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Historical Background of Oil Exploration in India

5.1 Pre Independence 1866 - 1947

5.1.1 The exploration of hydrocarbon in India commenced in 1866 when Mr. Goodenough of McKillop Stewart Co. drilled a well near Jaypore in Upper Assam and struck oil. Mr. Goodenough, however, failed to establish satisfactory production. By 1882 the Assam Railway and Trading Company (ARTC), a company registered in London in 1881, with an objective to explore the rich natural resources of Upper Assam, acquired rights for exploration over about 30 sq miles in the same area. Sub-surface oil

exploration activities started in the dense jungles of Assam in North-East India.

5.1.2 The first commercial discovery of crude oil in the country was, however, made in 1889 at Digboi. In 1893, rights were granted to the Assam Oil Syndicate which erected a small refinery at Margharita to refine the oil produced at Margharita. A new company known as Assam Oil Company (AOC) was formed in 1899 with a capital of £ 310,000 headquartered at Digboi to take over the petroleum interests, including the Makum and Digboi

concessions and the rights from Assam Oil Syndicate. A 500 BPD refinery was set up in Digboi in 1901, supplanting the earlier refinery at Margharita.

- 5.1.3 In 1921, UK based Burmah Oil Company (BOC) which had a successful oil exploration record in Burma, bought all the shares from ARTC and was appointed commercial and technical managers of AOC. By 1931, crude oil production has gone up to about 250,000 tonnes per annum and exploration activities were spread all over the Assam-Arakan region. Meanwhile another field was discovered at Badarpur in the Surma valley and because the discovering party lacked the capabilities to exploit the find, BOC provided technical know-how, financial backing and managerial support.

5.2 1947 - 1960

- 5.2.1 After independence, the Government of India (GoI) realized the importance of oil and gas for rapid industrial development and its strategic role in defence. Consequently, while framing the Industrial Policy Statement of 1948, the development of petroleum industry in the country was given top priority.
- 5.2.2 While BOC and AOC continued development of Digboi oil field and intensified exploration activities in the North-East region, the Indo-Stanvac Petroleum project (a joint venture between GoI and Standard Vacuum Oil

Company of USA) was engaged in exploration work in West Bengal. In the year 1953, the first oil discovery of independent India was made at Nahorkatiya near Digboi and then in Moran in 1956.

- 5.2.3 In 1955, GoI decided to develop the oil and natural gas resources in the various regions of the country as a part of development of the Public Sector. With this objective, an Oil and Natural Gas Directorate (ONGD) was set up towards the end of 1955, as a subordinate office under the then Ministry of Natural Resources and Scientific Research. The department was constituted with a nucleus of geoscientists from the Geological Survey of India (GSI).
- 5.2.4 In April 1956, the GoI adopted the Industrial Policy Resolution, which placed mineral oil industry among the schedule 'A' industries, the future development of which was to be the sole and exclusive responsibility of the state.
- 5.2.5 Soon, after the formation of ONGD, it became apparent that it would not be possible for the Directorate with its limited financial and administrative powers as subordinate office of the Government, to function efficiently. So in August, 1956, the Directorate was raised to the status of a commission with enhanced powers, although it continued to be under the government.
- 5.2.6 ONGC started its systematic geoscientific surveys in areas considered prospective on the basis of global analogies. A thrust in exploration was concentrated during the early years in the Himalayan Foothills and adjoining

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Ganga plains, in the alluvial tracts of Gujarat, Upper Assam and Bengal Basin. Exploratory drilling was initiated in the Himalayan Foothills in 1957 with drilling of the first well Jawalmukhi-1 in Himachal Pradesh. The year also saw drilling activities being taken up for the first time in Cambay Basin which ultimately resulted in the discovery of oil and gas in 1958.

5.2.7 Meanwhile, Oil India Private Ltd. was incorporated on February 18, 1959 for the purpose of development and production of the discovered prospects of Nahorkatiya and Moran and to increase the pace of exploration in the North-East India. It was registered as a Rupee Company in which AOC/BOC owned two-thirds of the shares and the GoI, one-third.

5.2.8 In October 1959, ONGC was converted into a statutory body by an act of the Indian Parliament, which enhanced powers of the commission further. The main functions of ONGC subject to the provisions of the Act, were "to plan, promote, organize and implement programmes for development of Petroleum Resources and the production and sale of petroleum and petroleum products produced by it, and to perform such other functions as the Central Government may, from time to time, assign to it".

5.3 1961 - 1991

5.3.1 On July 27th 1961, the Government of India and BOC transformed OIL into a Joint Venture Company (JVC) with equal partnership.

5.3.2 ONGC's Geo-scientific surveys and exploratory drilling activities were also spread out to U.P. (1962), Bihar (1963), Tamil Nadu (1964), Rajasthan (1964), J&K (1970), Kutch (1972) and Andhra Pradesh (1978). In spite of limited success in these areas, ONGC pursued its exploratory efforts and was successful in indentifying hydrocarbons in Cauvery basin and Krishna Godavari basins in the mid 1980s.

5.3.3 Offshore exploration was initiated in 1962 through experimental seismic surveys in the Gulf of Cambay. Detailed seismic surveys carried out in the western offshore in 1972-73 resulted in the identification of a large structure in Bombay Offshore which was taken up for drilling in 1974 leading to India's biggest commercial discovery, thereby establishing a new hydrocarbon province. Encouraged by the success at Bombay Offshore, exploratory efforts were expended systematically in the entire Western Offshore including Kerala-Konkan basin and Eastern Offshore areas leading again to large discoveries in the Western Offshore (Bassein and Neelam) and substantial accumulations in the Eastern Offshore (Ravva, PY-3 etc.).

5.3.4 ONGC went offshore in the early 1970s and discovered a giant oil field in the form of Bombay High, now known as Mumbai High. This discovery, along with subsequent discoveries of huge oil and gas fields in Western offshore changed the oil scenario of the country. Subsequently, over 5 billion tonnes of hydrocarbons were discovered. The most important contribution of ONGC, however, is its

self-reliance and development of core competence in E&P activities at a globally competitive level.

- 5.3.5 ONGC Videsh Limited (OVL) was formed with a view to undertake the overseas exploration and production activities on behalf of ONGC.
- 5.3.6 On October 14th, 1981, OIL became a wholly-owned Govt enterprise by taking over BOC's 50 percent equity and the management of Digboi oilfields changed hands from the erstwhile AOC to OIL. For the time PELs outside the North-East, were granted to OIL in Offshore Orissa (Mahanadi) in 1978, in Mahanadi Onshore (1981), North-East Coast Offshore (1983), Rajasthan (1983), Saurashtra Offshore (1989) and Ganga Valley areas in UP in 1990.

5.4 After 1991

- 5.4.1 The liberalized economic policy, adopted by the Government of India in July 1991, sought to deregulate and de-license the core sectors (including petroleum sector) with partial disinvestments of government equity in Public Sector Undertakings and other measures. Following this, ONGC was re-organized in February 1994 as a limited company under the Companies Act.
- 5.4.2 Post liberalisation, several committees were set up to examine various proposals for restructuring and devising strategies to meet the challenge of the new economic environment. Among the most prominent reports was the Sundarajan Committee Report in February 1995 which favoured de-

regulation of the petroleum industry at one stroke. However, the Strategic Planning Group on Restructuring of the Indian Oil Industry, the 'R' Group, headed by the then Petroleum Secretary, Dr. Vijay Kelkar, felt the switchover should be in a phased manner.

- 5.4.3 Commercial hydrocarbon discoveries were reported by OIL during 1990-91 in Assam and Rajasthan. During 1993-94 ONGC's production from western offshore reached a low of 15.37 MMT, prompting ONGC to enter into Joint Ventures for developing Ravva, Mid & South Tapti, Mukta and Panna fields.
- 5.4.4 The JV initiative was fruitful inasmuch as it increased the production from these declining fields by 5 MMT in 1994-95. during the same period 5 important discoveries were made in the Bombay, Krishna-Godavari and Cauvery basins.
- 5.4.5 A committee was constituted in 1992 under the chairmanship of P.K. Kaul, former Cabinet Secretary, to examine the need for restructuring of ONGC. This Committee recommended setting up of a body, with the name and style of the Director General of Hydrocarbons (DGH), for discharging the regulatory functions of leasing and licensing, safety and environment as also development, conservation and reservoir management of Hydrocarbon resources. Accordingly, DGH was set up by a Government Resolution in April, 1993 through which certain advisory regulatory roles were entrusted but no development role was assigned.

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5.4.6 OIL also went overseas and acquired a 20 percent participating interest in the production sharing contract for the Block 4 in Oman through a farm-in agreement with TOTAL-FINA of France. It also involved in the exploration service contract for the Farsi block in Iran along with OVL and Indian Oil Corporation Limited.

5.4.7 In 1997 the GoI, in order to accelerate pace of exploration efforts in the country, approved the New Exploration Licensing Policy (NELP) by providing a number of attractive fiscal and contractual terms. Till now, four rounds of NELP have been concluded while the 5th round is underway with the award for 18 of the 20 blocks on offer being announced in July 2005. The PSC for the blocks are expected to be signed in October 2005.

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India Attracting Global Upstream Investments

6.1 Introduction

6.1.1 Till the end of 1970s, E&P industry in India was dominated by the two National Oil Companies (NOC) - ONGC and OIL. With limited resources and technology exposure, exploration of oil and gas in the country was confined primarily to onland and shallow water depths of 200 m bathymetry by these two NOCs. Thus, a large part of India's sedimentary area comprising of 26 sedimentary basins

and deep water basins with an estimated hydrocarbon potential of 28 billion tonnes of oil and oil equivalent of gas remained largely untapped.

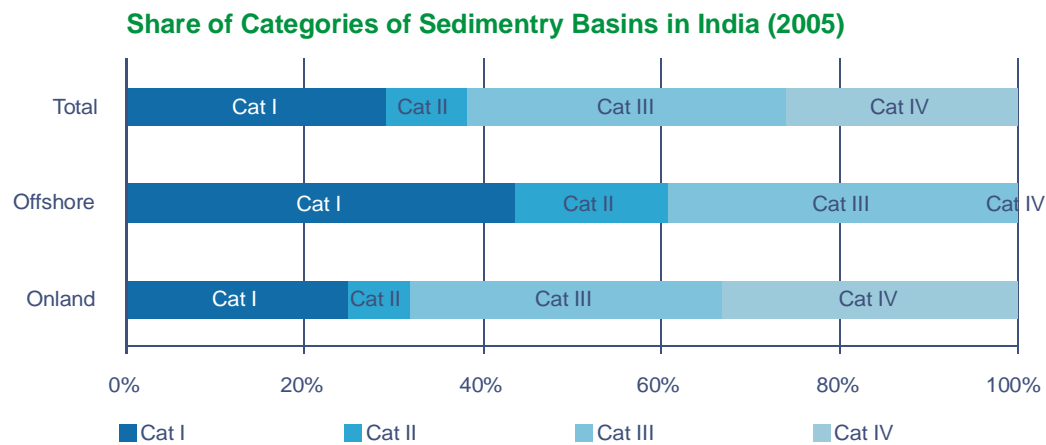
6.1.2 India's 26 sedimentary basins add up to approximately 3.14 million sq km with 1.78 million sq km comprising of onland and offshore areas up to the 200 m isobath line. In deep water beyond 200 metre isobaths, the sedimentary area has been estimated to be about 1.35 sq km.

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6.2 Categorization of Sedimentary Basins

6.2.1 The sedimentary basins have been divided into four categories as a function of geological knowledge of the basin as presently known, presence and/or indication of hydrocarbons and current status of exploration.

Category	Basis for categorization of Sedimentary basins in India
I	Established commercial production
II	Known accumulation of hydrocarbons but no commercial production as yet
III	Indicated hydrocarbon shows that are considered geologically prospective
IV	Uncertain potential which may be prospective by analogy with similar basins in the world



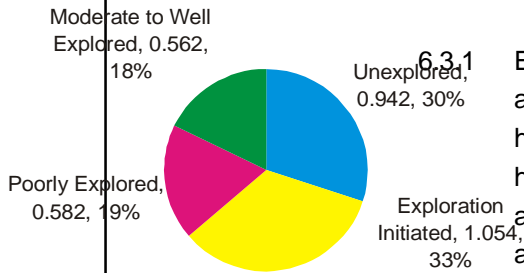
Source: DGH

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6.2.2 Till now, only 7 basins have been moderately or well explored. Out of the total sedimentary basin area in India almost 30 percent area remains unexplored while another 19 percent is poorly explored as per DGH statistics released on April 1st, 2004. Thus, many areas have been brought under active exploration compared to 1995-96 largely due to the efforts of DGH which carried out regional surveys especially in deep waters off the east and west coasts, the Andaman sea and some poorly explored areas of the country. However, India's well density is a mere 11.76 wells per 10,000 sq km against the world average of 1,000 wells per 10,000 square kilometre.

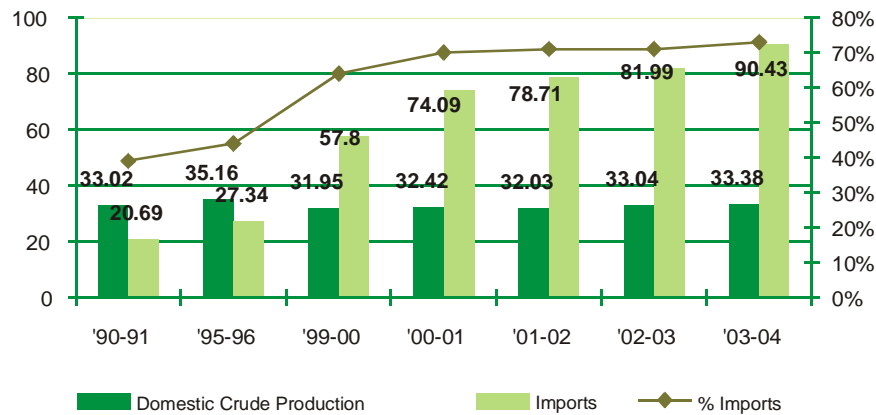
Source: DGH

Exploration of Indian Sedimentary Basins (Area in sq km) Turn Basins into Production Areas



E&P activities in India need to be accelerated as the gap between indigenous production and demand is likely to widen in the future. The stagnating domestic production of crude has increased the country's dependence on imports. This makes the economy highly susceptible to fluctuations in international prices due to supply disruptions, political and military events etc. As there cannot be any insurance against such events, the answer lies in intensifying exploration both within the country and looking for equity oil in prospecting ventures abroad.

Domestic Crude Production vs Imports (in MMTPA)



Source: MoPNG

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- 6.3.2 Significant investments are needed to step up the level of domestic production and accelerate the rate of reserve accretion. Among the various strategies that can be adopted to reduce the demand-supply deficit is providing incentives to the private sector in exploration. The capital has to come in from the private sector be it indigenous or foreign. The private sector can effectively contribute in terms of technology and finance two critical inputs for a developing nation like India. The chances of new discoveries are enhanced when this occurs in a big way.
- 6.3.3 As ONGC and OIL face the challenge of exploring more difficult areas and the deep waters, the technology gap had become critical. Crude oil reserve accretion during the 7th Five-year plan (1987- 92) exceeded the depletion and the reserves to production (R/P) ratio went up even as the production increased. The 8th Five-Year plan (1992- 97) started on a poor note. The accretion in the first three years was far short of target and the government decided to launch the accelerated programme for exploration (APEX), which had a number of components including:
- A national seismic grid
 - Exploration in frontier areas and deep waters
- 6.3.4 The idea behind the national seismic grid was to extend the available seismic data to the areas not yet covered and to upgrade data quality. Attempts to involve the private sector in seismic surveys through bidding rounds for speculative surveys were unsuccessful. However, joint venture speculative surveys with participation of the DGH have been more successful. DGH has also covered the entire Indian continental shelf up to a depth of 3,000 m through satellite gravity surveys.
- 6.3.5 GoI has stepped up its initiative of enticing private investment into the exploration and production of Oil and Gas. The most significant milestone in this regard has been the notification of NELP. Announced in the 1997-98 fiscal, the NELP took off in 1999. With it, the Government hoped to eliminate the country's growing demand-supply differential and the resultant expensive reliance on import of crude Oil.
- 6.3.6 The E&P licensing policy regime in India can be distinctly segregated into two phases Pre-NELP and NELP and has been discussed in the following chapters.

7

History of Pre-NELP Licensing Rounds

7.1 Overview

7.1.1 The earliest effort at attracting foreign companies to invest was in the mid-1970s under the then Union Minister for Petroleum and Chemicals H. R. Gokhale. ONGC and OIL were the major players. Except for Carlsberg of the US and Reading and Bates of Canada, the Government could not farm out any of the areas to other parties. The two also eventually pulled out without finding any oil but made their documentation available to the Government.

7.1.2 Failure to meet reserve accretion targets prompted the Government to involve the private sector. Exploration bidding rounds started in 1979, but the early rounds were not successful. The first four rounds took 12 years to come (1979-91). The next five rounds came in two years (1994-95) and succeeded in generating some interest in the international oil industry. An innovation was also introduced in the 9th round - known as the JV round - to reduce the risk for the private investors by associating ONGC/OIL as partners in these exploration ventures. However, the rigid decision-making structures of

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these National Oil Companies (NOCs) created problems of compatibility and reduced the attractiveness of this innovation.

7.1.3 To raise the interest of foreign companies in the E&P sector, the government decided to award some small and medium fields for development to the private and joint sectors, respectively, and came out with two rounds in 1992 and 1993. These rounds evinced tremendous response from foreign players. Also, in order to upgrade the information on the hydrocarbon potential of India's unexplored sedimentary basins, the GoI offered blocks for geophysical surveys during 1993 to 1995.

7.1.4 The following discussion chronologically traces the various Exploration rounds, Speculative Survey rounds and Development rounds announced by the GoI during the period from 1980 to 1995.

First Round of Exploration (1980)

7.1.5 In 1980, GoI made a second offer to the international industry. This offer is now referred to as the First Round as it was the first such invitation in the 1980s. During this round, 32 offshore blocks were placed offered to the international industry. The timing of the offer coincided with two significant international developments which adversely impacted the response of the industry. Firstly, the international market price of crude oil and products started showing signs of weakness. This was because of the combined impact of the decline in demand caused by the price rises of the 1970s and the addition to worldwide supply

arising from the discovery of new hydrocarbon reserves in non-OPEC countries particularly Norway, U.K. and Mexico. Falling oil prices narrowed the profit margins of the oil companies compelling them to be more selective in their choice of new international ventures.

7.1.6 Secondly, China threw open its offshore acreage to international companies. The offshore areas of China had excited explorers ever since offshore exploration had become a technical reality. Its offshore sedimentary basin offered the possibility of large new discoveries. Thus, when China reversed its policy of isolation and adopted an open door attitude towards international exploration, there was literally a scramble to take up acreage in the country. In the process funds which had been previously allocated to India and South Asia in general were diverted to exploration in China.

7.1.7 Four companies responded to the Government's offer for bidding for two blocks. After negotiations, the Government concluded an agreement in March 1982 with Chevron Oil Company of USA. This was a production-sharing contract that stipulated if Chevron had made a commercial discovery, ONGC would have had the option to take up to 50 percent equity interest in the project. Chevron was obliged to sell its share of crude oil to India at the international market price. A 56.375 percent corporate tax was to be levied on Chevron's profits. In addition a 15 percent royalty was leviable on gross production. Chevron drilled three wells without success and relinquished its contract area in 1985.

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Second Exploration Round (1982)

7.1.8 The Second Round was announced in 1982. This time the Government placed on offer 50 onshore and offshore blocks. Unfortunately the market had weakened even further by then and no bids were received for the blocks on offer.

Third Exploration Round (1986)

7.1.9 In March 1986, Gol announced its Third Round in which 27 offshore blocks were demarcated and placed on offer. The indicative terms of the production sharing contract were issued along with the announcement. The Government followed up the announcement with three presentations in Delhi, London and Houston during which a delegation from the Government, ONGC and OIL outlined the main provisions of the proposed contract and provided briefs on the geophysical and geological activities carried out by the two national oil companies in the blocks offered.

7.1.10 The framework of the contract offered in the Third Round was also of the production sharing kind. The detailed terms and conditions were however different from those offered in the earlier two rounds. Inter alia, the Royalty charge of 15 percent was withdrawn and Corporate Tax was reduced from 56.375 percent to 50 percent.

7.1.11 Seven companies viz., Shell, Chevron-Texaco, Broken Hill Proprietary Britoil, Amoco, Albion and International Petroleum Corporation (IPC) made 12 bids for 9 blocks. The bids were

evaluated in January 1987 and the various companies were called for negotiations in February. In December 1987 four contracts were signed, three with the Chevron-Texaco group and one with IPC. All four contracts were for exploration in the offshore east coast.

Fourth Exploration Round (1991)

7.1.12 In 1991, due to the Gulf crisis and disintegration of the Soviet Union, the Government further intensified its efforts and started announcing bidding rounds at regular intervals.

7.1.13 The Fourth round of exploration for oil and natural gas in India was announced in 1991. Gol invited bids from companies to explore for oil and natural gas in 72 blocks out of which 39 were offshore and 33 were onland. A number of foreign companies did participate in this round. These companies include Albion India Inc., Coplex (India) Ltd., Vaalco Energy Inc., Rexwood-Oakland Joint Venture and Pan Energy Resources from USA,, Niko Resources Ltd., Canada, Shell India Production Development B.V., The Netherlands, and Sterling Resources N. L., Australia.

First Development Round (1992)

7.1.14 Gol came out with the First Round of bidding for development of small and medium sized oil and gas fields in 1992. These fields were discovered either by ONGC or OIL but could not be developed on account of financial constraints of the companies.

7.1.15 A total of 31 small-sized discovered

History of Pre-NELP Licensing Rounds

fields were offered, out of which 10 were offshore and 21 onland. Of the above fields on offer, only 3 onland fields were discovered by OIL while the rest belonged to ONGC. The offshore basins in which the offered fields were located included the Andaman, Krishna-Godavari, Cauvery and Bombay basins. Onland blocks were in the Gujarat and Assam basins.

- 7.1.16 Gol offers 12 medium-sized fields 6 offshore while 6 onland to be developed by the companies in joint venture with ONGC/OIL. Offshore fields offered included the Ravva, Panna, Mukta, Mid and South Tapti and the R-Series. Onland fields included fields in Arunachal Pradesh, Assam and Rajasthan.

Fifth & Sixth Exploration Round/ Second Development Round/ First Speculative Survey Round (1993)

- 7.1.17 The Fifth Round of bidding for exploration of oil & natural gas in India was announced in 1993 in which a total of 45 blocks were offered 29 offshore and 15 onland. Rexwood-Oakland JV, USA, Command Petroleum Holdings, Australia, Vaalco Energy, USA participated.
- 7.1.18 Again in the same year, as part of the continuous round-the-year bidding scheme for exploration acreages, Gol announced the Sixth Round of bidding for exploration of oil & gas in India. Twenty-three blocks from those offered in the Fifth Round of bidding were offered again in this Round. In addition, 23 other blocks were put on offer making a total of 46 blocks on offer, with 17 of them being offshore and 29

onshore. Among the foreign companies who showed interest under this round included Samson International Ltd., Amoco India Petroleum Ltd. and Enron Oil & Gas India Ltd from the USA, BHP Petroleum (India) Ltd., Australia and Phoenix Geophysics Ltd., Canada.

- 7.1.19 In order to upgrade the information available on the hydrocarbon potential of the unexplored sedimentary basins in the country, Gol announced the offer of blocks for carrying out speculative geophysical and other types of surveys. In the First Round, a total of 35 blocks 21 offshore and 14 onshore were put on offer.
- 7.1.20 Also in 1993, Gol invited offers from companies to participate in the development of medium sized and small sized oil & gas fields in India. Eight medium-sized and 33 small-sized fields were on offer. The medium-sized fields were to be developed in joint venture between the companies and ONGC/OIL while the small-sized fields were to be developed by companies on their own with no participation by ONGC/OIL. Of the 33 small size fields, 4 were offshore while the balance 29 was onland fields. Of the 8 medium sized fields 2 were offshore Ratna & R-Series and Bassein Oil Rim while 6 were onland located in the Cambay and the Upper Assam basins.

Seventh & Eighth Exploration Round/ Second Speculative Survey Round (1994)

- 7.1.21 The Seventh Round of bidding for exploration of oil and natural gas blocks in India was announced by Gol in 1994. A total of 45 blocks were

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offered out of which 27 of them were onland and 17 were offshore and 1 onland block extended in offshore. Under this round companies like Rexwood-Oakland, Enpro India Ltd, Geo-Enpro Petroleum Ltd., Phoenix Overseas Ltd. and Enron Oil & Gas India Ltd participated among others.

7.1.22 In the same year the Gol announced the Eighth Round of bidding for the exploration acreages. A total of 34 blocks were offered out of which 19 of them were onland and 15 were offshore.

7.1.23 Gol announced the Second Round of offer of blocks for carrying out speculative geophysical and other surveys. In this round, a total of 12 blocks were on offer 11 onland and 1 offshore.

JV Exploration Programme / JV Speculative Survey (1995)

7.1.24 The last of this series of rounds was the Joint Venture Exploration Programme (JVEP) for the exploration of oil and natural gas in India announced by Gol in 1995. Under this programme the successful company/consortium was to form an unincorporated joint venture with ONGC/OIL. A total of 28 exploration blocks were placed on offer (23 of which were under licence to ONGC and 5 to OIL), with 10 of them being offshore and 18 onland.

7.1.25 The first two speculative survey rounds were unsuccessful, prompting Gol to announce a Joint Venture Speculative Survey Round in 1995. Under this round the blocks were offered to carry out speculative geophysical and other

types of surveys with the participation of its nominee, the Directorate General of Hydrocarbons (DGH). A total of 20 blocks were placed on offer with 16 being offshore and 4 being onland.

7.2 Exploration Rounds

7.2.1 As discussed in the above section, during the pre-NELP period, a total of nine rounds of bidding for exploration took were held by Gol including the last Joint Venture (JV) Round. The first three rounds were announced between 1979 and 1986 while the fourth round was announced in 1991 when India opened its door for foreign investments in a number of industries. After the Fourth Round, Gol adopted a system of continuous round-the-year bidding with exploration blocks being offered every six months. Under this scheme, the Fifth to Eighth Rounds of bidding were held during January 1993 to July 1994. Bidding for JVEP was held in September 1995.

7.2.2 The exploration blocks under the pre-NELP rounds were identified for offer in consultation with ONGC and OIL, who were the licensees. Notices were published in national and international dailies/journals inviting offers for the identified blocks. Companies were given about five to six months to submit their bids. The bids were invited under international competitive bidding system. Information docket/data packages were prepared by ONGC/OIL for each block on offer.

7.2.3 The main criteria for evaluating of bids were the technical and financial capability of the bidding company/consortium, work programme and the

History of Pre-NELP Licensing Rounds

commercial terms offered to the government. The bids were evaluated by ONGC/OIL/DGH. The evaluations were considered by the Empowered Committee of Secretaries (ECS) comprising Petroleum Secretary, Finance Secretary and Law Secretary. The C&MDs of ONGC and OIL also assisted the committee as technical members. The recommendations of the ECS on the award of blocks were placed before the Cabinet Committee of Economic Affairs (CCEA) for consideration and approvals. The blocks were awarded to the successful bidders after obtaining CCEA approvals. Successful companies or consortiums had to sign Production Sharing Contracts (PSCs) with Gol and ONGC or OIL.

7.2.4 The terms and conditions of the 9th Round of exploration, which was the JV Round, were as follows:

- ONGC or OIL was to have a participating interest of 25-40 percent in the joint venture, thus sharing exploration costs.
- In the case of crude oil and associated gas the contract was on a production-sharing basis for 25 years, from the date of commencement of the contract (with a possible extension of 5 years). For non-associated gas, the contract was for 35 years from the date of signing.
- The exploration period was for a maximum 6 years divided into 1-3 commitment phases, with no single commitment phase exceeding 2 years. The company or consortium had the option to terminate the contract at the end of each commitment phase.
- Cost recovery of up to 100 percent was allowed. The percentage of annual petroleum production expected to be allocated for recovering costs was required to be indicated.
- Companies had to indicate the minimum exploration work they planned to carry out in each commitment phase.
- The sharing of profit was to be based on a sliding scale tied to post-tax rates of return or multiples of investment recovered. Multiples of investment recovered was defined as the cumulative cash flow since the commencement of the project operations divided by the cumulative investment in the project.
- For Natural Gas, the joint venture had the freedom to make arrangements for marketing the gas.
- There were no production or signature bonuses.
- All data gathered during the course of operation under the contract was the property of Gol.
- If the joint venture opted to proceed to the second commitment phase, it had to relinquish 30 percent of the original area of the block. Similarly, if it opted for the third commitment phase, the joint venture had to relinquish a further 40 percent of the area. At the end of the last commitment phase, the joint venture had to relinquish all areas except those in which

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hydrocarbons had been discovered or a development plan had been prepared. However, negotiations for certain blocks were allowed.

- The joint venture was not required to pay royalty or cess and was exempt from customs duty on all operations under the contract.
- Foreign companies were free to remit amounts due to them under the contract out of India.
- Soft loans were available for the exploration of blocks.
- No private company in a consortium that had been awarded a block for exploration could unilaterally withdraw from the consortium. Further, government approval was required for induction of any new player in the consortium.
- The companies were required to adhere to the original schedule, and the government had the right to revoke the contract if the companies did not follow the schedule.

Blocks Offered under Pre-NELP Exploration Rounds								
Year	Round	No. of Blocks offered			Bids Received	Contracts Signed		
		Offshore	Onshore	Total		Offshore	Onshore	Total
1980	One	17	15	32	4	1*	0	1
1982	Two	42	8	50	Nil	0	0	0
1986	Three	27	0	27	13	0	0	0
1991	Four	39	33	72	24	2	3	5
1993	Five	29	16	45	15	4	2	6
1993	Six	17	29	46	20	2	3	5
1994	Seven	17	28	45	12	2	3	5
1994	Eight	15	19	34	38	1	3	4
1995	Ninth JV Round	10	18	28	22	1	1	2

* Given to Chevron in Saurashtra Offshore where 3 wells were drilled. Chevron exited from the block in 1983.
Source: PwC Research

History of Pre-NELP Licensing Rounds

7.3 Analysis of foreign investments in Exploration rounds

- 7.3.1 Before entering into a contract, an exploration and production (E&P) company has to balance the risk and reward of the venture and compare it with other ventures around the world that are competing for scarce resources. Companies will only bid on attractive acreage. The fiscal terms are generally of secondary importance. Attractive acreage has to be made available and be seen to be attractive. Success needs to be demonstrated.
- 7.3.2 Despite favourable terms and conditions given to major countries worldwide the 9 bidding rounds conducted thus far have met with poor response. The reasons for such a performance have been discussed in the following paragraphs.
- 7.3.3 The stipulation that the prospective investors should participate in biddings seems to have put off many.
- 7.3.4 There was a perception that the blocks with high prospects were reserved for the NOCs and only the high-risk areas were offered to private investors. The NOCs continued to hold on to the blocks they were awarded on a nomination basis. They also played a decisive role in the delineation of the blocks. Though it was recommended that, where feasible, an exploration block should include a producing field or an area with oil/gas finds, there were instances where this was not done and the producing areas were deliberately left out of the blocks. There were also instances of a block being advertised and later withdrawn at the instance of a NOC. These factors reduced the commercial attractiveness of the blocks offered. If an acreage had been extensively explored (e.g. by the NOCs) without success it would not be considered attractive. Much of the acreage offered in rounds seemed to be on offer because it had already been unsuccessfully explored.
- 7.3.5 The incentive structure was designed after a study of practices followed by other countries such as China and Indonesia. The bidders, however, felt better incentives were necessary in India to make up for the higher perceived risks. Many improvements have indeed been made in the NELP.
- 7.3.6 A very important factor was the delay in making and implementing the exploration policies. The award of production sharing certificates (PSCs) required clearances from several ministries, leading to inordinate delays. Though there was an empowered committee of secretaries, it had limited success in cutting through bureaucratic red tape. While it should normally take a few months to award these contracts after the receipt of bids, in practice it took 2-3 years. Further, the awards were followed by lengthy negotiations prior to signing of the contract. In all, the procedural delays disappointed even the most determined bidders. Even after the contract was signed, many approvals, including the all important exploration licence, were required. These also took years to be realized.
- 7.3.7 A disturbing point that has been made is that the agencies that were not

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- associated with the negotiation of the PSCs but had to be approached subsequently for various approvals were not prepared to treat the PSCs as binding and sought to reopen matters that were negotiated and settled. Some state governments have been of the view that they have the right to select the awardees as the exploration licence has to be issued by them. These issues have not yet been fully resolved which could cause problems in awarding blocks in the future. The blocks already offered would not be affected by this problem.
- 7.3.8 The current PSCs allow ONGC to obtain up to 40 percent equity risk-free in a successful discovery. The remaining 60 percent of the production is split between the government and the contractor, with the government receiving between 20-50 percent. On the remaining portion, up to 48 percent income tax is paid. The overall revenue received by the contractor is less than 18 percent, over a period of 25 years.
- 7.3.9 Acreage is assessed by inspecting data. All data has to be freely available and of good quality. A reasonable time has to be allowed for the assessment of the data. Industry has to know what acreage is available. There was no comprehensive map showing all open acreages, or areas for which the NOCs have already put in an application to explore. The data docket for the various blocks offered during the bidding rounds had insufficient data and were overpriced.
- 7.3.10 The 'effective date' was the date of signing the PSC. There are penalties if work does not commence within a specified time limit from this effective date. However, there was no corresponding penalty on the government if it did not provide approvals in time.
- 7.3.11 Exploration blocks were not of the size expected by international operators (the threshold size for exploration and developments considered to be of the order of 100-300 million barrels and 20-50 million barrels, respectively).
- 7.3.12 The bidding process was handled by a group called the Exploration Contract Monitoring Group (EXCOM), which formed a part of ONGC. The bidders perceived this to be against their interest.
- ### 7.4 Speculative Survey Rounds
- 7.4.1 In 1993, Gol offered blocks for geophysical and other surveys to upgrade the information on hydrocarbon potential of India's unexplored sedimentary basins. After completion of the work, Gol was to offer these blocks in the subsequent rounds of exploration. Until 1996, Gol announced three such rounds with the last round called the Joint Venture Speculative Survey Round (JVSSR), 1995, with a provision of risk participation by DGH of up to 50 percent.
- 7.4.2 The companies could enter into a speculative survey contract by signing a profit-sharing contract with Gol through their nominee, DGH. The contract could be for any type of geophysical survey and companies were free to bid for any number of blocks, on their own or by forming a consortium. The participation in these rounds, however, was very low be-

History of Pre-NELP Licensing Rounds

cause of the high perceived risk and the long time taken to settle negotiations.

7.4.3 The terms and conditions of JVSSR were as follows:

- Provision for cost sharing by GoI/ DGH up to 50 percent.
- Data acquisition, processing and interpretation work to start within six months of obtaining the petroleum exploration licence. The work should be completed within 24 months from the date of signing the contract. The total period for sale of data is up to seven years from the announcement of subsequent exploration round, in case the block is not awarded.
- The acquired speculative survey data can be sold to any interested hydrocarbon exploration company in India. The original data acquired,

as well as all the processed, re-processed and interpreted data is to be given free to the government. The price of data packages and any subsequent change have to be agreed upon by the government.

- Companies have to indicate the minimum work programme and the expenditure that would be incurred to complete it. Further, the company has to indicate profit-sharing with the government, which has to be based on a sliding scale, after cost recovery.
- In the case of taxes and duties, the Income Tax Act, 1961 is to apply. Companies are entitled to customs duty exemption on goods imported for use in petroleum operations under the contract.
- Foreign companies are free to remit amounts out of India, which are due to the company under the contract.

7.5 Analysis of foreign investments in Speculative Survey rounds

7.5.1 The first two speculative survey rounds failed to generate any response from companies and as a result GoI decided to go for a joint venture round in 1995. A contract was signed in 1997 when DGH formed a joint venture with Western Atlas, USA, to undertake 2-D seismic survey in the deepwater areas of Bay of Bengal. This was the first joint venture to be formed under the joint venture round for speculative surveys announced in October 1995. Western Atlas acquired more than 10,900 standard line km of data in the eastern offshore region.

7.6 Development Rounds

7.6.1 GoI offered the development of small and medium sized oilfields (having proven reserves and discovered by ONGC or OIL) to the private sector in August 1992. This was done because of limited finances available with GoI its resultant predilection to develop and produce in medium and bigger fields with better oil recovery prospects.

7.6.2 Two JV rounds for the development of already-discovered fields were announced by GoI. Since fields were already discovered by the NOCs, the risk element as opposed to the exploration bid rounds was minimal and hence the response was much better than the exploration rounds.

7.6.3 These development rounds evoked much enthusiasm, especially for the medium sized fields. A total of 117 bids

were received in response to GoI's First Round of development of medium- and small-sized oil and gas fields.

7.6.4 Companies or consortiums could participate in the development of medium- and small-sized fields offered under the various rounds. The terms and conditions of the last round are stated below:

- The joint venture to be formed for development of a medium-sized field could be an incorporated venture with equity participation of up to 51 per cent and the interest of ONGC or OIL being 40 per cent. ONGC or OIL had no participating or carried interest in the case of small-sized fields.
- On signing of a PSC between the company or joint venture and the government, the sharing of profit had to be indicated in the offer, based on a sliding scale tied to post-tax rates of return or multiples of investment recovered. Further, the percentage of annual production of crude oil and gas expected to be allocated for cost recovery purposes was to be indicated.
- As against the First Round of development where the private players had to supply natural gas to GoI, the Second Round allowed private players to market their natural gas. However, the domestic market was accorded the first priority to market the natural gas produced from any field. Arrangements for marketing the gas produced were negotiable between GoI and the company. The pricing

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formula for gas was based on internationally accepted principles.

- A signature and production bonus was to be paid.
- Royalty, cess and other applicable levies were also to be paid.
- Companies were subject to a corporate income tax rate of 50 percent of the taxable income. Ring fencing was allowed for development costs.
- No private company in a consortium that was awarded a field for additional development could unilaterally withdraw from the consortium. Further, government approval was required for the induction of any new player.
- Companies were required to adhere to the original schedule and the government had the right to revoke the contract if companies did not follow the schedule.

7.7 Analysis of Foreign Investments in Development Rounds

7.7.1 The offer of small-sized and medium-sized fields in India by the Gol received overwhelming response from the companies as can be seen from the number of bids submitted against the blocks on offer.

7.7.2 However, the operators of the medium-sized fields which were awarded the fields for development in 1994-95 faced certain roadblocks. The PSCs provided that crude oil/gas sales agreements would be drawn up within 90 days. Ad hoc arrangements were made to buy oil/gas from these fields as they came into production. The ad hoc prices delayed the cost recovery by the operators and resulted in a lot of frustration amongst them. The teams engaged for negotiating the crude sales agreements were different from the teams negotiating the PSCs which created problems for the operators.

Year	Round	Medium sized fields offered		Small sized fields offered		Bids Received	No. of fields for which contracts awarded or signed
		Offshore	Onshore	Offshore	Onshore		
Aug 1992	One	6	6	10	21	117	18
Oct 1993	Two	2	6	4	29	54	12

Source: PwC Research

8

Evolution of NELP

8.1 Introduction

8.1.1 The most important step that the Government has taken in the process of stepping up E&P activity in the country is the New Exploration and Licensing Policy, commonly called NELP. This series of new, attractive fiscal and contractual terms is designed to attract international operators to the Indian oil sector. Oil companies from the private and the public sectors will be treated at par and all new acreage acquired will be given market-driven price of crude oil and natural gas produced. This will hopefully enable the Government to award

acreage to the company with the best work programme and fiscal terms.

8.1.2 The Union Cabinet announced NELP in the 1997-98 Budget. But that was merely the first step; the follow-through has been extremely inexpedient. The course has had its ups and downs. NELP has not come through smoothly. In fact the dithering of the Union Government has proven to be quite expensive. Two successive governments took almost two fiscal years to finalize the tax incentives promised to prospective investors. Meanwhile fate frowned. Crude prices tumbled to almost half.

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- 8.1.3 NELP hung fire due to the lack of inter-ministerial consensus on actions necessary to operationalize the policy. These included the pros and cons of the new petroleum tax code the compilation of attractive fiscal incentives for investors. For instance, North Block shot down the Petroleum Ministry's proposal to exempt E&P companies from the minimum alternate tax (MAT). This was one of the six recommendations in the new petroleum tax code. The Revenue Department consented to accord 'infrastructure status' to petroleum companies and all tariff concessions that go with it, but not exemption from MAT. The Department also turned down the suggestion that multinationals be allowed to pay the same rate of corporate tax as NOCs, when developing new exploration blocks. NOCs paid 35 percent tax and transnationals, roughly 10 percent more.
- 8.1.4 There were ambiguities in the clauses pertaining to taxation in the model production-sharing contract drawn up for NELP. Also, a clause, which offset a loss in one exploration block with profits from another, needed to be amended before the policy was notified, as it could lead to a substantial revenue loss for the government. Then, the Ministry of Law raised objections to the bid evaluation criteria and the bidding format.
- 8.1.5 Numerous such snags delayed the NELP notification. The delay sent out signals that the government was not serious about opening up the hydrocarbons sector to private participation. It seemed to be doing very little to make NELP a success. Attracting foreign investment in the high-risk, capital-intensive business of oil and gas exploration is difficult at the best of times but all the more so when oil companies were reeling under the impact of slackening global demand and the consequent fall in prices. With oil companies all over the world mostly reporting poor second or third quarter results in 1998, wide-ranging cost cuts were certain to offset pressure on margins. Hence, many of them would take a second look at their exploration priorities and slash budgets for high-risk new ventures. As it is, the probability of striking hydrocarbons in a low-potential country like India was seen to be extremely low.
- 8.1.6 The way the Petroleum Ministry was conducting the exploration business indicated that it had little interest in addressing the basic concerns of potential investors. First, it did little to remove misgivings that only unattractive acreage was being offered to them even under the new policy. The Government did not provide potential investors easy access to geological data of the blocks that it had, thereby denying them the opportunity of studying the blocks before bidding. Also, the Government was oblivious to the frustrating delays experienced by investors in starting work on the exploration blocks already awarded. Further, a Government decision on the price of the crude oil or gas discovered and produced was interminably delayed.
- 8.1.7 The Oilfields Regulation and Development Act, 1948, was also awaiting amendment. The Royalty Amendment Bill to this Act would usher in a new

and more rational royalty regime for new exploration blocks under NELP. Since the Bill could not be adopted in Parliament, an Ordinance was passed. This enabled the Government to fix different rates of royalty for different kinds of exploration terrains, depending on the different cost and risk factors attached. The new royalty rates for onland areas are 12.5 percent for oil and 10 percent for gas. Offshore, the rate is 10 percent for oil and gas, except for deep-water discoveries (beyond 400 m bathymetry), which are at 5 percent for the first seven years of production. The Lok Sabha finally passed the Oilfield Regulation Bill in December 1998.

8.1.8 So, after the various enthusiastic go-aheads and the almost immediate halt commands, NELP finally took shape at the beginning of 1999. New year, new hopes. But some critics felt that the response to the maiden international bidding proposed under NELP would be lukewarm, as there were mostly cosmetic changes in 44 of the blocks on offer.

8.1.9 This was countered by pointing out that a substantial difference between these and the earlier blocks was that they were financially much more attractive than earlier fiscal packages. The NELP, however, does not change the perceived geological prospects of discovering hydrocarbons in the oil blocks until and unless data packages for the offered blocks are substantially upgraded through fresh exploration efforts by NOCs.

8.1.10 The main features of NELP are :

- Fiscal stability provision in the contract
- Finalisation of contract on the basis of Model Production Sharing Contract (MPSC)
- Petroleum tax guide to facilitate investors
- Possibility of seismic option in the first phase of the exploration period
- NOC's to compete for acreages
- No payment of signature, discovery or production bonus
- No Customs duty on imports required for petroleum operations
- No minimum expenditure commitment during the exploration period
- No mandatory state participation/ carried interest by NOCs
- Freedom to sell crude oil and natural gas in domestic market at market related prices
- Biddable cost recovery limit up to 100 percent
- Sharing of profit petroleum based on pre-tax investment multiple achieved and is biddable
- No cess on crude oil production
- Royalty payment for crude oil and natural gas on ad-valorem basis

	Onland Blocks	Offshore	Deepwater #
Crude Oil	12.5per cent	10 per cent	5 per cent*
Natural Gas	10 per cent	10 per cent	5 per cent*

* For first 7 years of commercial production
beyond 400m bathymetry

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- Option to amortise exploration and drilling expenditures over a period of 10 years from first commercial production
 - Contribution to site restoration fund fully deductible in same year for income tax
 - Liberal depreciation provisions making companies eligible for further tax adjustments
 - 7 years tax holiday from the commencement of production
 - Conciliation and Arbitration Act, 1996, which is based on UNCITRAL model shall be applicable
- 8.1.11 Under NELP companies are required to bid for:
- Work programme commitment
 - Profit petroleum share expected by the contractor at various levels of pre-tax multiple of investments
 - Percentage of annual production sought to be allocated towards cost recovery
- 8.1.12 An objective Bid Evaluation Criteria (BEC) is in place wherein the following main parameters will be considered while evaluating the bids:
- Technical capability of the bidding company/consortium
 - Operatorship experience
 - Financial capability of the bidding company/consortium
 - Work Programme
 - Profit sharing offered by the bidder/s along with proposed cast recovery limit
- 8.1.13 DGH provides the companies with seismic data on the Indian sedimentary basins. Companies are free to purchase and inspect this data. Successful bidders enter into a Production Sharing Contract, based on the MPSC.

8.1.14 The major differences between earlier rounds of bidding for exploration blocks and NELP can be summarised as under:

Terms	Earlier rounds	NELP
Royalty/cess.	Companies exempt from payment royalty. No cess. ONGC/OIL to bear these on private companies behalf, as per fiscal package approved by government.	Companies to bear
Participating interest by NOCs	0 per cent-40 per cent at their option, except for the Joint Venture Exploration Programme (JVEP), where they had to take 25 per cent-40 per cent interest from the beginning.	No participation by NOCs as government nominees.
Carried interest of NOCs	NOCs had 30 per cent carried interest, exercisable on commercial discovery, except in JVEP where they have working interest from the start.	No carried interest by NOCs.
Level playing field for NOCs	NOCs carried the burden on behalf of private companies and for their own operations they did not get the same terms available to private investors.	NOCs get international price on their production of oil and gas and exemption from payment of customs duty and cess.
NOCs to compete for acreage	NOCs got acreage on preferential basis.	NOCs to compete for acreage.
Incentive for exploration	No special incentive.	Only half royalty for deep-water to be paid in the initial seven years.

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8.1.15 NELP terms beneficial to NOCs

- NOCs are exempted from payment of cess (a concession of almost US \$3.0/bbl)
- The maximum royalty rate is 12.5 percent of international price as against 20 percent of the administered price in non-NELP areas
- Incentive for deep water exploration with only half of the royalty payable in the initial seven years from commencement of commercial production
- Exemption from customs duty
- NOCs to get international prices on their production of oil and gas
- Seven-year tax holiday from the date of commencement of commercial production
- Liberal depreciation provisions will make companies eligible for further tax adjustments
- Contribution made to the Site Restoration Fund Scheme is deductible in the year of contribution and not in the year of Site Restoration as per earlier provision of the Income Tax Act

8.1.16 NELP terms beneficial to private investors - Other than all the above benefits that are applicable to private investors as well, the following benefits also apply:

- Carried interest of NOCs at 30 percent has been abolished
- Companies are free to have 100 percent participating interest as earlier up to 40 percent participat-

ing interest was to be held by NOCs. This will also provide operational flexibility to the companies in selecting partners of their choice.

- A level playing field as no blocks are reserved for NOCs.

8.2 Progress under NELP

8.2.1 According to a DGH press release the progress of NELP in terms of exploratory wells drilled and discoveries made can be summed up as follows:

- From the year 2000 onwards, so far 71 wells have been drilled under NELP PSCs. Out of these 37 wells have been successful in terms of striking hydrocarbons. Thus the success ratio of exploratory wells drilled under NELP is 50 percent which is very encouraging.
- As many as 23 discoveries have been notified by companies like Cairn Energy, Niko Resources, Gujarat State Petroleum Corporation and Reliance Industries. Out of these discoveries, two discoveries by Niko in the block CB-ONN-2000/2 have already been brought to production. One discovery, namely Dhirubhai-2, by Reliance has been declared commercial.
- Development plans for two deepwater discoveries of Reliance Dhirubhai-I & Dhirubhai-3 have already been approved and gas production is expected to begin in mid- 2008. Proposals for the commerciality of another deepwater

discovery Dhirubhai-6 has been submitted by Reliance and this is being evaluated within DGH. All the other remaining discoveries are being appraised.

8.3 NELP I (1999)

- 8.3.1 The first round of New Exploration Licensing Policy (NELP I) was announced on January 8, 1999 by Gol. A total of 48 blocks were put on offer for exploration of oil and natural gas. Of these, 12 blocks were deepwater (beyond 400m isobaths), 26 shallow offshore and 10 were onland blocks. The bid closing date was August 18th, 1999. The companies could bid for one or more blocks, singly or in association with other companies and the successful company/ consortium was free to form an unincorporated or incorporated venture.
- 8.3.2 For the first time in India, blocks categorised under the nomenclature of Deep water blocks were put on offer under NELP I. Under the pre-NELP rounds there were only two categories of blocks, either onland or offshore. Companies were provided with only the Basin Information Docket for the deepwater blocks as there was no separate Data Package available for each block. However, seismic and gravity-magnetic data was made available for each of the blocks along with Satellite Gravity Data.
- 8.3.3 By the bid closing date of August 18th, 1999, Gol received 45 bids for the 27 blocks on offer. Ten foreign, 6 Indian private companies and 5 public sector

enterprises submitted their bids. The PSC's were signed for 24 exploration blocks comprising 7 deepwater, 16 shallow offshore and 1 onland.

- 8.3.4 A total of 16 discoveries have been made in two KG deepwater blocks and one shallow offshore block in Mahanadi-NEC. These discoveries include the world class gas discovery made by the RIL-Niko Resources consortium in 2002 in the Krishna-Godavari (KG) basin deepwater block KG-DWN-98/3. The other two discoveries include the gas discovery made by Scottish company Cairn Energy in 2001 in the deepwater block KG-DWN-98/2 and gas discovery by RIL in block NEC-OSN-97/2 in the Mahanadi-NEC shallow offshore area.

8.4 Analysis of foreign investments under NELP I

- 8.4.1 The foreign companies which bid under NELP I, either on their own or in consortium with an Indian company, include Enron Corporation-USA, Petronas Carigali-Malaysia, OAO Gazprom-Russia, Energy Equity India Petroleum Pty Ltd.-Australia, Cairn Energy-Australia, Niko Resources Ltd.,-Canada, Geopetrol International Inc.-Panama, Mosbacher India LLC-USA, Grynberg Petroleum Co. (RSM Production Corporation, USA) and South Asia Oil & Gas Plc-Australia.
- 8.4.2 Out of the 10 foreign companies who submitted their bids under NELP I only 5 were successful in bagging a block. These foreign companies were Cairn Energy (1 block), Niko Resources (12 blocks in consortium with RIL), OAO

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Gazprom (1 block) and 1 block by Mosbacher India Ltd. and Energy Equity India Private Ltd.

8.5 NELP II (2000)

- 8.5.1 GoI invited bids under NELP-II, on December 15th, 2000 for 25 blocks for exploration of oil and natural gas. Of these, 8 blocks were deep water, 8 shallow offshore and 9 were onland blocks. For the first time blocks in the west coast were put on offer as at that time more than 50 percent of the country's crude production came from ONGC's Mumbai High fields on the west coast. The bidders were given time duration of three-and-a-half months to submit their bids and file their documents by March 31st, 2001.
- 8.5.2 After the NELP I round, comments were invited from 43 E&P companies and organisations on the MPSC and based on the comments received GoI approved some changes to the MPSC issued under NELP I. Also, to increase transparency in the bidding process and to make it more investor-friendly, the weightage of the broad parameters for bid evaluation were made public for the first time.
- 8.5.3 The PSCs for the 23 blocks were signed on July 17, 2001, three and half months from the closure of bids on March 31, 2001 as against just about seven and half months in the first round of NELP. The total investment committed in these 23 blocks was US\$ 290 million (Rs.1,300 crore) in Phase-I and US \$ 788 million (Rs.3,700 crore) in all three phases.
- 8.5.4 A total of 3 discoveries have been made in two blocks viz. CB-ONN-2000/1 &

CB-ONN-2000/2 located in Cambay basin which were offered under NELP II. GSPCL discovered oil in the CB-ONN-2000/1 block in August 2004. Niko Resources struck natural gas in the CB-ONN-2000/2 block in 2002. Subsequently significant quantities of Shallow gas (NSA field) have been discovered in the block.

8.6 Analysis of foreign investments in NELP II

- 8.6.1 To woo private investors, both foreign and domestic, GoI appointed IHS Energy Group of USA as the marketing consultant for NELP-II and road-shows were held at Delhi, London, Houston, Singapore and Tokyo. Among the major oil firms that participated in these road-shows included Shell, British Petroleum, British Gas, Premier Oil, Cairn Energy, Exxon Mobil, Marathon, Philips, Chevron, Texaco and Pertamina of Indonesia.
- 8.6.2 The foreign companies who submitted their bids under NELP II round were Niko Resources, Canada, Cairn Energy, U.K., Petrom, Romania, Heramec, U.K, Hardy Exploration & Production India, U.K., Joshi Technologies, USA, Petrobas, Brazil, ExxonMobil, USA, Premier Oil, Pan Canadian, Total Fina Elf France and BHP Petroleum Australia

8.7 NELP III (2002)

- 8.7.1 NELP III was announced on March 27th, 2002 and bids were invited by the GoI for 27 blocks for exploration of oil and natural gas. Of these, 9 blocks were deep water, 7 shallow offshore and

11 were onland blocks. The bid closing date was August 28, 2002.

8.7.2 As in the previous rounds, the Gol undertook a comprehensive promotional exercise to promote the blocks through five road-shows at New Delhi, Singapore, London, Houston and Calgary and through an exclusive NELP-III Indigo Pool website.

8.7.3 A total of 45 bids were received for the 23 blocks on offer under the NELP-III by the bid closing date. Out of the 27 blocks on offer, PSCs were signed for 8 onland blocks, 6 shallow-water offshore blocks and 9 deepwater blocks. No bids were received for 3 onland blocks and 1 shallow-water offshore block.

8.7.4 A further analysis of the NELP III response reveals that 18 blocks attracted multiple bids, whereas 5 blocks attracted single bids. Thus about 78 percent of the blocks on offer attracted multiple bids under NELP III as compared to around 50 percent blocks attracting multiple bids under NELP-I and NELP-II.

8.8 Analysis of foreign investments in NELP III

8.8.1 The year 2002 was a mixed bag for the foreign E&P investors. On one hand efforts were being made by the Gol to attract foreign investments such as deregulation of the petroleum sector w.e.f. April 1st, 2002, and reduction in the income tax rate applicable to foreign companies from 48 percent to 40 percent while on the other hand apprehensions were being expressed

by the investor community regarding the Indo-Pakistan border tension and travel advisories issued by certain countries.

8.8.2 By the time NELP III was announced in March 2002 hydrocarbon discoveries had been made under the first two rounds of NELP which included discoveries by Cairn Energy in block KG-DWN-98/2 (NELP I) and Niko in block CB-ONN-2000/2 (NELP II). The Government, on the strength of these discoveries, was confident that the perception long held by the foreign E&P companies regarding the low to moderate hydrocarbon prospectivity of India, would change and that such discoveries would instil confidence among the foreign investors while investing in India.

8.8.3 However, the NELP III round received lacklustre response from the foreign E&P companies. A total of 11 companies submitted their bids out of which 7 were domestic oil companies and 4 were foreign companies which included Cairn Energy, U.K., Premier Oil, U.K., Hardy Exploration and Production, U.K. and Geo Global Resources, Canada. Amongst the foreign companies Premier Oil and Geo Global Resources had bid for the first time under NELP.

8.8.4 Scottish explorer Cairn Energy and Premier Oil of UK had bid for one and three blocks respectively but drew a blank. However, Hardy Oil of UK in consortium with RIL, was successful in bagging seven of the nine prime deep water blocks on offer, Geo Global Resources in consortium with Gujarat State Petroleum Corporation (GSPC)

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and Jubilant Enpro, was successful in bagging the KG-OSN-2001/3 in which a huge gas discovery of 20 tcf has been reported in June 2005 by GSPC.

8.9 NELP IV (2003)

8.9.1 Fourth round of NELP was announced by GoI on May 8th, 2003, under which it invited bids for 24 blocks for exploration of oil and natural gas. Of these, 12 blocks were deep water, 1 shallow offshore and 11 were onland blocks. The bid closing date was September 30th, 2003.

8.9.2 As many as 48 companies reviewed the data packages for the 24 blocks on offer. A total of 19 companies submitted their bids. Out of these 12 were domestic (six Public Sector and six Indian private companies), and seven were foreign. Nine companies were first-time bidders under NELP. PSC's were signed for 20 exploration blocks comprising 10 deep water and 10 onland blocks. The twoblocks in Manipur and Palar offshore basin did not receive any response.

8.9.3 Some of the changes made in NELP IV include:

- Provision of fast-track arbitration
- Higher weightage for technical and financial capability for deepwater blocks
- Surcharge on income tax for foreign companies abolished

- Bank guarantee to be returned after minimum work programme completion

8.10 Analysis of foreign investments in NELP IV

8.10.1 NELP IV was expected to generate a large participation from the foreign companies, especially in the aftermath of world class gas discovery reported by the RIL-Niko consortium in the KG-DWN-98/3 block in October 2002 in the KG Basin. Although international oil majors like Total, ExxonMobil and Shell showed interest, especially in the deepwater blocks, but decided not participate in the NELP IV bidding process.

8.10.2 The seven foreign companies who participated in NELP IV round were Enpro Finance, Niko Resources, Canada, Canoro Resources, Canada, Cairn Energy, UK, Geoglobal Resources, Zarubezneftgaz, Russia, BG, UK and Hardy Exploration & Production, UK. Out of the above 7 foreign companies Zarubezneftgaz, BG and Canoro Resources had participated for the first time under NELP.

8.11 NELP V (2005)

8.11.1 NELP-V was launched on January 4th, 2005 offering 20 blocks six deep water blocks, two shallow water blocks and 12 onland blocks. The launch was earlier scheduled for May 25th but was postponed due to the political uncertainty in the wake of the general

elections. For the first time Maharashtra was included for exploration under NELP-V. The bid closing date was May 31st, 2005.

8.11.2 A total of 69 bids for 20 blocks (18 bids for six deepwater blocks, seven bids for two shallow water blocks and 44 bids for 12 onland blocks) were received. On July 25th, 2005, the Cabinet Committee on Economic Affairs (CCEA) approved the award of 18 blocks under NELP-V. The award of two blocks is pending on account of certain representations raising legal issues having been submitted by the bidders to the Government which are being examined at the time of writing of this paper.

8.11.3 Some of the new features introduced under NELP V are :

- All geo-scientific data was made available online through the internet to enable companies to view data at their own convenience and location. Work stations were provided at Data Centres at London, Houston, Calgary and Dubai to facilitate companies to review and analyze data and to provide on the spot clarifications.
- Details of all operational blocks from earlier rounds such as work programme, fiscal terms, etc., were made available at Data Centres to enable companies to assess existing work programme as well as other bidding parameters while formulating their own bids and also help them in forming strategic alliances.
- In order to provide marketing stability to the companies, the

Government decided to exercise its option to take its profit share of natural gas in cash or in kind for a block of 5 years instead of such option being made every year as in the previous rounds.

- In order to encourage small and medium sized investors, companies having a net worth of US\$ 500 Million or more were not required to give a bank guarantee towards MWP commitment in respect of onland and shallow water blocks. This threshold value in the previous rounds was US\$ 1,000 Million.
- In order to provide transparency to the bidding process, weightage for all bid evaluation criteria including weightage for sub-criteria were made public under NELP-V for the first time.

8.12 Analysis of foreign investments in NELP V

8.12.1 A total of 26 foreign companies and 21 Indian companies (eight Public Sector Undertakings and 13 Private Sector undertakings) submitted their bids.

8.12.2 Out of the 26 foreign companies 17 companies submitted their bids for the first time. These companies are British Petroleum (UK), Petrobras (Brazil), ENI S.p.a (Italy), Hunt Oil (UK), Beach Petroleum (US), KUFPEC (Kuwait), Norwest Energy (US), Suntera Resources Limited (Russia), Zakros Holdings Ltd. (Cyprus), Foresight (UK), Providence Resources (UK), Birkbeck Investment Limited (Mauritius), Exspan Exploration and Production International (Indonesia), Istech Resources Asia

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(Indonesia), Jubilant Energy India (V) Ltd. (Cyprus), Jubilant Energy India (V) Limited (Cyprus) and Welwyn Resources Limited (Canada).

8.12.3 Energy majors like Shell (US), Total (France), BHP Billiton (Australia), Statoil (Norway) showed interest after initially purchasing the data packages for various blocks but stayed away from submitting bids at the last moment.

8.12.4 The handsome response generated by NELP-V as compared to the previous

NELP rounds can be attributed to the professional and extensive promotional exercise undertaken by the Government in promoting NELP-V acreages and also the huge gas and oil discoveries made by Reliance Industries Ltd.-Niko Resources consortium and Cairn Energy.