner in which the foreign oil company receives compensation. The following paragraph explains the difference in most succinct terms:

> If the reward is the guaranteed purchase by (the contractor) of a certain percentage of the annual production at a special (and sometimes) favorable price (and treating the costs as a loan to be repaid by the national oil company with or without interest), (or simply cash payments in some instances), the arrangement is usually known by the general term "service contract." If the reward consists of allowing the contractor a certain free share of the annual production (after recovery of costs), the arrangement is usually known as a production sharing contract, Zakariya, *New Directions in the Search for and Development of Petroleum Resources in the*

that no jointly-owned company is created, and title to the petroleum produced is vested in the host country until it is disposed of either by selling to the foreign company or marketing abroad. The foreign company actually acts as a contractor to the host country and bears production, exploration, and development expenses and receives in return a certain percentage of the annual production (after recovery of cost), or a guaranteed price for a fixed share of the production depending on the agreement.[138] The contractor will also be given the opportunity to market the petroleum produced for a commission.[139]

The fourth type of arrangement is the state participation or ownership which takes the form of state owned entities conducting exploratory operations and private companies playing an advisory role as independent contractors, or of private companies financing and conducting operations until commercial production begins when the national oil company takes over the operation, and the contractor is reimbursed accordingly and paid a fee "based on a formula of price and production volume."[140]

The greatest advantage the concession system can offer is that the state assumes no financial risk and administration is relatively simple compared with other systems. If the host country could manage to obtain substantial bonuses and greater royalty accompanied with higher taxation through competitive allocation, revenues to the state could be very significant. The major disadvantage lies in the loss of total control by the host government over the nation's natural resources. The host country is excluded from participating in managing and developing policy for her petroleum resources, and this could bring about damaging effects to her national interests as a whole in the long run. Also, because the host country is excluded from participating in resource management and decision-making, there is virtually no opportunity for her nationals to learn all facets of management and operation in petroleum development. This would

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Developing Countries, 9 VAND. J. TRANSNAT'L L. 563 (1976).
It was Indonesia which first developed the concept of production sharing contract in 1966, and since then the system has been adopted in as many as 15 other countries, including Egypt, Libya, Nigeria, Lebanon, Jordan, Syria, South Yemen, India, Bangladesh, Burma, Malaysia, Sri Lanka, Philippines, Peru, Bolivia, and Uruguay. *Id.* at 565. The production sharing concept is regarded as an important step toward reconciling national and international interests in natural resource development.

138. WORLD REPORT, *supra* note 133, at 15.

139. Lucas, *Doing Petroleum Business Abroad*, 24th Oil & Gas Inst. 295, 353-57 (Matthew Bender 1973).

140. World Report, *supra* note 133, at 15-17.

adversely affect the host country's self-reliance policy of developing natural resources on its own in the future.

The joint venture system overcomes the above defects by allowing the host country greater control over petroleum operations while the oil company still takes the financial risks of exploration. Under the joint venture format, arrangements can also be made between the host country and the oil company for the former to become the operator at regular intervals, say five years, as in the case of an agreement entered into between the Chinese Petroleum Corporation of Taiwan and Continental Oil Company of Taiwan. The right to operate actually alternates between the government and the oil company. Arrangements could also be made for all important matters to be decided by a committee composed of representatives from both parties. The most important advantage of the joint venture is the opportunity it presents for the nationals of the host country to acquire technical and managerial skills in petroleum operations at various levels, including technical, supervisorial and managerial.

In a joint venture the private oil company assumes only the financial risks of exploration and the host country has to bear its share of operating expenses when commercial production starts, thus subjecting the host country to sharing risk with the foreign oil company because of oil market price risks and production cost uncertainties.

The production sharing formula exempts the host government from any financial commitments in connection with petroleum operations while at the same time allowing the state to participate in the control of petroleum operations. The host country will receive an agreed-upon minimum share of production, regardless of how much the oil company will have to pay for its exploratory and development costs. According to the Offshore Regulations the foreign oil company shall provide exploration investment and bear exploration risks, and the Chinese will invest in the cooperative venture only after a commercial oil/gas field is discovered.

The above is a general survey of the various petroleum systems now in use among oil producer countries. However, it should be pointed out that any of these systems can be modified to incorporate certain features of the other system according to the economic realities and policy objectives of the country involved in order to produce best results.

In recent years the trend has been toward greater participation of the state in the petroleum resource development, solely because the

producer countries have perceived the need of controlling this critical resource in order to strengthen their economic and strategic positions in the world arena. As the World Petroleum Policies Report[141] points out, the concept of direct state participation in the development of petroleum resources has been widely accepted and implemented in many parts of the world, and both developing and developed countries have enacted laws and acts that assure them of direct participation in the management of petroleum operations, including the power of determining the rate, price, and distribution of production. Even the United States which has traditionally favored the concession system is now beginning to explore options whereby the government would have an operating interest. The degree of success achieved by the various systems as adopted by different countries varies greatly, and this in large measure "reflects the petroleum potential and the bargaining strengths of the countries involved".[142]

There are positive aspects of the joint venture system (JVS) and profit sharing system (PSS) which are very attractive to a host country like China which has not enough hard currency to finance its oil development and will have to depend in a large measure upon compensation arrangement, i.e. repayment in oil. The Profit Sharing System is also consistent with China's avowed policy of self-reliance in its economic construction because the host country enjoys the exclusive right over the management of its natural resources and ultimate control on matters of importance in petroleum operations. These advantages are important to China as an emerging world power with its burgeoning energy needs and ambitious drive for economic development. The integration of joint venture and profit sharing systems not only offers possibilities to meet China's expanding energy needs and update its technology, but also assures a steady income of foreign currency through various support services to foreign contractors and subcontractors. As the host country controls the resources and the management of oil operations, the system is consistent with the basic thrust of China's development strategy and long-term offshore petroleum development.

Whether the Chinese system, being a mixture of production sharing and joint venture systems and conceived on the Indonesian model and Norwegian practices, can ultimately fulfill the basic objective of achieving timely and efficient exploration, development, and produc-

141. *Id.* at 5-6.
142. *Id.* at 34-35.

tion of offshore petroleum resources and generating maximum revenue to China and a fair return to the foreign oil company still remains to be seen. It is because there are still many unknowns which make it virtually impossible to predict what the Chinese government and the foreign oil company may get from the cooperative venture. Among the most important of these unknowns are the number of commercial oil fields which may be found off the Chinese coast and the size of such fields, the price of oil and gas in the future, and the ultimate investment and operating costs required. Also, variable operating costs will eventually determine the actual production rate and affect the decision to continue or terminate production. As discussed above, the Chinese have developed a complicated formula of calculating profits according to a variable factor which applies to different levels of production in reverse order. Following this formula, the percentage of allocable profit oil is "in inverse proportion to output level: the more oil produced, the less goes to profit oil."[143] Whether this profit-sharing formula would enhance efficient resource recovery and provide sufficient incentives to the foreign oil companies to carry out the work is difficult to say at the moment. It is a question of how to strike a proper balance between securing a fair return to the host country for the lease of its offshore fields and providing the incentive of a fair profit to the oil companies which bear the risk of investing billions of dollars in this highly risky business.

VI. Protection of Marine Environment

The Offshore Regulations contains an article concerning marine environmental protection.[144] This article calls for the oil companies to carry out operations in accordance with the laws of the PRC and international practice with a view to protecting fishery and other natural resources and preventing the air, sea, rivers, lakes and lands from pollution or damage. Chinese industries did not attach much

143. Brown, *supra* note 102, at 36.

144. Article 24 of the Offshore Regulations stated:

> In the course of implementing petroleum operations, the operator and subcontractors shall comply with the relevant laws and provisions on environmental protection and safety of the People's Republic of China, and shall, by taking account of international practice when conducting operations, protect fishery resources and other natural resources and prevent the environment, including the air, sea, rivers, lakes, and land, from being polluted or damaged.

Offshore Regulations, *supra* note 64, art. 24.

importance to the environmental problems in the past, and they rarely took the environmental factor into consideration when designing industrial production and construction. The environmental problem is further aggravated by the use of outdated technology and equipment in most Chinese enterprises resulting in high consumption of resources and energy, and the generation of various forms of harmful industrial waste.[145] There was, strictly speaking, no environmental law in China until the promulgation of "The Environmental Protection Law of the PRC" (EPL) on September 13, 1979.[146] Most of the policies on environmental protection work were sporadically contained in talks by Chinese leaders at various levels. The promulgation of EPL represents China's first major effort to cope with the ever-increasing dangers of environmental pollution, and to insure smooth implementation of China's modernization program.

The EPL is in many ways similar to the United States National Environmental Policy Act (NEPA) and has 33 articles in all setting forth in very broad and general terms China's national environmental policy and goals. It includes guidelines concerning the functions of the National Environmental Protection Office (China's counterpart of the U.S. Environmental Protection Agency), its local environmental protection units as well as their interrelationship.

On August 23, 1982 China promulgated its marine protection law entitled "Marine Environmental Protection Law of PRC."[147] The law was drafted on the basis of "The Environmental Protection Law of the PRC" promulgated in 1979, and spells out mainly legal rules for the prevention of marine pollution and liability provisions for violations thereof. It contains 48 articles under 8 chapter headings and includes such main topics as:

- Prevention of marine environmental pollution and damage by seashore projects;[148]
- Prevention of marine environmental pollution and damage by offshore oil exploration and exploitation;[149]

145. People's Daily editorialist, *Closely Combine Environmental Protection with Production Development*, People's Daily, Aug. 22, 1982, at 1.

146. The Environmental Protection Law of the PRC was adopted in principle at the 11th Meeting of the Standing Committee of the 5th National People's Congress on Sept. 13, 1979, *reprinted in* China Laws for Foreign Business.

147. Marine Environmental Protection Law of the PRC was promulgated on August 23, 1982 and came into effect as of March 1, 1983, *reprinted in* People's Daily, Aug. 25, 1982, at 3 [hereinafter MEPL].

148. *Id.* arts. 6-9.

149. *Id.* arts. 10-17.

- Prevention of marine environmental pollution and damage by land-based pollutants;[150]
- Prevention of marine environmental pollution and damage by ships;[151]
- Prevention of marine environmental pollution and damage caused by the dumping of waste materials.[152]

The law provides legal liability for its violators who will be held responsible, both administratively and criminally as the case may be, and are required to pay compensation.[153]

For the offshore oil operators, the provisions under Chapter 3 are relevant. They require the operator:

- to submit a marine environmental impact report including effective measures to prevent pollution and damage to the marine environment before submission of development plans;[154]
- to take effective measures to protect fishery resources where explosives are used in offshore oil exploration and other maritime activities;[155]
- to prevent oil leakage accidents; oil residues and waste oil should be recovered and not be discharged into the sea;[156]
- not to discharge oil-containing wastes and oily mixtures emanating from oil drilling vessels, drilling platforms, and production platforms directly into the sea; the oil content of such wastes to be discharged after recovery shall not exceed the standards set by the state;[157]
- not to dispose of oil-containing industrial wastes from oil drilling vessels, drilling platforms, and production platforms in the sea area; other industrial wastes shall be disposed in such a way as not to pollute and damage the fishery waters and navigational channels;[158]
- not to discharge oil and oily mixtures into the sea while the well is put to an oil test at sea: steps shall be taken to have it fully burned out to prevent marine pollution;[159]
- to comply with the requirements for prevention of seepage, leakage, and corrosion in the construction of offshore oil pipelines and oil storage facilities in order to prevent oil leakage accidents;[160]

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150. *Id.* arts. 18-25.
151. *Id.* arts. 26-37.
152. *Id.* arts. 38-40.
153. *Id.* arts. 41-44.
154. *Id.* art. 10.
155. *Id.* art. 11.
156. *Id.* art. 12.
157. *Id.* art. 13.
158. *Id.* art. 14.
159. *Id.* art. 15.
160. *Id.* art. 16.

- to install pollution-preventing facilities and equipment and take effective technical measures to prevent blowout and oil leakage accidents; in case of blowout and oil leaks, a report shall be submitted immediately to the competent authorities and effective measures taken to control and eliminate oil pollution.[161]

The above eight provisions apply exclusively to the prevention of marine environmental pollution by offshore oil exploration and exploitation.

Under the chapter of legal liability,[162] the law provides that those who violate the law resulting in real or potential pollution and damage to the marine environment shall be subject to the sanction of the competent authorities which will set a deadline for elimination and control of the pollution and will require payment of fees and damages to the state. They may also be warned or fined as the case may be. Appeals from such decisions shall be made within 15 days as of the date of receiving the decision. Individuals and units suffering from damage as a result of marine environmental pollution shall have the right to ask for damages from the parties causing it.

Individuals and units causing the pollution may be immune from paying compensation if reasonable and timely measures to avert the damage to the environment proved ineffectual due to one of the following situations:

1. Act of war;
2. Force majeure and natural disaster;
3. Negligence on the part of those in charge of the lighthouse or other navigational aid equipment.[163]

The violator of the law may be subject to criminal prosecution if he is directly responsible for causing pollution and damage to the marine environment resulting in severe loss to private or public property or deaths.[164] The law went into force on March 1, 1983.

It should be noted that the present law is a general framework law with the emphasis on pollution prevention and protection of the marine environment in general. Separate laws will be promulgated governing protection of mineral and aquatic resources. The law also authorized various regional and local environmental agencies and governmental departments to issue enforcement rules and regulations in accordance with actual situations.

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161. *Id.* art. 17.
162. *Id.* arts. 41-44.
163. *Id.* art. 43.
164. *Id.* art. 44.

VII. Policy Fluctuations and Legal Uncertainty

Foreign investors are particularly concerned about China's political stability and policy consistency. Actually, these two issues are one and related to each other. In order to have a profound grasp of the Chinese politics, one must first understand how politics work in China. China is ruled by one party—the Chinese Communist Party. All major policies of the state are formulated by the party nucleus, the Central Political Bureau of the Chinese Communist Party. Due to the existence of political factions within the Party, mainly the Radical and the Moderate, Party policies fluctuate with the change of personnel in control of the power machinery. It could be in the hands of extreme radicals (like the Gang of Four), radicals and pro-moderates all depending on the political thermometer of the day.

China's economic policies were mainly dominated by the leftist (the radical) line since 1958. The leftist line advocated speeding up national economic construction without taking into account China's realities—its vast population and backward means of production. They wished that China would become a modernized state overnight. This unrealistic, overzealous and over-ambitious attitude toward economic construction was the root cause of China's economic failures since 1958. Such slogans as "to overtake the British and catch up with the U.S.," "to realize modernization within 15 years," "to establish ten Daqing oilfields[165] by the turn of the century," etc. were reflections of this "leftist" policy.[166]

Since the factional struggle within the party and the existence of different ideologies within the same faction are inevitable in party bureaucracy and constitute part and parcel of the stark reality of Chinese politics, it would not be difficult to understand why the economic policies swayed like a pendulum from left to right and vice versa over a long period of time. Even today we cannot completely rule out the possibility of policy fluctuations in economic as well as in other realms of activity given the theory of inherence and inevitability of party struggle in Marxist ideology.

The second cause for policy fluctuations is the lack of experience and knowledge in socialist construction. This is quite understandable

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165. Daqing, the largest oil field complex in China, produced one million barrels of oil per day, almost half of China's current oil production. Ondrik & Woodard, *A Survey of China's Land Oil Fields*, 12 China Bus. Rev. 19 (Jan./Feb. 1985). *See also supra* note 17.

166. People's Daily Special Commentator, *Correct the Guiding Ideology in Economic Work*, People's Daily, April 9, 1981, at 5.

in view of the fact that economic construction of such a vast socialist country with one billion population poses a formidable task for any leaders in the world. Furthermore, China has been short of economists due to the erroneous policy pursued by the Communist Party in the 1960's and 70's. People recoiled at the idea of being an economist or a lawyer in fear of being stigmatized as a bourgeois representative. This also accounted for lack of free academic discussion about economic theories that are to guide China's economic construction.

The third factor that affects China's policy decisions is the world situation, particularly bilateral relations between China and the great powers. That politics dominates economic relationship is clearly demonstrated in the case of Pan Am Airline. In 1983 when Pan Am wanted to resume flights to Taiwan for economic reasons, the Chinese government formally warned the United States that the resumed flight of Pan Am to Taiwan would have "severe repercussions" on Sino-U.S. relations.[167]

The Sino-U.S. relationship is now steadily improving due to Chinese leaders pursuing pragmatic policies both at home and abroad as well as in the treatment of the Taiwan issue. Should the Sino-U.S. relations retrogress to the point of downgrading their diplomatic level, it would certainly affect mass involvement of U.S. interests in China's offshore oil development. Fortunately, this is not likely to happen in the foreseeable future as long as there is a stable government under the current Chinese pragmatic leadership. Chinese leaders are anxious to show to the world and the Chinese people that China can reap substantial benefits from its joint ventures with foreign partners. Thus, failure in this cooperative oil venture would have far-reaching impact on China's move toward the "capitalist" road, and would provide an opportunity to the leftists to launch an all-out attack on the current open-door policy. The success or failure of China's open-door policy will determine China's viability as a world power on the international scene as well as the viability of current pragmatic leadership at home.

Fourth, domestic political instability has always been a prime factor affecting China's policies in almost all spheres of activity. The inner party struggle within the Chinese Communist Party will never cease. The recent downfall of the Party's General Secretary, Hu Yaobang,

167. Newsweek, June 13, 1983, at 66.

from his number two position in China is eloquent enough to show how vulnerable the Party leadership is in face of attacks from the leftist diehards.[168] Although Deng's supporters are now in firm control of the party and state machinery, the mass influx of new members into the Communist Party alleged to be around 18 million during the cultural revolution still pose a formidable threat to the present leadership.[169]

Thus, it is not difficult to see that the Chinese policy-making body is vulnerable to various influences, political, social, and economic, which singly or jointly contribute to the instability and inconsistency of Chinese policy. In the sphere of international cooperation, Chinese leaders have repeatedly emphasized that the "open-door" policy is a long-range policy andwill not change under any circumstances. In offshore oil ventures, China particularly welcomes the influx of massive foreign investment and technology. Because of the inherently high risks incidental to the oil ventures and the long time span needed to recoup costs and profits, the assurance of political stability and policy consistency is of special concern to foreign investors. However, as it is, it is still too early to predict how long such stability and consistency can hold out.

Finally, closely related to the policy fluctuations is the Chinese legal system which has emerged only recently over the horizon. According to Chinese sources, China has issued 504 administrative laws and regulations in the seven years from 1979 to the end of 1986, of which more than 340 concern the regulation of economic matters.[170] However, to trace these laws and regulations would be the toughest job confronting legal scholars today because most of them have not been codified into a permanent book form for the use of the general public. "The most important job now is to make the law known to all in China" was the general echo of the delegates who assembled at the 6th National People's Congress in April 1986.[171] Moreover, laws and regulations are subject to constant change and revision in accordance with circumstances. It is extremely difficult

168. On January 17, 1987 General Secretary of the Chinese Communist Party, Hu Yaobang, was forced to resign following student demonstrations in December of 1986. The Communique released by the Central Political Bureau of the Chinese Communist Party said that Hu "violated the principle of collective leadership and made mistakes on important political issues during his tenure as General Secretary of the Party." People's Daily, Jan. 17, 1987, at 1.

169. Chen Yun's speech at the 12th Party Congress (Sept. 6, 1982), *reprinted in* People's Daily, Sept. 7, 1982, at 2.

170. People's Daily, Overseas Ed., April 27, 1987, at 4.

171. 29 Beijing Rev. 18 (April 21, 1986).

for international lawyers especially to get acquainted with Chinese laws. For example, the Chinese Constitution, which is the fundamental law of the nation, has already undergone four major revisions since its first promulgation in 1954,[172] and it all took place under the same government and party. Some laws were repealed even before the Chinese public knew of their existence.[173]

The legal uncertainty is, in fact, a reflection of policy fluctuations which are inherent in Chinese politics. There is no separation of legislative, judicial and executive powers in China, nor a mechanism of "checks and balances" to keep the government machinery healthy and sound. In China, the Communist Party controls the state machinery and wields absolute leadership over all spheres of government activity.

Ambiguity is another feature of Chinese legislation. Article 5, paragraph 2 of the Offshore Regulations defines the CNOOC as "a state corporation with the qualification of a juridical person . . . ." However, questions arise as to the ability of CNOOC and its subsidiaries to assume legal liability and the extent of such liability in case of litigations. Some oil companies have expressed uneasiness about CNOOC's power to sign contracts and to fulfill contractual obligations.

There is no doubt that CNOOC has been fully authorized by the Chinese government to take up the responsibility for entering into cooperative ventures with foreign enterprises in exploiting China's offshore petroleum resources, and as such, has the power to sign contracts with foreign enterprises and carry out its contractual obligations. Although the Chinese legal system is still far from perfect and is trying to catch up with its legislation, China has established its creditability and trustworthiness in international trade over the years and is a reliable trade partner. In an interview with the Board Chairman of Atlantic Richfield Corporation, Mr. Anderson, Premier Zhao said:

> The Chinese policy of carrying out economic and technical cooperation with foreign enterprises is firm and unshakable. Although

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172. Wu, *Building New China's Legal System*, 22 COLUM. J. TRANSNAT'L L. 101, 116-21 (1983).

173. *See, eg.*, Temporary Provisions of the PRC on the Prevention of Pollution in Offshore Waters, *reprinted in* Selected Documents on Environmental Protection (compiled by the Environmental Protection Office of Anshan Steel Corporation, a non-legal organization). The Temporary Provisions were enacted in 1974 and have not been promulgated officially. They may have already been rescinded.

> our legislation in this respect is not perfect enough, you may rest assured that we mean what we say and that we abide by our agreement.[174]

Chinese leaders seem to revel in oral guarantees of China's credibility in fulfilling its contractual obligations even in the absence of applicable laws. This is actually a reflection of the deep-rooted "rule of man" mentality which dominated Chinese society for centuries. Chinese leaders were used to substituting spoken words for written law. This can also be partly attributable to the war years of the revolution during which the Chinese Communist Party exercised political leadership through its policy statements, because law as a permanent form of legal institution simply could not keep up with the rapidly changing situation in those years.

VIII. Conclusion

For about a century, from the 1840s to the 1940s, China was constantly invaded and harassed by imperialist powers and subjected to various forms of imperialism and colonialism as a result of unequal treaties which degraded China to the position of a semi-colony. During those years China was nominally independent, but in essence a semi-colonial country. Its sovereignty was severely trampled upon. Against this historical background, one can better understand why China is so sensitive to the issue of sovereign rights over its natural resources on land and under the sea.

For over three decades, since the founding of the People's Republic, the questions of safeguarding national sovereignty have been a subject of hot debate within and without the leadership of the Communist Party. It invariably cropped up whenever foreign assistance was involved, either in the form of "brotherly help" as in the fifties when the Russians came in hordes to "help" the Chinese to reconstruct the war-torn country, or in the form of joint ventures as in the late seventies when the moderates openly advocated the participation of foreign interests in the development of national resources under the sea. Even until today, this struggle is still going on though with less momentum and openness.[175]

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174. People's Daily, Sept. 19, 1982, at 1.

175. Chu & Tung, *Joint Ventures with Foreigners Are Advantageous to Socialist Enterprises*, People's Daily, Aug. 6, 1982, at 5.

In November 1970 when Japan, South Korea, and Taiwan made public their joint development project in the East China Sea,[176] China broke her long silence and launched a vigorous attack on the joint project accusing Japan and South Korea of plundering China's seabed resources, and Taiwan of "selling out the sovereignty and resource of our country."[177] Had the attack on Taiwan at the time been directed at the legality of its sovereign right to enter such a joint development program, the People's Republic would have been in a better position today to defend itself against any like accusation from within and without the Party. However, as it was, the accusation was "selling out sovereignty and resource of our country." Then the question comes up. Does the legality of the PRC government to form joint ventures with foreign entities to exploit China's offshore oil resources change by one iota the nature of the substance of the deal?

Judging from the statements of the Chinese leaders issued before the downfall of the "Gang of Four," the answer is "no." Typical of the example was the statement by the former foreign trade minister, Li Qiang, who categorically ruled out the possibility of foreign participation in the exploitation of natural resources in China when he said in 1974 that China "will never try to attract foreign capital or exploit domestic or foreign natural resources in conjunction with other countries."[178] Thus, it is evident that a policy reversal has taken place since then.

Against the above backdrop, the PRC is now overly careful in conducting its negotiations with foreign corporations on the joint development of offshore petroleum resources. This overreaction is not without ground when viewed against the long and drawn-out struggle between the two opposing factions, radicals and moderates, within the party hierarchy.

With the complete reversal of policy on foreign investment in China, the crucial issue then is to what extent the open-door policy will reap benefits to the nation and the people as a whole. This will

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176. On November 12, 1970 a liaison committee composed of Japanese, Taiwanese and South Korean representatives was established in Seoul. They declared that beginning 1971 they would jointly exploit the undersea oil in the water areas around Taiwan Province and its appendant islands and in the shallow waters close to China and Korea. *See, U.S. & Japanese Reactionaries Out to Plunder Chinese and Korean Seabed Resources*, Peking Rev., No. 50, Dec. 11, 1970 at 15.

177. People's Daily Commentator, *Plunder of China's Seabed and Subsoil Resources by U.S. and Japanese Reactionaries Will Never Be Allowed*, Peking Rev., No. 1, Jan. 1, 1971, at 22.

178. Fountain, *The Development of China's Offshore Oil*, CHINA BUS. REV. 24 (Jan./Feb. 1980).

have to be assessed against the political, social, economic and ideological aspects of the policy. A major policy failure in any one of these aspects could paralyze, if not topple, the present cabinet and lead to an overall reassessment of its policies in the domestic economic construction.

Although a complete reversal of the open-door policy might not be likely, major policy revisions in the direction of less reliance on foreign investment and technology, more emphasis on self-reliance and more control on people's ideology would be possible depending on the balance of conservative and reformist forces then existing within the party. The bourgeois influence on the Chinese life style and ideology as a necessary evil accompanying the influx of massive foreign capital, technology and personnel is the biggest challenge Chinese leaders have to face in the next few decades. The Communist Party Leaders are fully aware that proliferation of bourgeois ideology among Chinese people will pose a direct threat to the existence of the Communist regime in China in the long run.

Recently the Chinese Communist Party made a big fanfare about the political reform. However, a closer look at its essence revealed nothing more than establishing a system which would be, according to Zhao's report, "conducive to increasing efficiency, strengthening nation's vitality and bringing every positive factor into play."[179] On the most crucial issue of separating Party leadership from government leadership, Zhao categorically ruled out the possibility of introducing "separation of powers" into the Chinese political system saying that it is inconsistent with the socialist democracy of Chinese characteristics.[180] In other words, the Party will continue to exercise leadership in all spheres of government activity.

People have already begun worrying about what would happen in China when the strongman, Deng Xiaoping, passed out of the scene. Would the present leaders have sufficient clout and prestige to control the Party and the Army? Would the current policy on foreign

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179. The General Secretary of Chinese Communists Party, Zhao Ziyang's report to the 13th Chinese Communist Party Congress held in Beijing, Oct. 26-Nov. 1, 1987, *reprinted in* People's Daily, Overseas Ed., Oct. 27, 1987, at 1.

180. With regard to separation of the Party from the Government, Zhao said that the main form of exercising the Party's leadership over the government is making the Party's views become law through legal process. The Central Committee of the Party shall make important decisions in respect to matters relating to domestic, diplomatic, economic and defense policies, and recommend candidates for leadership positions in the nation's highest organ of state power and exercise political leadership in every aspect of the governments work. People's Daily, Overseas Ed., Oct. 26, 1987, at 4.

participation in China's resource development still prevail? Would the foreign assets be nationalized? Given the current world and domestic situation in China with the moderates at the helm and massive experimentation of joint ventures just beginning to show some positive results, one feels a bit at ease investing in China, at least in the foreseeable future.