

TWENTY-EIGHTH REPORT

COMMITTEE ON PUBLIC UNDERTAKINGS (1986-87)

(EIGHTH LOK SABHA)

OIL & NATURAL GAS COMMISSION—
HEAD OFFICE, SURVEY AND EXPLORATION
(MINISTRY OF PETROLEUM AND NATURAL GAS)

[Action Taken by Government on the recommendations
contained in the 12th Report of the Committee on
Public Undertakings (Eighth Lok Sabha)]



Presented to Lok Sabha on 29 April, 1987

Laid in Rajya Sabha on 29 April, 1987

LOK SABHA SECRETARIAT NEW DELHI

April, 1987/Vaisakha, 1909(S)

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**CORRIGENDA TO TWENTY EIGHTH REPORT
OF COMMITTEE ON PUBLIC UNDERTAKINGS
(EIGHTH LOK SABHA) ,**

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COMMITTEE ON PUBLIC UNDERTAKINGS
(1986-87)

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Shri K. Ramamurthy

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*Elected w.e.f. 22-8-1986 in the vacancy caused by appointment of Miss Saroj Khaparde as Minister of State.

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**ACTION TAKEN SUB-COMMITTEE OF THE
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(1986-87)**

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INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to submit the Report on their behalf, present this 28th Report on Action Taken by Government on the recommendations contained in the 12th Report of the Committee on Public Undertakings (Eighth Lok Sabha) on Oil & Natural Gas Commission—Head Office, Survey and Exploration.

2. The 12th Report of the Committee on Public Undertakings was presented to Lok Sabha on 21 August, 1986. Replies of Government to all the recommendations contained in the Report were received on 23 March, 1987. The replies of Government were considered by the Action Taken Sub-Committee of the Committee on Public Undertakings on 24 April, 1987. The Committee also considered and adopted this Report at their sitting held on 24 April, 1987.

3. An analysis of the action taken by Government on the recommendations contained in the 12th Report (1985-86) of the Committee is given in Appendix II.

K. RAMAMURTHY

Chairman,

Committee on Public Undertakings.

NEW DELHI;

27 April, 1987

7 Vaisakha, 1909(S)

CHAPTER I

REPORT

The Report of the Committee deals with the action taken by Government on the recommendations contained in the Twelfth Report (Eighth Lok Sabha) of the Committee on Public Undertakings on Oil and Natural Gas Commission—Head Office, Survey and Exploration which was presented to Lok Sabha on 21 August, 1986.

2. Action Taken Notes have been received from Government in respect of all the 36 recommendations contained in the Report. These have been categorised as follows :—

- (i) *Recommendations/observations that have been accepted by Government.*
S.Nos. 3, 5, 7, 8, 11-14, 16-22, 24-29 and 31-36.
- (ii) *Recommendation/Observation which the Committee do not desire to pursue in view of Government's reply.*
S.No.15
- (iii) *Recommendations/observations in respect of which reply of Government have not been accepted by the Committee.*
S.Nos. 9, 10 and 23.
- (iv) *Recommendations/observations in respect of which final replies of Government are still awaited.*
S. Nos. 1, 2, 4, 6 and 30.

3. The Committee desire that the final replies in respect of recommendations for which only interim replies have been given by Government should be furnished to the Committee expeditiously.

4. The Committee will now deal with the action taken by Government on some of their recommendations.

A. Corporate Plan of ONGC

Recommendation No. 4 (Paragraph 1.14)

5. The Committee had noted that ONGC had not prepared its Corporate Plan in terms of BPE guidelines issued in 1974. The Committee had therefore recommended that the Corporate Plan of ONGC,

the details for which were reportedly being worked out should be finalised early and laid before Parliament immediately and in any case before the end of 1986.

6. In their reply the Government have stated that the ONGC is yet to submit their revised Corporate Plan to the Government for approval. The matter is being pursued with ONGC.

7. The Committee regret to note that Corporate Plan of ONGC has not been finalised so far. They take a serious note of the matter particularly in view of the fact that Chairman ONGC had promised before the Committee during evidence as far back as in 1985 that their Corporate Plan would be prepared within next six months. It appears to the Committee that ONGC has not taken the matter with a sense of urgency in spite of clear assurance given by its Chairman to the Committee. The Committee, therefore, urge upon the Ministry that ONGC should be asked to finalise and submit its revised Corporate Plan to the Government for approval without any further delay.

Needless to reiterate that after the approval of Corporate Plan by the Ministry, action should be taken for laying it before Parliament at the earliest.

B. Demarcation of work between ONGC & OIL

Recommendation No. 10 (Paragraph 3.22)

8. The Committee had noted that Oil India Ltd. had been permitted by the Government to take up exploratory dilling for oil in the off-shore areas of Andaman and Nicobar Islands where ONGC had already done considerable survey work. Similarly, in Rajasthan an other areas ONGC and OIL were carrying out survey and exploration activities. The Committee had therefore observed:

“The working of two national agencies in the same area cannot be conducive to optimal utilisation of limited national resources. When two agencies operate in the same area using the same type of equipment there is always wasteful movement of machinery and equipment and even the infrastructural facilities have unavoidably to be duplicated. The Committee feel that with a view to optimise utilisation of scarce national resources, the two agencies should not be allowed to work in the same basin.

As far as possible the work relating to survey and exploration should be allocated to ONGC and OIL in separate basins."

9. In their reply, the Government have stated as follows:—

"Exploration for hydrocarbons is a unique business venture, in that explorationists compete against nature and not amongst themselves. In other words, exploration is not a zero-sum-game whereby one company's gain would necessarily be another company's loss. In fact, the success of one company in discovering hydrocarbons in a basin is of positive benefit to another company working in that basin because it increases the prospectivity of the entire basin. Due to the highly probabilistic and uncertain nature of exploration in general and geoscientific interpretation in particular it is necessary that independent lines of thought and operating philosophies are encouraged as inputs into exploration activities. In the Oil Industry, it is not uncommon to find two companies with access to the same data arriving at two different conclusions, each one substantiated on scientific grounds. It is only actual drilling that would determine which of the interpretations is correct. This aspect assumes significant importance particularly where hydrocarbon exploration is being carried out in high cost and geologically complex areas such as offshore Andaman, Offshore Bay of Bengal and Onshore Rajasthan. Such an approach towards exploration minimises the ultimate costs by spreading the risks between the two oil companies and increases the chances of an early hydrocarbon find. Exchange of data obtained from wells in a basin further contributes to more efficient operations.

One of the determinants in deciding on the effort that should be deployed in exploring a particular basin is the intensity of exploration that a basin demands. The intensity is dependent on the prospectivity and the size of the basin and the probable number of independent drillable locations. If the basin is large with a large number of independent drillable locations, the establishment of its hydrocarbon potential should be expedited if more than one company were involved in its exploration with different sets of men & material.

Additional costs due to two companies operating in a basin as against only one company are marginal in relation, to the total

cost of exploration e.g., in Andamans the total overhead costs of OIL are Rs. 40 lacs out of a total project cost of Rs. 62 crores (0.6%). In Rajasthan they are about 3.6%. This is because the duplication, if any, is confined only to overheads in a limited area. Even if only one company were to operate where ONGC and OIL are presently carrying out concurrent operations, a multiple drilling programme would still be required to quickly and efficiently establish the hydrocarbon potential. A multiple drilling rig operation whether by one company or two companies would in any case add to the overhead costs.

International practice confirms the conclusion that, more often than not, two companies can develop a basin more efficiently than a single company. Three Western European countries in which the State is involved in exploration have found it beneficial to have more than one company operation. UK has British Petroleum, British National Oil Corporation and British Gas Corporation. France has Elf-Aquitaine and CFP-Total and Norway has Statoil and Norsk Hydro.

In Indian situation where expertise exists in both the national oil companies, it is all the more necessary that the geoscientific talents in both companies are exploited to full. There is thus no reason for adopting a rigid stance towards the issue of the number of companies that should operate in a basin."

10. The Committee are not impressed by the belaboured explanation given by the Government in regard to the desirability of allowing ONGC and OIL to carry on their operations in the same basin. Since some of the basins still remained unexplored the Committee had felt that it would be better if different basins are allocated to different companies for extensive exploration. Even the representatives of the ONGC were in line with the Committee's view that basin-wise allocation of work among the companies would be desirable for optimal utilisation of national resources. (Paras 3.6 and 3.7 of 12th Report). In view of this, the Committee reiterate their earlier recommendation that with a view to ensure optimum utilisation of scarce national resources, two agencies should not be allowed to work in the same basin and as far as possible the work relating to survey and exploration should be allocated to ONGC & OIL in separate basins. The Committee desire that the matter should be reconsidered.

C. Exploration by Foreign Companies

Recommendation No. 23 (Paragraph No. 3.103)

11. The Committee had noted that in order to supplement the efforts of the two national companies (ONGC & OIL) engaged in the work of exploration and exploitation of oil, Government had decided to invite foreign oil companies of repute to explore and exploit hydrocarbons in selected areas of the country. In the earlier two rounds of biddings received in 1980 and 1982 for leasing of areas for oil exploration and production, one block was awarded to a USA Company namely Chevron in 1982. This Company did exploration work in an assigned area but as no hydrocarbons were found, the Company terminated the contract. The Committee had been informed that Government was going in for a third round of bidding for leasing of areas for oil exploration for which 27 blocks in different basins had been earmarked. The terms and conditions for these contracts were reportedly being finalised. The Committee were of the view that Parliament should have been taken into confidence while taking such an important decision. The Committee had, therefore, recommended that Government should place before the Parliament a comprehensive policy statement of Government's oil policy with particular reference to the involvement of foreign oil companies and its approach to the exploration strategy for the future.

12. In their reply the Government have stated that the Government had called the foreign oil companies to bid for exploration and exploitation of hydrocarbons in selected blocks in the country in two rounds in 1980 and 1982 in the past. The invitation to the foreign oil companies in 1986 in the third round was thus not a new policy decision taken by the Government. This decision is part of the Government's policy of supplementing the efforts of the two national oil companies viz. the Oil & Natural Gas Commission (ONGC) and the Oil India Limited (OIL) who are engaged in the work of exploration and exploitation of hydrocarbons. According to Government since this was not a new policy decision, it is not considered necessary that a discussion in Parliament should be held at this stage. It has been further stated that from time to time in replies to various questions raised by the Members information relating to the third round had been given in both Houses of the Parliament.

13. The Committee are sorry to note that Government have not at all appreciated the spirit behind Committee's recommendation to the

effect that a comprehensive policy statement on Government Oil Policy might be laid in the Parliament. What the Committee had intended was that in respect of major policy decisions such as involvement of foreign companies in the sphere of oil exploration, it would be desirable to keep the Parliament properly informed. Since the contracts to foreign companies on the basis of third round of biddings have yet to be awarded the Committee feel that it would be in the fitness of things if a comprehensive statement regarding Government's policy and the terms and conditions on which foreign companies are permitted to operate, is made in the Parliament. The Committee therefore urge that Government should bring before the Parliament a comprehensive policy statement on Government's Oil Policy with particular reference to the involvement of foreign oil companies and its approach to the exploration strategy for the future.

D. Integrated Energy Policy

Recommendation No. 30 (Paragraph 4.19)

14. The Committee had pointed out that the Government has not framed any integrated energy policy for the country taking into account all the energy sources like coal, hydel and other energy sectors. For this purpose Government had appointed an Advisory Body on energy in March, 1983 for formulating an integrated energy policy. It was stated to have given several recommendations in September, 1983 and February, 1984. The Committee had recommended that Government should examine these recommendations early and place before Parliament and integrated energy policy at the earliest. The Committee had also recommended that if considered necessary, a high Powered Committee having some experts on it should be appointed.

15. In their reply the Government have stated that the Committee's recommendations for formulating integrated energy policy has to be considered by the Government for energy sectors including petroleum. This is a large issue beyond the scope of Ministry of Petroleum & Natural Gas and as such would require consideration of the Cabinet Secretariat and the Advisory Board of Energy.

16. The Committee regret to note that in their action taken reply, the Government have merely stated that the issue involved was beyond the scope of the Ministry of Petroleum & Natural Gas and required consideration by Cabinet Secretariat and the Advisory Board of

Energy. It is unfortunate that no action has been taken by the Ministry on the recommendation so far. It is needless to point out that if the Ministry of Petroleum & Natural Gas could not take any decision on its own.

The least that was expected of the Ministry was that they would take action to place the matter before the appropriate body in the context of the Committee's recommendation. The Committee strongly feel that an integrated energy policy must for the country and they therefore, desire that Ministry should initiate action for the formulation of such a policy.

CHAPTER. II

RECOMMENDATIONS THAT HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation Serial No. 3 (Paragraph No. 1.13)

The Committee note that even though Bureau of Public Enterprises had issued guidelines as far as back, in 1974 to the effect that each Undertaking were required to prepare a Corporate Plan with formal ratification/approval by the administrative Ministry, the Ministry of Petroleum undertook to pursue the matters only after the Committee on Public Undertakings (1983-84) had brought out in their 91st Report on Bharat Petroleum Corporation Ltd. that oil companies had no uniform approach to corporate plan and had recommended that all undertakings should prepare their Corporate Plans with formal ratification/approval by the Ministry. The Committee are unhappy to find that even after a lapse of about two years, the Corporate Plans of most of the undertakings including ONGC are yet to be finalised. The Committee would urge that Ministry of Petroleum should fix responsibility for this sorry state of affairs. The Committee must stress once again that Corporate Plans of all undertakings under their administrative control must be finalised without further delay as they feel that this would not only help individual undertaking to achieve their long term objectives but also the Ministry would have an overall view of the production and requirements of petroleum and related products in the country.

Reply of the Government

The Corporate Plan of the following undertakings have since been finalised and approved by the Government:

1. Lubrizol India Limited.
2. Hindustan Petroleum Corporation Limited.
3. Bharat Petroleum Corporation Limited.
4. Indian Oil Corporation Limited.

5. Cochin Refineries Limited.
6. Engineers India Limited.
7. Madras Refineries Limited.
8. Indo-Burma Petroleum Co. Limited.

In the case of Biecco Lawrie Company Limited, it has been decided that the Corporate Plan could be prepared only after the rehabilitation plan of the undertakings is approved first. The Corporate Plan of Oil India Limited and Bongaigaon Refinery & Petrochemicals Limited are being revised in the light of the comments furnished by the Planning Commission. The Corporate Plans of ONGC (revised Plan), and Balmer Lawrie Company Limited are still awaited from these undertakings and that of GAIL is being examined.

Recommendation Serial No. 5 (Paragraph No. 2.23)

The Committee find that actual staff strength at ONGC Head office increased from 1826 in 1981 to 2530 in 1985. ONGC has stated that on account of expanding exploration and exploitation activities there has been corresponding increase in work relating to planning budgeting, control etc. at Head Office. The Committee were also informed that as a result of implementation of reorganisation scheme efforts were being made to shift many persons from Head Office to regions where operational activities were increasing and there was possibility of reducing the manpower at Head office by 30%. According to the Committee, this is a step in the right direction and ONGC should complete this exercise as early as possible.

Reply of the Government

ONGC has adopted the following policy to achieve the desired results for reducing the manpower at Head Office :

(a) no additional transfer of officers to Dehradun under normal circumstances;

(b) the request for transfers to Dehradun on compassionate grounds to be scrutinised carefully and acceded only with the approval of the Chairman, ONGC;

(c) wherever possible, the staff belonging to decentralised categories be encouraged to opt for transfer to Regions/projects.

ONGC have achieved a reduction of 11.15% in the manpower at Headquarters in respect of transferable categories (class I and II) during the nine months period 1-4-1986 to 1-1-1987. The Commission is endeavouring to achieve the target of 30% reduction as early as possible.

Recommendation Serial No. 7 (Paragraph No. 2.25)

The Committee's examination of establishment overheads of Head Office of ONGC has revealed that there has been manifold increase in wage bill, maintenance expenses and other establishment expenses including travelling allowance during 1980-81 to 1984-85. The wage bill increased from Rs. 3.23 crores in 1980-81 to Rs. 8.24 crores in 1984-85. The maintenance expenses increased from Rs. 0.11 crores in 1980-81 to Rs. 0.50 crores in 1984-85. Similarly, other establishment expenses including travelling allowance increased from Rs. 1.03 crores in 1980-81 to Rs. 4.16 crores in 1984-85. The Committee are concerned to note that there has been a four-fold increase in the establishment expenses over a period of 5 years. The Committee desire that this abnormal increase in the establishment expenses should be critically analysed with a view to effect economy.

Reply to the Government

ONGC had set up a task force to critically examine the reasons for the increase in the establishment expenses and to recommend concrete suggestions to effect allround economy. The task force has completed its study and recommended that in addition to continuation of steps already initiated by ONGC for reduction of incidence of T.A and control of inventory of stores/spares, efforts should be made by the civil engineering department to keep closer watch on the expenditure of repairs and maintenance at Headquarters so that all possible economies are affected within the approved budget estimates. The task force has also suggested for constitution of task force in different business groups for overall review of manpower to secure its optimum utilisation.

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86=ONG US (EO) dated 20-3-87].

Recommendation Serial No. 8 (Paragraph No. 2.26)

ONGC paid overtime allowance to the tune of Rs. 4.03 lakhs, 5.06 lakhs, 6.9 lakhs, 6.32 lakhs and Rs. 7.77 lakhs during the year 1981 to 1985 year-wise. The Committee feel concerned over the steady increase in the payments of overtime allowance particularly in view of the facts that ONGC itself feel the manpower strength at Head Office was more than the requirements and about 30% of the total staff was being shifted to the regions/operational areas with a view to ensure proper utilisation of manpower. Chairman, ONGC was candid in his admission that overtime has to be cut down. The Committee would like to be informed about the concrete measures taken and results achieved in this direction. The Committee also recommend that as agreed to by the Chairman, during evidence, ONGC should introduce immediately a suitable incentive scheme for increasing the productivity of manpower in the organisation.

Reply of the Government

Since the Head Office of ONGC is governed by the U.P. Shops and Commercial Establishment Act, all the employees who are required to stay beyond the working hours should be paid overtime allowance. However, expenses on overtime allowance has been contained at the last years level.

As regards the introduction of the incentive scheme there already exists a scheme which is renewed & modified from year to year.

Recommendation Serial No. 11 (Paragraph No. 3.23)

3.23 The Committee are constrained to note that even though Member (Exploration) of ONGC is on the Board of Oil India Ltd. no meaningful coordination exists between the two national agencies. Transfer of technology between ONGC and OIL is done basically on commercial lines. Even the communications satellite facilities are not being shared by these two companies. At present there is no coordination Committee to coordinate the activities of ONGC and OIL. The Committee feel that coordination between the two is a must in the national interest and accordingly recommend that

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86=ONG US (EO) dated 20-3-87].

there should be a Coordination Committee having representatives of Ministry of Petroleum and Natural Gas, ONGC and OIL to ensure better coordination of the activities of these two agencies and exchange of ideas for proper exploration and exploitation of hydrocarbon resources in the country.

Reply of the Government

The ONGC and OIL are the two national oil exploration and production organisations in the country. A healthy inter-action and coordination between two organisations already exists. For instance, the basin analysis expertise available with the KDM Institute of Petroleum Exploration was recently utilised by OIL to obtain a second opinion on geological and hydrocarbon prospects of the Mahanadi offshore area. OIL also obtained a second opinion from the Institute of Reservoir Studies, Ahmedabad on the development of Kharsang field. Similarly, sometime back the computer facility available with OIL were utilised for seismic data processing by the ONGC. Being commercial organisations, these services are naturally obtained by ONGC and OIL on commercial terms. There is also a continuous inter-action between the technical personnel of ONGC and OIL in different forums like the Scientific Advisory Committee under the Ministry of Petroleum and Natural Gas.

A task-force comprising officers of ONGC and OIL recently completed a study on availability of crude oil upto 2005 in the North-East.

The Government is of the view that it may not be necessary to formalise such efforts by setting up a Coordination Committee having representatives of the Ministry, ONGC and OIL. However, the recommendation of the Committee emphasising the need for a meaningful coordination between the two national agencies has been taken note of and efforts in this direction would be continued.

Recommendation Serial No. 12 (Paragraph No. 3.24)

3.24 From the information made available to the Committee it is seen that the Minister of Petroleum in one of the performance review meetings mentioned that ONGC and Oil India Ltd. were being

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86=ONG US (EO) dated 20-3-87].

maintained as separate undertakings for oil exploration with a view to ensure competition between the two. The Committee were, however, surprised to know from the Secretary, Ministry of Petroleum and Natural Gas that at present it was not possible to compare the performance of ONGC with OIL as no objective parameters have been evolved so far to make a comparative study of the performance of ONGC and OIL. The Committee are of the view that such comparative evaluation would be useful to both the organisations and hence, suitable parameters should be evolved without any further loss of time for proper comparison and evaluation.

Reply of the Government

The question of evolving suitable parameters for comparing the performance of ONGC and OIL has been looked into. The following parameters are being further examined for comparison :

- (i) Cost of establishing per ton of recoverable reserves of oil and oil equivalent of gas.
- (ii) Cost of production per ton of oil and oil equivalent of gas.

In view of the different logistics and geological conditions in which the two companies are operating and also the difference in size of the companies and maturity of their operations, a straight comparison based on the above parameters would be misleading. The question of further refining these parameters is being examined in consultation with the oil companies.

Recommendation Serial No. 13 (Paragraph No. 3.54 and 3.55)

3.54 The Committee have been informed that based on age of sediments and other geological elements, it has been possible to identify 26 sedimentary basins in the country. These together occupy a surface area of about 1.72 million sq. kms. of which about 0.38 million sq. kms. lie offshore. Of these 26 basins, 5 contain rocks more than a thousand million years old. They are, therefore, not considered to be prospective. The remaining 21 basins have been categorised under four categories *viz.*, (i) proved petrol if rouse basins

[Ministry of Petroleum and Natural Gas O.M. No. O-27012/8/86=ONG US (EO) dated 20-3-1987].

with commercial production of hydrocarbons, (ii) basins with known occurrence of hydrocarbons but from which no commercial production has yet been established, (iii) basins in which significant shows of hydrocarbons have not yet been found but which on general geological considerations are considered to be prospective and (iv) poorly explored frontier basins with uncertain prospects but which on analogy with geologically similar hydrocarbons producing basins of the world may be prospective.

3.55 The Committee find that out of 26 sedimentary basins, only 3 basins falling in category-I, have been extensively explored. Another 10 basins falling in categories II & III, which were considered of immediate interest have been taken up for hydrocarbon exploration. The rest of the 13 basins remain completely unexplored or are very poorly explored. The exploratory effort has thus been restricted to some selected basins where hydrocarbons had been discovered and warranted intensive exploration. Such a selective approach was perhaps justified in the context of the oil crises faced in early seventies when the production of indigenous crude was an overriding priority. The situation has now undergone a change and there is need for adopting an aggressive strategy for accelerated exploration of all the basins with a view to locate and develop new oil and gas resources. The aim of oil exploration efforts now should be not only to discover oil accumulations but also to establish that a certain basin or its part has no commercial oil potential. This would imply that each sedimentary basin should be methodically examined for which suitable strategy may have to be thought of.

Reply of the Government

Of the 13 basins mentioned 5 basins viz., Cuddapah Basin in Andhra Pradesh, Bheema and Kaladgi Basins in Karnataka, and Bastar and Chhatisgarh Basins in M.P. are not considered prospective because of the low organic content and high degree of metamorphism of the sediments in these basins. Of the remaining 8 basins 2 basins viz., Tectonized Zone of Himalayas and the Deccan syncline pose both logistic and technical problems. The Tectonized Zone of Himalayas consists of highly imbricated structure and poses additional difficulty of getting correct sub-surface picture through conventional

geophysical methods. In the Deccan Syncline, the sediments are masked by blanket of basaltic lava-flows, which create opacity to the geophysical methods for obtaining any information about these sediments below the basaltic screen. In both these basins efforts are still being made to develop effective techniques for obtaining the required subsurface geological information before drilling. A close watch is being kept for the developments that are taking place in Brazil, USSR, USA for solving problems of the type faced in Deccan Syncline. At the same time use of Deep Seismic Sounding, Magneto-telluric methods etc. is being planned for their possible use in solving this problem. Until such a time that proper techniques are developed only experiments would have to be conducted. In the remaining 6 basins geological, geochemical and geophysical surveys and parametric drilling are being planned during the 7th Five Year Plan so that adequate data is obtained to enable a better assessment of the prospectivity of these basins, so that systematic exploration programmes could be formulated. These basins are targets for more intensive exploration in the 8th Five Year Plan. Any exploratory drilling, if conducted in these without adequate data, is likely to lead to failures and wastage of the already limited resources.

Sufficient exploratory effort, particularly drilling was not done in basins other than Category-I until about the 6th Plan period. Even Category-II & III basins were explored insufficiently even though all these basins merit high priority. The strategy of exploration for the 7th Five Year Plan is to extend and step-up exploratory drilling efforts in Category-II & III basins to prove sufficient reserves to meet the growing demand; to make up for the depletion of reserves from the Category-I basins, and upgrade the data base for the 6 basins mentioned above so that systematic exploration could be conducted in them during the 8th Plan period.

Recommendation Serial No. 14 (Paragraph No. 3.56)

The sedimentary basins were identified by the Geological Survey of India from 1858 onwards and the last basin was identified in 1920. The Committee have been informed that with the change of technology some areas need to be re-surveyed. The Committee are surprised to learn from Chairman, ONGC that systematic resurvey would not be completed even within next 20 years if there were some changes

in technology or the resource constraint was there. As basins were demarcated more than 100 years ago and the technology of seismic surveys has advanced considerably the Committee feel that it should be possible to find ways and means to re-survey in a phased manner the whole country systematically with a view to establish conclusively with the help of the latest technology that there is no other sedimentary basin of interest.

Reply of the Government

Nearly the entire country has been surveyed, atleast once, by geological methods or geophysical methods or both. Additionally, the satellite imageries, now available, have also been studied. Based on the information gathered it can even now be said that—barring the areas where basaltic flows (Deccan Traps) may have concealed sediments below them, making them inaccessible to probing by these conventional methods—there is hardly any other part where any scope could exist for finding new sedimentary basin/s of significance. As stated earlier in para 3.54 and 3.55, techniques are under development/experimentation to obtain geological information from blow the basaltic flows.

It may be mentioned that resurveys in several basins, or in parts thereof, have been done and these will continue to be done in future also as and when new concepts in geology develop requiring examination or re-examination of specific elements not examined in details earlier. Likewise, as and when new techniques/technologies become available enhancing the capabilities of methods to geology of the area in greater details—a resurvey will be called for. The idea is to know more and more about the existing basins.

Prospecting involves a sequence of activities starting from collection of broad regional information, selection of areas having relatively higher priority based on this information, and subjecting these areas to more rigorous examination. This leads to repeated surveys; each time with different objectives. Surveys may, therefore, continue in many parts of the basins as long as human ingenuity of generating new ideas or developing new techniques/technologies exists.

Recommendation Serial No. 16 (Paragraph No. 3.58)

3.58 With a recent steep fall in oil prices in international market the exploration strategy has to be reviewed. The Committee

feel that opinions may be divided on whether production should be stepped up in a situation where imported oil is cheap but there can be no two opinions on the need for sustained exploration. As pointed out by the Chairman, ONGC the prices of services and materials for the oil sector have come down considerably and in some cases the prices were as low as 50 per cent. This was, therefore, the best time to carry out exploration at the lowest cost. The Committee desire that the entire strategy for exploration should be reviewed in its proper perspective and efforts to locate and develop new oil and gas reserves should be maximised in the current plan period so that there will be an increase in domestic availability at the start of the next plan.

Reply of the Government

In the background of the fall in prices in crude oil in international market and reviewing all relevant factors, the Government have decided to maintain the thrust on exploratory activity during the 7th Plan and also to retain the targets of production as envisaged earlier. The exploratory effort during the 7th Plan will be almost three times that in the 6th Plan.

Recommendation Serial No. 17 (Paragraph No. 3.65)

The statistics of the actual work done, by ONGC during the last 25 years of its existence, in the matter of survey and exploration of oil in the country, do not at all make an impressive reading. This is particularly so when considered in the context of the vastness of the area to be covered and the resources employed. As admitted by the Chairman, ONGC only 25% of the work has so far been done and 75% of the work is yet to be accomplished. It is difficult to visualise how much time will be required to complete the entire work. The Committee cannot but emphasize the need for accelerating the exploration activities of ONGC so that the stupendous task ahead could be completed within the shortest possible time. There is no gain saying the fact that for acceleration of the activities of ONGC adequate resource will have to be mobilised. There is also an immediate need to critically analyse the exploratory effort during the current plan for formulating future exploration strategy.

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Reply of the Government

The need for accelerating the exploration efforts of ONGC has been realised. In the 7th Plan the exploratory effort, both in terms of surveys and exploratory drilling, has been significantly stepped-up. The exploratory meterage planned in the 7th Plan is about 285% of the meterage drilled during the 6th Plan. Within resources allocated an optimal mix of exploratory drilling in different kinds of basins has been developed. Drilling has been intensified Category I basins to upgrade the geological reserve to producible reserves, it has been extended and stepped up in Category-II & III basins, and a cogent plan for enhancing the data base of the Category-IV basins has also been formulated. Care has been taken not to let the success-ratio deteriorate nor the returns on the investments dwindle. Further, to supplement ONGC's efforts to accelerate the pace of exploration Government has invited offers from foreign companies for exploration in 27 offshore blocks. In addition, two areas, one in North Gujarat and the other in Cauvery have been taken up for integrated intensive exploration, both seismic surveys and drilling, by the Soviets. Another area in West Bengal is also being taken by them for carrying out exploratory drilling.

The exploration strategy of ONGC has been reviewed by the Planning Commission as well as the Scientific Advisory Committee on Geosciences to the Ministry. The annual exploration programmes are being monitored and necessary mid-course corrections effected. As a result there has been an accretion of considerable Geological Reserves (112.64 million tonnes of oil and oil equivalent of gas) as well as Recoverable Reserves 103.4 million tonnes of oil and oil equivalent of gas in the first year of the 7th Plan, and the results of the current year's exploratory effort are expected to be even better.

Recommendation Serial No. 18 (Paragraph No. 3.66)

It is gratifying to note that the success ratio of exploratory efforts of ONGC compared well with the international average. Against the international average of 1 to 5 ONGC has been able to achieve a success ratio of 1 to 3. There are however a number of countries whose success ratio is much better than that achieved by ONGC.

[Ministry of Petroleum & Natural Gas O.M. No. O-27/012/8/86 ONG/US (EO) dated 20-3-1987].

Hence the effort should be to emulate the performance of the countries who have done better. The Committee wish that ONGC should take advantage of the latest technology and put in more concerted efforts in future to improve upon their own achievements.

Reply of the Government

The recommendations are noted for action. Good success-ratio in drilling depends largely on judicious selection of locations for drilling. Such a selection in turn, depends upon adequate acquisition of data, both in quality and quantity, and its systematic analysis and interpretation. ONGC, even at the cost of appearing slow, has been careful in this respect. No doubt the use of latest technology like seismic stratigraphy, 3-D modelling, etc. will enhance the capability of understanding the sub-surface geology and the mechanism of hydrocarbon entrapment much better.

Recommendation Serial No. 19. (Paragraph No. 3.76)

3.76 It is a matter of concern to note that the achievements of ONGC during the Sixth Plan period were considerably below the planned targets. There have been slippages in practically all the major activities like surveys, exploratory drilling, development drilling and production of crude and gas. As a result of this the total expenditure on survey and exploration activities during the 6th Five Year Plan was Rs. 1312 crores against the allocation of Rs. 1473.12 crores. Thus, an amount of Rs. 161 crores remained unutilised. This sounds a little ironical because on the one hand there is a prolonged tussle between ONGC and the Planning Commission for allotment of more resources and on the other ONGC is unable to fully utilise whatever is sanctioned. The Committee cannot but emphasise that the targets for which adequate budgetary provisions have been made should be kept up and met at all costs. In this context, the Committee will like to emphasise that the financial procedures which lead to delay in release of amounts sanctioned should be reviewed and streamlined. The Committee would also like ONGC to learn lessons from their past experience and see to it that the targets set down for the Seventh Plan are fully achieved and the funds allotted therefor do not remain unutilised and lapse.

Reply of the Government

It is a fact that there has been a shortfall in the actual expenditure during the 6th Plan on surveys and exploratory activities vis-a-vis the original allocation of Rs. 1473.12 crores. The shortfall in expenditure has been mainly due to the fall in international market price for equipment, materials and services and delay in supply of equipment ordered on Indian companies.

Efforts are being made by ONGC to ensure that the plan expenditure is fully utilised during the 7th Plan period.

Recommendation Serial No. 20 (Paragraph No. 3. 77)

It has been stated that the two main constraints which still inhibit ONGC in realising its plan targets are land acquisition problems and difficulty in drilling in deeper depths. The problem regarding land acquisition has been dealt within the 8th Report of the Committee (1985-86) on Oil & Natural Gas Commission (Organisational Structure and Project Clearance). As regards the problem regarding drilling in deeper depths, the Committee recommended that efforts should be made in R&D institutions of ONGC to overcome this problem and all out efforts should be made to achieve the target set for exploration and production.

Reply of the Government

As regards the problem related to drilling in deeper depths, the Committee's recommendation for enhancing efforts in the R&D Institutes is well taken. In fact, the I.D.T. has now been able to successfully develop drilling policies for 2 problematic areas viz., Krishna Godavari Onshore and Tripura, as a result of which wells at Narsapur, Razole, Rokhia have been successfully completed. It may also be noted that ONGC is utilising expatriate assistance through joint venture for drilling 7,000 meters deep wells in Himalayan Foot Hills.

Recommendation Serial Nos. 21 and 22 (Para Nos. 3.89 and 3.90)

3.89 The Committee find that in the matter of off-shore surveys also the drilling metreage has come down considerably in the last three years. From 27,231 line Kms. in 1982-83, it has come down

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86—ONG/US (EO) dated 20-3-87].

to 23,444 line kms. in 1984-85. The position was particularly bad in 1983-84 when the total metreage was only 19,774 line kms. According to ONGC this was the result of a deliberate policy to reduce the quantum of work as data collected earlier was still to be processed and there was a backlog of seismic data to the tune of 34,190 line kms. ONGC could not put forward any valid reason for the reduction in the quantum of work except the decision of the Defence Ministry to impose a total ban on sending data from sensitive areas abroad for processing. The Committee feel that this is not a sufficient ground for reducing off-shore survey work particularly in view of the fact that after the discovery as Bombay High Offshore in 1975, no major discovery had been found in off-shore area. The Committee find that one of the reasons given for the backlog of seismic data was the non-arrival of large capacity computer from USA. The proposal for large size computer was approved by Government in August, 1983 at a cost of Rs. 43.64 crores. As per the schedule, the computer should have been installed by mid 1985. Even though the building was ready, exporters have not been granted a licence by USA Government so far. The Committee were informed that the matter was being pursued by the Ministry of External Affairs. The Committee are of the view that the matter should be taken up at the highest level so that a final view could be taken on the possibility of acquiring large computer from USA and some alternate arrangements could be thought of to meet the urgent requirement of ONGC if final response from UAS was negative.

3.90 The interpretation of the data already gathered is an area in which the Committee feel that substantial improvement is needed and must be accelerated. The Committee would suggest that the backlog in respect of the processing of data should be quickly liquidated by using the facilities available with other organisations in the country or by getting it processed abroad. The Committee would like to be informed of the efforts made and results achieved in this direction within next six months.

Reply of the Government

Seismic data is collected by ONGC onshore and offshore. Certain areas in the offshore have been classified by the Ministry of

Defence as sensitive. The data pertaining to the sensitive areas is mostly processed in India. Specific approval of that Ministry is required for such data to be processed abroad. The in-house capacity available with ONGC/OIL and NIC is being fully utilised. At the specific request of this Ministry, the Ministry of Commerce have also allowed private entrepreneurs in the 'SEEPZ' to process data on ad-hoc basis. The acquisition of data by ONGC at present exceeds the facilities available in the country for processing. This tight position is likely to remain until ONGC are able to augment their existing in-house capabilities. There is a proposal to acquire large capacity computers for this purpose. One large capacity computer has since been delivered to ONGC at Dehradun and is expected to be operational by March 1987. Contracts for five computers have been signed by ONGC with foreign suppliers. Two of these computers have also arrived at Calcutta and Baroda. The computers at Bombay, Madras and Jorhat (Assam) are expected to be delivered by November, 1987.

Recommendation Serial No. 24 (Paragraph No. 3.104)

3.104. The Committee have reasons to believe that ONGC take unduly long time in handling tenders floated from time to time for various services and contracts. The delay, apart from causing avoidable embarrassment, has resulted in a setback to the exploration programme. To give a concrete instance, it may be mentioned that Government took the decision to involve private contractors in the onshore drilling programme on a selective basis in 1981. Based on this decision the ONGC issued an advertisement in February 1985 seeking to invite bids from the prospective bidders. Since then bids have been received and series of discussions held with the bidders but no decision could be taken on any of the bids as yet. The Secretary, Ministry of Petroleum also deposed before the Committee that there were procedural delays in INGC also for which ONGC had to streamline their procedure for examination of tenders, etc. He had stated that in some cases the quotations received by ONGC by October, 1985 had not been finalised till April, 1986. More-over apart from frequent changes in the norms and rules, the terms and conditions are also frequently modified from one tender to another tender. This creates the suspicion that these frequent changes are made to add or to eliminate the tenderers. The Committee feel that there is scope for tightening up of procedures both in the Ministry

and the ONGC with a view to reducing delays in the finalisation of tenders and quotations. The Committee would like to be apprised of the concrete action taken in this behalf within six months.

Reply of the Government

The time taken in processing foreign exchange cases is sought to be reduced through enhancement of the delegated powers of the ONGC and the Ministry. From the next financial years, the powers of the ONGC would be enhanced from the present limits of Rs. 25 lakhs for capital items and services and Rs. 50 lakhs for stores and spares, to Rs. 1 crore for each item. The bulk release of foreign exchange to ONGC would also be enhanced to Rs. 100 crores.

Correspondingly the powers of the Ministry are also being enhanced from Rs. 3 crores to Rs. 5 crores.

Recommendation Serial No. 25 (Paragraph No. 3.105)

The Committee feel that Indian companies both in the public and private sectors should be encouraged to undertake exploration activities. If the Indian companies can be made to enter oil exploration in a big way, much of the leeway in the exploration actively can be made up quickly.

Reply of the Government

Oil exploration in the country is being carried out exclusively by ONGC and Oil India Ltd. The Government have also decided to offer certain selected offshore blocks to foreign companies. Areas in Cauvery, Cambay and West Bengal are also being given to Russians for integrated exploration.

In order to boost indigenisation and to supplement the efforts of ONGC/OIL, Indian companies are being allowed to take up drilling and other oil field services on contract basis. Joint ventures and technical collaborations are also encouraged between Indian companies and reputed foreign oil companies for this purpose. Already

18 Joint Ventures/Foreign Collaborations for drilling services have been approved by the Government.

Recommendation Serial No. 26 (Paragraph No. 3.115)

3.115 The Committee note that the cost of onshore exploratory drilling increased from Rs. 5,360 per meter in 1982-83 to Rs. 9,581 per meter in 1984-85. However, during the same period the cost of offshore exploratory drilling showed marginal decline. The per meter cost of offshore exploratory drilling was Rs. 33,477, Rs. 33,843 and Rs. 32,080 respectively during the years 1982-83, 1983-84 and 1984-85. In this regard various reasons like deployment of more rigs, increase in salary etc. of the staff, increase in material cost and drilling in deeper depths, etc. have been advanced by the ONGC. The Committee feel that since these reasons are common to offshore drilling also, there does not seem to be any justification for the steep increase in cost of onshore exploratory drilling. The Committee recommends that this aspect should be gone into depth and concerned efforts should be made to effect the economy in the onshore drilling costs in particular. The Committee are of the firm view that this is certainly an area where ONGC can effect substantial economies.

Reply of the Government

ONGC have clarified that the increase in the cost of onshore exploratory drilling vis-a-vis offshore during 1982-83 to 1984-85 was mainly due to the following factors:

- (i) The average depth of onshore wells increased from 2136 meters to 2579 meters whereas the average depth of offshore wells came down from 3168 meters to 2889 meters during this period. Since the cost of drilling normally varies in proportion to the increase in depth, there has been an increase in the cost of onshore exploratory drilling.
- (ii) The cost of casing and tubings per meter for onshore well has gone up due to the increase of depth whereas there has been a saving on this account in the offshore.

- (iii) In 1984-85, ONGC charter hired two rigs in the onshore which resulted an increase in contracts payments of the order of Rs. 888 in the onshore drilling cost per meter. On the contrary, the cost of offshore contractual payments came down mainly due to the increase in the number of owned rigs during this period and also due to slight reduction in market prices for certain services.

ONGC have also taken various measures for effecting economy in drilling costs such as introduction of lighter mobile rigs and dragging of rigs. The Government had also set up a Committee under the chairmanship of the then Adviser, Economic Policy and Planning in the Ministry to recommend measures for increasing drilling efficiency. ONGC is already implementing the recommendations made in the report submitted by this Committee.

Recommendation Serial No. 27 (Paragraph No. 3.116)

3.116 The Committee were also informed by ONGC that the costing system was different for onshore and offshore drilling and a Committee had been constituted for rationalisation of costing systems. Similarly the Committee have noted that there were wide gaps between the revised estimates and actual cost of drilling in case of both onshore and offshore drilling during the last 3 years. Admittedly there was need for further refining of the budgeting process and necessary remedial action was stated to have been initiated in the matter. The Committee need hardly stress the importance of these aspects viz. rationalisation of costing system and refinement of budgeting process. The Committee, therefore, recommended that ONGC should expedite action for strengthening the cost control system in the Commission.

Reply of the Government

ONGC have stated that they have examined the different costing systems for drilling followed in onshore and offshore and have been able to achieve a uniform system of costing. They are also making efforts to improve and rationalise the costing system for ensuring better cost control and cost reduction. A special Task Force headed by a Deputy General Manager had been constituted for this purpose.

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86—ONG/US (EO) dated 20-3-87].

This Task Force is expected to go into the micro details of the various aspects of drilling so as to bring about cost reduction. A special drive has also been initiated by ONGC to create cost consciousness in all sections of employees. ONGC has also decided to create a Costing Cell headed by a Senior Officer who will be exclusively responsible for costing work for drilling etc.

Recommendation Serial No. 28 and 29 (Paragraph No. 4.17 and 4.18)

4.17 The Committee note that the production of crude oil increased from 10.5 million tonnes in 1980-81 to 28.99 million tonnes in 1984-85. The demand for oil in the country increased from 22.26 million tonnes to 40 million tonnes during the same period. A redeeming feature has been that the percentage of self-sufficiency has also increased from 32.54 in 1980-81 to 73 in 1984-85. The gap between the production and the total requirements is bridged by imports of crude oil from the other countries. The total imports of crude oil during Sixth Five Year Plan were of the order of Rs. 18,096 crores. During Seventh Five Year Plan also, there will be wide gap between the indigenous production and the requirement. The Committee feel dismayed to learn that as per the projections of the Seventh Five Year Plan, at the end of Seventh Plan, the self-sufficiency ratio is likely to come down to 61% from the present level of over 70%. This would be on account of increase in demand being more than increase in the production. Thus, unless new sources of oil are discovered and exploited quickly, the country's dependence on imported oil will go up to alarming levels. In such a situation, the country has little option except to locate and develop new fields unless there is no constraint of foreign exchange available for imports. The Committee, therefore, recommend that concerted efforts should be made to maintain atleast the present level of the self-sufficiency ratio in the demand and production of oil if it is not possible to improve it further.

4.18 Chairman, ONGC, informed the Committee during evidence that country could be self-reliant in the matter of oil and related products by the end of this century provided adequate resources were available for exploration/exploitation of hydrocarbon resources. On the contrary, the Secretary, Ministry of Petroleum and Natural Gas painted a very bleak picture before the Committee stating that since exploration of oil is a probabilistic exercise, it was not possible to indicate with any certainty that self-sufficiency could be achieved

within a given time-frame. The Committee view with concern this lack of commitment on the part of the Ministry. Keeping in view the vital importance of availability of oil and oil products in the economy of the country, the Committee expect that the least the Government can do is to frame realistic targets to achieve self-reliance in the matter of oil and related products and somehow provide the necessary resources for the realisation of these targets. They cannot absolve themselves of the responsibility by merely stating that oil exploration was a probabilistic exercise. It is no doubt necessary that such a decision can be taken only at the highest level of the decision-making in the Government and the Committee would like the Ministry of Petroleum and Natural Gas to take this matter to the appropriate forum.

Reply of the Government

History of exploration the world over shows that generally large pools of oil are discovered early and with less efforts. Subsequent discoveries are smaller. The benefits of larger discovery resulting in higher production help a country like India, achieve higher rate of self-sufficiency. Thus, while self-sufficiency was in the vicinity of 6% in 1956, though significant discoveries in Assam, Gujarat and Bombay High, the country achieved a ratio of 70% self-sufficiency, in 1984-85. However, by the end of the Seventh Plan, the projected demand is 57.98 million tonnes against a production of 34.5 million tonnes indicating a self-sufficiency ratio of 61%.

It is possible to improve upon this ratio by exploiting proven-reserves at a faster pace. However, the depletion rate of hydrocarbons is based on a policy which a country consciously adopts. In India, a production reserve ratio of 1:15 has been generally considered reasonable.

For adding to the reserves to sustain higher production, greater exploratory effort is necessary. The Seventh Plan recognizes this and the exploratory drilling meterage has been increased almost three times as compared to the Sixth Plan to give a thrust to exploration. Simultaneously, 27 offshore blocks have been offered to foreign oil companies for exploration. In addition, Soviet assistance is also forthcoming for onshore exploration in Cauvery, Cambay and West Bengal Basins. With this three-pronged strategy for exploration, about 1100

million tonnes of proven reserves are expected to be added during the Plan period. The Plan outlay for ONGC for the Seventh Plan has been indicated as Rs. 8752 crores. In the first two years itself about Rs. 4,000 crores are likely to be spent. The Planning Commission is expected to make additional outlays on a year to year basis, to meet the requirements of the physical programme. The Ministry has consistently pleaded for higher outlays for ONGC/OIL; however, the final physical and financial targets are determined by the Government keeping in view the overall national priorities. These targets and outlays are decided at the very highest levels of decision-making in the Government and finally approved by the National Development Council.

Notwithstanding the above, it must be recognised that success in exploration is a matter of chance. However, optimistic one may be, it would be incorrect to state that higher financial allocations would definitely result in self-sufficiency through discovery and production of hydrocarbons in the country. Finding oil cannot be directly proportionate to resources allocated. It is in this background that the Secretary (P&NG) made the statement that it would not possible to indicate with any certainty that self-sufficiency could be achieved within a given time frame. There is no lack of commitment on the part of the Ministry and the targets framed are realistic even though the degree of self-reliance may appear to decline. In the opinion of the Ministry, it would be incorrect to paint an unduly optimistic picture before an august Committee like the COPU. As regards targets and outlays for exploration it is reiterated that these were fixed after consideration at the highest level of decision-making in the Government.

Recommendation Serial No. 31 (Paragraph No. 5.24)

5.24 The research and development activities of ONGC are mainly conducted in their three institutes, viz. (i) KDM Institute of Petroleum Exploration, Dehradun, (ii) Institute of Drilling Technology, Dehradun and (iii) Institute of Reservoir Studies Ahmedabad. ONGC is also in the process of setting up two additional institutes viz. Institute of Petroleum Technology and Institute of Engineering and Ocean Technology both at Panvel, Bombay at the cost of Rs. 8 crores and Rs. 9.86 crores respectively. The construction work for these institutions was to begin in November, 1985. The Committee recommend that ONGC should adhere to the original schedule for completion of these institutions so that cost over-runs caused by delay in setting

up the institute could be avoided. They need hardly stress the need for monitoring the project schedules on regular basis for timely completion of these institutes.

Reply of the Government

All out efforts are being made by the ONGC to ensure timely completion of the Institute of Petroleum Technology and Institute of Engineering and Ocean Technology being set up at Bombay. There has been some set-back due to heavy rains in Bombay- Progress is monitored by the Advisory Board on Research and Development. The Commission has been asked to put extra efforts as so to complete these projects without slippages.

Recommendation Serial No. 32 (Paragraph No. 5.25)

5.25 The Committee have been informed by ONGC that they have acquired considerable expertise in the field of oil exploration. In so far as onshore oil exploration is concerned, ONGC has become more or less self-sufficient and has been conducting the activities on their own. However, ONGC has been availing of foreign expertise in certain selected areas in order to update the indigenous technology and to draw upon the experience of foreign oil companies in these fields. In the field of off-shore exploration also, ONGC is reported to have gone a long way towards self-sufficiency. However, in view of rapid developments in technology in this area, ONGC has been going in for assistance from reputed foreign oil companies. ONGC is also reported to have identified the technological gaps in each operational area. The acquisition of latest technology for filling up the gaps in each operational area. The acquisition of latest technology for filling up the gaps is done with continuous interaction with foreign companies through training and association of technical personnel, international conferences/symposia/seminars/workshops within the country and abroad. The Committee recommend that further efforts should be made for absorption of latest technology in ONGC in the field of survey, exploration and production of oil, which is very essential for achieving the goal of self-sufficiency in oil and related products in the country.

Reply of the Government

The recommendation of the Committee has been noted. All efforts will be made by ONGC for absorption of latest technology in the field of survey, exploration and production of oil.

Recommendation Serial No. 33 (Paragraph No. 5.26)

5.26 Even though ONGC has been maintaining that their technology was comparable to foreign companies and they were near the goal of self-reliance in this field the Committee are dismayed to learn that the foreign exchange spent by ONGC has been increasing year after year. Foreign exchange outgo on account of ONGC's activities increased from Rs. 920 crores in 1982-83 to Rs. 1189 crores in 1984-85. The Committee feel that more efforts are needed to indigenous all sorts of technology and tools for exploration and exploitation of hydrocarbon resources in the country so as to minimise the outgo of much needed foreign exchange. Vigorous efforts by R&D are therefore called for.

Reply of the Government

There was an acceleration of the activities of ONGC during the 6th Plan period. The tempo of these efforts is proposed to be stepped up further during the 7th Plan. This increase in the level of activity resulted in increased foreign exchange outgo on account of import of equipment and services required by ONGC. With a view to reducing this foreign exchange outflow as well as to develop the indigenous capability, the Government have consciously embarked on a programme of indigenisation in the petroleum sector. A number of concessions like deemed export benefits, price preference up to 35% based on value addition, duty concession for import of raw materials and components etc. have been provided to promote indigenisation.

These efforts have paid dividends and there has been an encouraging response on the part of the Indian industry to undertake manufacture of sophisticated oil field equipment and to provide oil field services. Indigenisation has inter-alia been effected in the manufacture of onshore rigs, offshore platforms, jack-up rigs, offshore supply vessels, casing pipes and tubings, oil field chemicals, oil well cement, etc. A number of joint ventures/foreign collaborations have also been approved by the Government of India for rendering oil field services.

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86—ONG/US (EO) dated 20-3-87].

As a result of these efforts, the level of indigenisation (calculated on the basis of value of orders placed on Indian parties) has increased from 24.69% in 1981-82 to 53.61% in 1985-86. In absolute terms against orders worth Rs. 180 crores in 1981-82, orders worth Rs. 947 crores were placed on Indian parties in 1985-86. ONGC is also making all out efforts for building necessary in-house capabilities through R&D, technology absorption etc.

Recommendation Serial No. 34 (Paragraph No. 5.27)

5.27 The Committee were informed by Chairman, ONGC that ONGC has been able to export its technology to neighbouring developing countries i.e. Abu Dhabi, Iraq, Tanzania and Sri Lanka. The Committee appreciate that this is a step in the right direction. The Committee need hardly emphasise that the exports of technology to other countries should be augmented to earn the foreign exchange and efforts should be made to achieve break-even point in balance of payments so far as ONGC's imports and exports are concerned.

Reply of the Government

The ONGC has been interacting with foreign countries to further mutually beneficial cooperation. This includes consultancy services, training and exploration ventures in other countries. In the matter of exploration ventures abroad, the Commission is guided by the policy that they should consider only those prospective areas where exploration risks are less than those in India and the principal aim of exploration ventures abroad would be to supply oil at cost to India without requiring to pay for it in foreign currency.

Recommendation Serial No. 35 (Paragraph No. 5.28)

5.28 The Committee note that only 1.9 per cent of ONGC's approved outlay of Seventh Five Year Plan has been earmarked for R&D activities. Since ONGC is a premier institution in the field of exploration and exploitation of hydrocarbon resources in the country, the Committee are of the view that sanctioned funds for R&D activities are inadequate and importance of R&D development should not be lost sight of. They, therefore, recommend that ways and means should be found to increase the funds for R&D activities of ONGC.

Reply of the Government

The recommendations of the Committee have been noted for future guidance. ONGC has been advised to increase its R&D activities by identifying new research schemes.

Recommendation Serial No. 36 (Paragraph No. 5.29)

5.29 The Committee are surprised to know that ONGC do not maintain separate figures of foreign exchange expenditure incurred on import of technical consultancy, machinery, spares, rigs etc. required for survey and exploration activities. The Committee feel that such statistics are necessary to know the extent of yearly dependence of ONGC on foreign countries in the field of technology for survey and exploration and the Committee, therefore, recommend that ONGC should maintain an account of foreign exchange expenditure under different heads and it should also be clearly brought out in the annual reports of ONGC so as to enable the Parliament and public to have access to the vital facts.

Reply of the Government

The ONGC is compiling the actual foreign exchange expenditure under the following heads :—

- (i) Capital Expenditure.
- (ii) Stores and Spares.
- (iii) Services.
- (iv) Debt servicing.

Collection of the actual expenditure under the above heads cover the entire activities of the Commission including services of exploratory activities as also purchases of machinery, spares, rigs, etc.

The recommendation of the Committee to bring out the foreign exchange expenditure in the Annual Plan has been noted by ONGC for necessary action.

CHAPTER III

RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF GOVERNMENT'S REPLIES

Recommendation Serial No. 15 (Paragraph No. 3.57)

3.57 The basic objective of exploration is to convert potential hydrocarbon resources, into proven inplace geological reserves. According to ONGC, the total prognosticated hydrocarbon resources in the country as on 1-1-1985 were 15.39 billion tonnes. As against this only 3.651 billion tonnes have been converted into inplace geological reserves of hydrocarbons (i.e. oil and oil equivalent of gas). Thus less than 25 per cent of India's ultimate theoretical oil and gas potential has been counted as proven. India is thus grossly under-explored for oil and gas. The Chairman, ONGC stated before the Committee that they have yet to carry out 75 per cent of the work and the task involved was tremendous. The Committee are also informed that as a result of increase in exploratory efforts the ratio of geological inplace reserves would increase to 33 per cent at the end of Seventh Five Year Plan as against the present ratio of 23 per cent. The Committee feel that there is a need for further increasing the exploratory efforts to augment the prognosticated hydrocarbon resources as well as inplace geological reserves of hydrocarbons and to keep a scientific ratio between the two. For this, the Committee would recommend that a time bound programme should be chalked out for all the basins and progress of work should be monitored on regular basis.

Reply of the Government

It may not be quite correct to consider 15.39 billion tonnes as India's ultimate oil and gas potential. This figure, at the best, represent an intelligent guess about the order of magnitude of oil and gas likely to be present in various basins. These exercises of assessing the resources are attempts at crystal-gazing what, otherwise, is not known. Such exercises are made, time and again, as and when additional information about basins or an improved methodology for assessment become available. Accordingly, the figures about the hydrocarbon

resources for different basins are revised upwards or downwards. Such assessment of resources have several uses. Nevertheless, it is *not proper to arithmetically compare these gross figures with precisely-calculated and exactly quantifiable proven reserves.*

Notwithstanding the above, the conclusion that has been arrived that a large number of basins are underexplored, and that there is still large quantum of work to be done, is correct. Undoubtedly, there is a need to increase exploratory effort and this is being done to the extent feasible. It will be noted that exploratory surveys and drilling have been stepped up in the Seventh Plan. Compared to drilling of 847920 metres and 335 wells during the 6th Plan., ONGC is likely to drill 2413000 metres and 712 wells in the 7th plan. Yet another element to be noted here is that the share of Category II & III basins in the total drilling has increased from 32.5% to 41% between 6th and 7th Plans. The exploration strategy for the Category-IV basins also been outlined and geological, geochemical and geophysical surveys are being carried out in these basins. In addition, a number of parametric wells have also been indicated to be drilled during this period to obtain necessary sub-surface geological information.

Time-bound programmes can be made only when the last milestone indicating completion of the activity, is known. In exploration programme this is not so. Definite targets for a given period are being assigned to give a sense of purpose and urgency to this exploratory efforts. As such the intention behind the recommendation should be satisfactorily achieved.

CHAPTER IV

RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

Recommendation Serial No. 9 (Paragraph No. 3.21)

At present ONGC and Oil India Ltd. are the two national agencies engaged in exploration and exploitation of hydrocarbon resources in the country. Under the Petroleum and Natural Gas Rules, 1959, the agencies engaged in exploration and exploitation of Hydrocarbon resources have to take Petroleum Exploration Licence (PEL) from the Government. Thus the Government can, through the procedure of giving petroleum exploration licences, demarcate areas for exploration between the two agencies in a systematic way to avoid overlapping or duplication of efforts. However, no efforts seems to have been made by the Government to allocate specific areas to the two agencies in a rational manner.

Reply of the Government

Oil India Limited was founded as a joint sector venture with the Burmah Oil Company (BOC) of the UK on 18th February, 1959. Till a decision was taken by the Government of India to acquire the 50% equity of BOC OIL's operations were, as a policy, confined to the North-East (Assam and Arunachal Pradesh). It was only after it was decided that OIL would be deemed to have been taken over by Government of India with effect from 1-1-77 that OIL was allowed to expand its activities outside Assam and Arunachal Pradesh. It was thus that OIL was granted 28200 sq. kms. of Petroleum Exploration Licence in the Bay of Bengal (Mahanadi in 1978 and N.E. Coast in 1983), 28600 sq. kms. of PEL in Rajasthan in September 1983 and 10900 sq. kms. of PEL in Andamans offshore in March 1986.

As there was requirement to intensify exploration for hydrocarbons in order to attain self-sufficiency in crude oil, it was considered necessary to utilise the expertise and infrastructure available with OIL

towards this end. However, by the time a final decision was taken to acquire the equity of BOC, ONGC had started survey and exploration activities in almost all the basins of India. As it was not prudent to transfer ONGC's producing areas (part of Assam-Arakan, Cambay and Bombay High basins) to OIL, it was decided that OIL should be granted acreage in other basins of India.

A review of the basins where ONGC was not producing hydrocarbons and where ONGC had not achieved a sufficiently high exploration density revealed that there was necessity to intensify exploration for hydrocarbons in the Bay of Bengal, Rajasthan and Andamans offshore. Out of these three basins, Rajasthan and Andamans are in Category II and fairly prospective. The above basins are also large enough to accommodate two oil companies. The number of independent drillable locations are also numerous to justify the deployment of two companies.

Exploration Licences for on shore areas are granted by State Governments with the previous approval of the Central Government under rule 5 of Petroleum & Natural Gas Rules, 1959 (as amended from time to time). All Petroleum Exploration Licences for Offshore areas are granted by Central Government. Before asking for Central Government's approval under P&NG Rules, the State Governments generally satisfy themselves that the area in question is not already granted to any other company for exploration. Hence the chances of overlapping or duplication of efforts are remote. In the case of Offshore explorations, in case there is any chance of overlapping or duplication, the two companies are generally advised to sit together and sort out the areas which they want to explore. Both the companies formulate their plans for exploration (Annual Plans, Five Year Plan). These are considered and approved by the Central Government. These plans also include the areas which they want to explore for hydrocarbons.

Thus it would be seen from the foregoing that the Government of India's allocation of areas between ONGC and OIL is rational and changes of overlapping or duplication are very rare. It was the conscious decision of the Government to allow both OIL & ONGC to operate in certain areas like Rajasthan, Andamans, Assam, etc.

Recommendation Serial No. 10 (Paragraph No. 3.22)

The Committee were surprised to find that Oil India Ltd., had been permitted by the Government to take up exploratory drilling for oil in the offshore areas of Andaman and Nicobar Islands, where ONGC had already done considerable survey work. Similarly in Rajasthan and other areas both ONGC and OIL are carrying out survey and exploration activities. The working of two national agencies in the same area cannot be conducive to optimal utilisation of Limited national resources. When two agencies operate in the same area using the same type of equipment there is always wasteful movement of machinery and equipment and even the infrastructural facilities have unavoidably to be duplicated. The Committee feel that with a view to optimise utilisation of scarce national resources, the two agencies should not be allowed to work in the same basin. As far as possible the work relating to survey and exploration should be allocated to ONGC and OIL in separate basins.

Reply of the Government

Exploration for hydrocarbons is a unique business venture, in that explorationists compete against nature and not amongst themselves. In other words, exploration is not a zero-sum-game whereby one company's gain would necessarily be another company's loss. In fact, the success of one company in discovering hydrocarbons in a basin is of positive benefit to another company working in that basin because it increases the prospectivity of the entire basin. Due to the highly probabilistic and uncertain nature of exploration in general and geo-scientific interpretation in particular, it is necessary that independent lines of thought and operating philosophies are encourage as inputs into exploration activities. In the Oil Industry, it is not uncommon to find two companies with access to the same data arriving at two different conclusions, each one substantiated on scientific grounds. It is only actual drilling that would determine which of the interpretations is correct. This aspect assumes significant importance particularly where hydrocarbon exploration is being carried out in high cost and geologically complex areas such as offshore Andaman, Offshore Bay of Bengal and onshore Rajasthan. Such an approach towards exploration minimises the ultimate costs by spreading the risks between the two oil companies and increases the chances of an early hydrocarbon find. Exchange of data obtained from wells in a basin further contributes to more efficient operations.

One of the determinants in deciding on the effort that should be deployed in exploring a particular basin is the intensity of exploration that a basin demands. The intensity is dependent on the prospectivity and the size of the basin and the probable number of independent drillable locations. If the basin is large with a large number of independent drillable locations, the establishment of its hydrocarbon potential would be expedited if more than one company were involved in its exploration with different sets of men & material.

Additional costs due to two companies operating in a basin as against only one company, are marginal in relation to the total cost of exploration e.g., in Andamans the total overhead costs of OIL are Rs. 40 lacs out of a total project cost of Rs. 62 crores (0.6%). In Rajasthan they are about 3.6%. This is because the duplication, if any, is confined only to overheads in a limited area. Even if only one company were to operate where ONGC and OIL are presently carrying out concurrent operations, a multiple drilling programme would still be required to quickly and efficiently establish the hydrocarbon potential. A multiple drilling rig operation whether by one company or two companies would in any case add to the overhead costs.

International practice confirms the conclusion that, more often than not, two companies can develop a basin more efficiently than a single company. Three Western European countries in which the State is involved in exploration have found it beneficial to have more than one company operation. UK has British Petroleum, British National Oil Corporation and British Gas Corporation. France has Elf-Acquitaine and CFP-Total and Norway has Statoil and Norsk Hydro.

In Indian situation where expertise exists in both the national oil companies, it is all the more necessary that the geoscientific talents in both companies are exploited to full. There is thus no reason for adopting a rigid stance towards the issue of the number of companies that should operate in a basin.

Comments of the Committee

(Please see Paragraph 10 of Chapter I of the Report)

[Ministry of Petroleum & Natural Gas OM No. O-27012/8/86—ONG.US (EO) dated 20-3-87].

Recommendation Serial No. 23 (Paragraph No. 3.103)

3.103 : In order to supplement the efforts of the two national companies (ONGC & OIL) engaged in the work of exploration and exploitation of oil, Government decided to invite foreign oil companies of repeat to explore and exploit hydrocarbons in selected areas of the country. In the earlier two rounds of biddings received in 1980 and 1982 for leasing of areas for oil exploration and production; one block was awarded to a USA Company namely Chevron in 1982. This Company did exploration work in an assigned area but as no hydrocarbons were found, the Company terminated the contract. The Committee have been informed that Government was going for a third round of bidding for leasing of areas for oil exploration for which 27 blocks in different basins have been earmarked. The terms and conditions for these contracts were reportedly being finalised. The Committee are of the view that Parliament should have been taken into confidence while taking such an important decision. Even now, the Committee would like the Government to place before the Parliament a comprehensive policy statement of Government's oil policy with particular reference to the involvement of foreign oil companies and its approach to the exploration strategy for the future.

Reply of the Government

The Government had called the foreign oil companies to bid for exploration and exploitation of hydrocarbons in selected blocks in the country in two rounds in 1980 and 1982 in the past. The invitation to the foreign oil companies in 1986 in the third round was thus not a new policy decision taken by the Government. This decision is part of the Government's policy of supplementing the efforts of the two national oil companies viz. the Oil & Natural Gas Commission (ONGC) & the Oil India Limited (OIL) who are engaged in the work of exploration and exploitation of hydrocarbons. Since this was not a new policy decision, the Government do not consider it necessary that a discussion in Parliament is required at this stage. However, from time to time in replies to various questions raised by the Members information relating to the third round has been given in both Houses of the Parliament.

Comments of the Committee

(Please see paragraph 13 of Chapter I of the Report).

CHAPTER V

RECOMMENDATIONS IN RESPECT OF WHICH FINAL REPLIES OF GOVERNMENT ARE STILL AWAITED

Recommendation Serial Nos. 1 & 2 (Paragraph Nos. 1.11 and 1.12)

1.11 The Committee note that in terms of Bureau of Public Enterprises guidelines issued in 1970, 1979 and 1983 each public undertaking was required to formulate with the specific approval of the administrative Ministry, a statement of objectives and obligations which should inter alia, lay down the broad principles for determining the precise financial and economic obligations of the undertakings in the matter of creation of various reserves, responsibility of self-financing, the anticipated return on capital employed etc. However, the Committee find that Ministry of Petroleum asked the undertakings under their administrative control to frame their objectives only in June, 1983. No action seems to have been taken on the guidelines issued by BPE earlier in 1970 and 1979. This is highly regrettable. Taking note of the statement made by the Petroleum Secretary that corporate Plans of all the undertakings under this Ministry would be finalised in about three months, the Committee would like to be informed whether all the undertakings under the administrative control of Ministry of Petroleum have since formulated their micro objectives in terms of the BPE guidelines.

1.12 The Committee do not find any justification in the reply given by ONGC to the Ministry in July and October, 1983 that they need not frame their objectives as their objectives were given in the preamble to ONGC Act and their functions as mentioned in Section 14 of the ONGC Act, 1959 were the objectives. The Committee need hardly point out that the functions and objectives mentioned in ONGC Act are worded rather too generally while objectives and obligations to be framed under BPE guidelines are required to spell out specifically the broad principles for creation of various reserves, responsibility of self-financing, the anticipated return on capital employed and other matters. These objectives when clearly spelt out provide basic parameters for evaluating the performance of the undertakings and taking timely remedial measures, wherever necessary. The Committee would

like that the micro objectives of ONGC should be clearly spelt out and laid before Parliament within three months.

Reply of the Government

The recommendations of the COPU regarding framing of micro objectives by all the undertakings under the administrative control of the Ministry including ONGC have been communicated to the various undertakings. They have been requested to review the matter in the light of the recommendations. This exercise is likely to take some more time.

Recommendation Serial No. 4 (Paragraph No. 1.14)

1.14 The Corporate Plan for ONGC, the details for which were reportedly being worked out should be finalised early and laid before Parliament immediately and in any case before the end of 1986.

Reply of the Government

The ONGC is yet to submit their revised Corporate Plan to the Government for approval. The matter is being pursued with ONGC.

Comments of the Committee

(Please see paragraph 7 of Chapter I of the Report)

Recommendation Serial No. 6 (Paragraph No. 2.24)

The committee note that ONGC had appointed M/s Foundation for Organisation Research (FORE) as consultants to give an objective and independent assessment of total manpower requirements/norms in the Commission. The report of the consultants was still awaited. The Committee recommend that since the total staff strength of ONGC is over 40,000 the deployment of the staff strength in various field areas/ Head Office should be in such a manner as to ensure optimal utilisation of manpower resources. The Committee would also watch with interest the outcome of the recommendations of the consultants and the action taken by ONGC on their report.

Reply of the Government

ONGC, after making a preliminary study of the report of M/s. Foundation for Organisation Research (FORE) has discussed the report

[Ministry of Petroleum & Natural Gas O.M. No. O-27012/8/86—ONG/US (EO) dated 20-3-1987].

with the representatives of the FORE. The final report of FORE is expected by the end of March 1987.

Recommendation Serial No. 30 (Paragraph No. 4.19)

The Committee's examination has also revealed that the Government have not framed any integrated energy policy for the country taking into account all the energy sources like coal, hydel and other energy sectors. For this purpose, Government appointed an Advisory Body on Energy in March, 1983 for formulating an integrated energy policy. It is stated to have given several recommendations in September, 1983 and February, 1984. The Committee recommend that Government should examine these recommendations early and place before Parliament an integrated energy policy at the earliest. If necessary, some high powered committee could be appointed having some experts on it. The Committee would like to be informed of the action taken in this regard.

Reply of the Government

The above recommendation for formulating integrated energy Policy has to be considered by the Government for energy sectors including petroleum. This is a large issue beyond the scope of Ministry of Petroleum & Natural Gas and as such would require consideration of the Cabinet Sectt. and the Advisory Board of Energy.

Comments of the Committee

(Please see Paragraph 16 of the Chapter I of the Report)

APPENDIX I

*Minutes of the 77th Sitting of the Committee on Public Undertakings
held on 24th April, 1987*

The Committee sat from 15.30 hr. to 16.30 hrs.

PRESENT

Shri K. Ramamurthy—Chairman

MEMBERS

2. Chowdhry Akhtar Hasan
3. Shri Dinesh Goswami
4. Shrimati Sheila Kaul
5. Shri Satyagopal Misra
6. Shri Braja Mohan Mohanty
7. Sri K.R. Natrajan
8. Shri K. Ramachandra Reddy
9. Shri Chiranji Lal Sharma
10. Shri Jagesh Desai
11. Shri Krishna Nand Joshi
12. Prof. C. Lakshmanna

SECRETARIAT

- | | |
|---------------------|--|
| 1. Shri N.N. Mehra | —Joint Secretary |
| 2. Shri G.S. Bhasin | —Senior Financial Committee
Officer |
| 3. Shri Rup Chand | —Senior Financial Committee
officer |

2. The Committee first considered and adopted the following action Taken Reports, as approved by the Action Taken Sub-Committee.

- (i) * * * * *
- (ii) Action Taken by Government on the recommendations contained in the 12th Report (1986-87) of CPU on Oil and Natural Gas Commission—Head Office Survey and Exploration.
* * * * *

4. The Committee authorised the Chairman to finalise the draft Reports on the basis of factual verification by the Ministries & Undertakings concerned and Audit and present the same to Parliament.

The Committee then adjourned.

APPENDIX II

(Vide Para 3 of the Introduction)

Analysis of the Action taken by Government on the recommendations contained in the 12th Report of the Committee on Public Undertakings (Eighth Lok Sabha) on Oil & Natural Gas Commission Head Office, Survey & Exploration

I. Total number of recommendations	36
II. Recommendations that have been accepted by the Government (Vide recommendations at Sl. Nos. 3,5,7,8, 11-14, 16-22, 24-29, 31-36	27
Percentage to total	75%
III. Recommendation which the Committee do not desire to pursue in view of Government's reply (Vide recommendation at Sl. No. 15)	1
Percentage to total	2.78%
IV. Recommendations in respect of which replies of Government have not been accepted by the Committee (Vide recommendations at Sl. Nos. 9, 10 and 23)	3
Percentage to total	8.33%
V. Recommendations in respect of which final replies of Government are still awaited (Vide recommendations at Sl. Nos. 1,2,4,6 and 30)	5
Percentage to total	13.89%