



PETROFED

Petroleum Federation of India

Report on Review of the Oilfield (Regulation and Development) Act, 1948 and the Petroleum and Natural Gas Rules, 1959

June 2008

A study by PetroFed in association with Member Company and Knowledge Partner

PRICEWATERHOUSECOOPERS 

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1 Introduction

1.1 Background

- 1.1.1 Regulation may broadly be understood as an effort by the State 'to address social risk, market failure or equity concerns through rule-based direction of social and individual action'. Regulations are meant to achieve a balanced growth of the market. The interests of both the market players and the consumers are kept in mind while regulating any industry under a policy framework. Considering the strategic importance of hydrocarbons in the economic growth of a nation, policymakers resort to close regulation of the hydrocarbon industry.
- 1.1.2 The need for proper regulation of oilfields and development of mineral oil resources in India was recognised in the early years of our independence when the Industry Policy Resolution of April 6, 1948 included minerals amongst the industries to be subjected to Central regulation and control. Till 1948, in India each Province had its own methodology for permitting exploration and production of crude oil.
- 1.1.3 The first all India Act for the regulation of oilfields and development of mineral oil resources was enacted in 1948 in the name and style of The Oilfields (Regulation And Development) Act, 1948 (hereinafter referred to as "the Act") which came into effect from October 25, 1949. The Government also notified the Petroleum and Natural Gas Rules, 1959 (hereinafter referred to as "the Rules") which provides for rules to regulate the grant of licences and mining lease in respect of petroleum and natural gas resources in India.
- 1.1.4 The Act broadly provides for powers of Union Government to regulate the grant of leases and licences, conservation and development of mineral oil, royalty on mineral oil, powers of inspection and delegation of powers exercisable under the Act, besides the penalties. The Rules elaborate the provisions of the Act and deal with the grant of petroleum exploration licence (PEL) and petroleum mining lease (PML), rentals and royalty, transfer or assignment of licence/lease, pre-emptive right of the Government, suspension and cancellation of licence/lease. The Act and the Rules in some ways were ahead of their time and provided for execution of exploration and production operations through "modern oil field practices" and have provisions for optimum production from fields as also for prevention of pollution. Further, the Rules provide for a constitution of a suitable agency for supervision of compliance of the Rules by the licensee/lessee.
- 1.1.5 While from time to time, the Act and the Rules have undergone amendments, today, after more than half a century, it is but rational to revisit the said Act and the Rules in the light of new industry dynamics which have undergone tremendous change as compared to the circumstances which prevailed during the drafting of the Act and the Rules. The Ministry of Petroleum and Natural Gas (MoPNG) has, therefore, requested Petroleum Federation of India (PetroFed) to carry out such a review aimed at suggesting any change or modification in the Act and Rules, as amended till date. PetroFed has, in turn, requested its member company and knowledge partner PricewaterhouseCoopers (PwC) for undertaking such a review.

1.2 Approach and Methodology

- 1.2.1 PetroFed is conscious of its role and responsibility to act as a catalyst in enabling smooth introduction of regulatory reforms in the petroleum industry to help industry gear up to meet the energy security challenge brought about by India's strong economic growth trends and prospects. It has always been an effort of PetroFed to adopt a consultative approach while suggesting such sectoral reforms to policy makers. In this study also, PetroFed has sought to mobilise industry opinion on upstream regulatory issues and convey it to the Government after deliberations with the industry.
- 1.2.2 On September 27, 2007 the MoPNG issued a letter requesting the Oil PSUs and private E&P companies, through the Directorate General of Hydrocarbons (DGH), to suggest amendments/modifications to the Act and the Rules. The letter also requested companies to nominate a nodal officer for this purpose.
- 1.2.3 On October 12, 2007, a response sheet was prepared and circulated by PetroFed to the industry with intent to solicit from the industry, comments on identified upstream issues. Addressees were requested not to restrict their comments/suggestions to the issues mentioned in the said response sheet. The last date for receipt of comments from the addressees was fixed at October 31, 2007. Only two (02) companies responded to the response sheet circulated by the due date. Subsequently, a reminder mail was sent by PetroFed on November 1, 2007 requesting companies to respond by November 7, 2007. PetroFed received responses from two (02) more companies.
- 1.2.4 On November 15, 2007, PetroFed, in knowledge partnership with PwC, prepared a draft Discussion Paper which was circulated by PetroFed to the industry stakeholders for their review. The draft Discussion Paper included the suggestions/recommendations proposed to be made to the Government by the industry stakeholders. Addressees of the draft Discussion Paper were requested to analyse its contents and comment upon the issues highlighted.
- 1.2.5 On November 28, 2007, our knowledge partners PwC presented the major findings of this draft Discussion Paper at a meeting organised by PetroFed at our office in New Delhi. Few more responses were received from companies before the industry meeting, taking the total company response tally to ten (10), which were also presented in the meeting. The summary of discussions which took place in the industry meeting and the issue-wise suggestion/recommendation emerging out of those discussions have been duly incorporated in this final report. .

1.3 Milestones and Timelines

- 1.3.1 The study was kick-started on October 10, 2007 with the preparation of a response sheet highlighting some key upstream issues which was circulated by PetroFed to the industry stakeholders on October 12, 2007. The industry stakeholders were requested to respond by October 31, 2007. A draft Discussion Paper was submitted by the knowledge partners PwC on November 13, 2007 which was circulated by PetroFed to the industry stakeholders on November 15, 2007. An industry meeting was organised by PetroFed on November 28, 2007 at our New Delhi office followed by a report incorporating the discussions held therein on December 14, 2007. This report was circulated to the industry by PetroFed seeking their comments before finally being sent to MoPNG. Industry comments so received have been incorporated in this final report.

2 Summary of changes proposed by Industry in ORD Act, 1948 and P&NG Rules, 1959

2.1 Criticality of Hydrocarbon Industry in India

2.1.1 Today India is on a high economic growth path. Economic experts are optimistic about India's economic growth and projections indicate that Indian economy will overtake that of the United States in the year 2043¹. To fuel this ambitious growth target India needs energy on a sustained basis and at reasonable price. India's current energy consumption profile is dominated by coal which contributes more than 50 percent to the primary commercial energy basket followed by oil and gas. In the long-term also the situation is not expected to change drastically with coal continuing to dominate the energy mix. Within the hydrocarbons, oil is expected to maintain its share in the expanded energy pie while natural gas is expected to displace coal in some applications and expected to emerge as the fastest growing fuel.

2.1.2 Access to hydrocarbon resources, therefore, is critical for India to achieve its energy security targets. India currently imports more than 75 percent of its crude oil requirements and this dependence is expected to increase if domestic production follows historical trends. Domestic natural gas production is also not sufficient to meet the demand in India. India meets some of its domestic gas requirement through LNG imports. Such high level of import dependence for sourcing crude oil and natural gas exposes India to the variation of price in the international market. Besides, risk of disruption in supply in case of any eventuality may also prove to be detrimental to India's economic growth prospects.

2.1.3 To reduce the need for energy imports the Government of India has adopted the policy of promoting development of domestic hydrocarbon resources. This calls for massive investment from both the public and private sector which is possible only under an enabling and investor friendly policy and regulatory environment. This study aims at suggesting changes/modifications to the Act and the Rules with an objective of creating such an enabling and investor friendly policy and regulatory environment for E&P companies to invest in India.

2.2 Industry Recommendations/Suggestions

2.2.1 PetroFed is grateful to the respondents who devoted their valuable time and efforts in completing and submitting the Response Sheet circulated by PetroFed. The company responses were both on the specific issues highlighted in the Response Sheet forwarded by PetroFed and other issues which companies felt meritorious for being addressed in this study. Our attempt has been to incorporate company suggestions in the same spirit and context as was originally meant to be included by them in the report.

¹ Goldman Sachs Report 2007

- 2.2.2 Companies have given their suggestions on specific provisions of the Act & Rules. These suggestions are suitably supported in Chapter 4 by reasons which have been put forth by the advocating companies and also the discussions which took place in the industry meeting organised by PetroFed to discuss these issues. Also, some respondents have even responded saying that instead of amending the existing Act and Rules, it would be a better idea to introduce fresh set of Act and Rules to address the new rules of the game and which are more comprehensive and relevant.
- 2.2.3 **The specific amendments and additions proposed in Act and Rules as per suggestions received from the industry are summarised below and are also placed as box items in Annexure 2 & 3.**
- 2.3 Amendments proposed in Act and Rules**
- 2.3.1 Section 3 – Definitions: The definition of “mineral oil” is proposed to be amended to include Coal Bed Methane (CBM) and Gas Hydrates. **(Refer Para 4.2 & 4.3 for details)**
- 2.3.2 Rule 14 (1) (a) is proposed to be amended to replace the term “mineral oil” with “crude oil, casing head condensate, natural gas, coal bed methane or gas obtained from gas hydrate”. **(Refer Para 4.4 for details)**
- 2.3.3 Provisio to Rule 14(1)(a) is proposed to be amended to suggest that “no royalty shall be payable in respect of any crude oil, casing head condensate, natural gas, **coal bed methane or gas obtained from gas hydrate** which is unavoidably lost or is returned to the reservoir or is used for drilling or other operations relating to the production of petroleum or natural gas or both”. **(Refer Para 4.4 for details)**
- 2.3.4 Section 6A which deals with Royalties in respect of mineral oils is proposed to be suitably amended to allow NOCs to pay royalty on post-discount prices, so that the statutory provisions are complied with and NOCs are saved from the hardship of coughing up more that what is stipulated in the Act. **(Refer Para 4.8 for details)**
- 2.3.5 Section 6A which deals with Royalties in respect of mineral oils is proposed to be suitably amended to treat other statutory levies paid by NOCs such as Oil Industry Development (OID) Cess, National Calamity Contingent Duty (NCCD), Education Cess on OID cess and Education Cess on NCCD as post wellhead cost and hence allowed to be deducted from the selling price to arrive at wellhead value. **(Refer Para 4.9 for details)**
- 2.3.6 Section 6A which deals with Royalties in respect of mineral oils is proposed to be suitably amended to notify reduced rates of royalty for the EOR/IOR projects currently being undertaken by company(ies) in India. **(Refer Para 4.10 for details)**
- 2.3.7 Rule 7 relating to grant of Mining Lease, where lessee has exclusive right to carry out oil and gas operation, is proposed to be suitably amended to provide preference to the existing operator who has made the additional discovery of either CBM or oil & gas for undertaking simultaneous exploration of CBM and Oil & Gas **(Refer Para 4.6 for details).**

2.4 Additions proposed in Act and Rules

- 2.4.1 The Act and the Rules do not specifically address the issue of EWT. Rule 7(1)(i) does, however, give an exclusive right to the holder of a Petroleum Exploration Licence (PEL) to carry out “*information drilling and test drilling operations for petroleum*”. The Rules are suggested to be suitably amended to insert relevant clause(s) relating to Extended Well Tests addressing issues such as approvals, duration, volume, liability to pay royalty, tax obligations, environmental concerns etc. **(Refer Para 4.5 for details)**
- 2.4.2 Rule making powers with respect to safety (HSE matters) is suggested to be explicitly mentioned in the Act and the Rules for offshore areas. **(Refer Para 4.11 for details)**
- 2.4.3 Rule making power to notify agency for supervision of safety in offshore E&P operations is proposed to be provided in the Act and the Rules. **(Refer Para 4.12 for details)**

3 Evolution of India's E&P Industry

3.1 Introduction

3.1.1 Policy and regulations are institutionalised by the State with intent to address domestic market realities existing at that time as also those which can be predicted based on reasonable foresight and similar international industry experiences. It would, therefore, be worthwhile to look back to see how our domestic oil and gas industry has evolved over the years. This would also help us appreciate the necessity of having to revisit the Act and the Rules in order to align them to the current market realities. The following paragraphs very briefly describe the evolution of our domestic E&P industry.

3.2 Evolution of MoPNG

3.2.1 Prior to 1942, there was no organisation in the Government of India dealing exclusively with oil. Arrangements for meeting the requirements of the country, except that of the defence department, were more or less left to the private oil companies.

3.2.2 In February 1947, two organisations dealing with oil were amalgamated to form a Petroleum Division under the Department of Works, Mines and Power. In 1952, certain subjects relating to oil were transferred from the Petroleum Division to other ministries. Refineries and synthetic oil plants were entrusted to the Ministry of Production and those relating to oil prospecting, exploration concession etc. became the concern of the Ministry of Natural Resources and Scientific Research for undertaking exploration, exploitation and refining of oil in the country. With the formation of the new central cabinet after the general elections in April 1957, the ministries were reorganized. Ministry of Natural Resources and Scientific Research and the Ministry of Production were abolished and a new Ministry of Steel, Mines and Fuel was set up with two departments viz. Department of Iron and Steel and Department of Mines and Fuel.

3.2.3 In 1962, the Department of Mines and Fuel was made into a separate Ministry. In 1963, a new Ministry of Petroleum and Chemicals was formed with two departments viz. Department of Petroleum and the Department of Chemicals. Again in February 1969 the Departments of Petroleum and Chemicals were placed along with the Department of Mines and Metals under the newly created Ministry of Petroleum, Chemicals, Mines and Metals. In the late eighties, the Petrochemicals Division was taken out of the Ministry of Petroleum and transferred to the Department of Chemicals, and the Ministry was renamed as the Ministry of Petroleum & Natural Gas.

3.3 E&P Regulatory Regimes

3.3.1 The regime governing regulation and development of the upstream sector in India can be divided into three distinct phases viz. Nomination, Pre-NELP and NELP. The various blocks currently being operated in India and governed by the Act and the Rules were awarded to companies under these three regulatory regimes. Nomination regimes refers to the era when acreages were awarded by the Government only to the two National Oil Companies (NOCs) viz. Oil India Limited (OIL) and Oil and Natural Gas Corporation (ONGC). Pre-NELP regime refers to the period from 1980 to 1995 when blocks were awarded to private sector based on competitive bidding. Since 1999, the Government of

India offers exploration acreages under the New Exploration Licensing Policy (NELP) with attractive fiscal and contractual terms. The following paragraphs will help us understand the transition of our domestic E&P industry from one regulatory regime to the other.

- 3.3.2 Initially, public sector companies OIL and ONGC were given the responsibility of finding and developing domestic hydrocarbon resources. While OIL operated in the North-east part of India, ONGC's focus was fairly dispersed throughout the country. ONGC's exploratory efforts met with success when it discovered the Bombay High fields. Shortage of financial resources, growing domestic demand, widening demand-supply gap and limited technological know-how, however, prompted the Government to look for other options besides the two E&P PSUs.
- 3.3.3 As early as 1986, Government started offering exploration blocks to private investors. In 1991 a systematic effort on a regular basis to attract private investment for exploration and production, along with the efforts of National Oil Companies (NOCs). Foreign companies were invited to invest in India under various bidding rounds for award of exploratory blocks. A total of eight rounds were announced but did not achieve the desired success in terms of response from foreign companies and reserves accretion targets set by the Government. The blocks offered to foreign companies were perceived by them as unattractive with low prospectivity. To bolster the confidence of foreign companies, the Government announced a Joint Venture round in which either OIL or ONGC bid jointly with foreign companies.
- 3.3.4 While blocks were awarded for exploration, there were some small to medium sized fields already discovered by the E&P PSUs which were not developed either due to poor financial health of E&P PSUs and lack of requisite technological expertise or due to the perceived non-commercial feasibility of such discoveries. The Government, therefore, offered such blocks, under competitive bidding, to the private sector. The offer of such small and medium size discovered fields received a tremendous response from the foreign companies.
- 3.3.5 The poor response received by the offer for exploration blocks prompted the Indian Government to redesign its policy for award of exploration blocks. Since the Government could not wish-away the below-the-ground risks attached to exploration blocks, it sought to make the deal attractive to foreign investors by devising attractive fiscal and contractual terms and conditions. The Government, therefore, set about at the task of formulating a new policy for award of exploration blocks. The Government approved the new policy in 1997 and operationalised it in 1999 with the announcement of the first competitive bidding round. This policy was called the New Exploration Licensing Policy or NELP.
- 3.3.6 NELP, as compared to the policy regime before its introduction, is regarded as highly successful in terms of the response received from both domestic and foreign private companies and the world class oil and gas discoveries made. Since its introduction in 1999, a total of six bidding rounds have been concluded under the NELP policy. Production Sharing Contracts (PSCs) for 162 blocks have been signed under NELP with total committed investments in excess of US\$ 10 billion.
- 3.3.7 Considering the potential of Coal Bed Methane (CBM) gas in India and its role in meeting the burgeoning domestic gas demand, the Government of India introduced the CBM

Policy in 1997 for the award of coal blocks with the objective of exploiting CBM prospects. Till now a total of three competitive bidding rounds have been concluded.

- 3.3.8 While NELP has been successful in attracting private investments in India, the window available to E&P companies for investing in India remains open for a limited duration during the currency of a bidding round. To open our domestic E&P industry for investments round the year and allow flexibility to companies in choosing their geographical areas of interest the Government is now determined to introduce the Open Acreage Licensing Policy (OALP) for award of exploration blocks in India for the exploitation of oil and gas resources. For formulating OALP, various activities such as preparation of maps on different scales, compilation of data in grid form wherever available, bidding procedures etc and other activities are currently being undertaken.

3.4 Upstream Regulator

- 3.4.1 A committee was constituted in 1992 under the chairmanship of Shri P.K. Kaul, former Cabinet Secretary to examine the need for restructuring of ONGC. The Kaul Committee recommended setting up of a body, with the name and style of the Director General of Hydrocarbons (DGH), for discharging the regulatory functions of leasing and licensing, safety and environment as also development, conservation and reservoir management of Hydrocarbon resources. Accordingly, DGH was set up by a Government Resolution in April, 1993.
- 3.4.2 The need for a regulatory body arises from the fact that the Government under the Constitution continues to be the owner of the petroleum resources, with the various operators only being leaseholders. It is, therefore, necessary in public interest to ensure compliance with sound reservoir engineering and management practices which in the view of the Government is not a matter that may be left to industry for self-regulation. The other functions of DGH like central storage of essential data etc., which have a commercial value and are also matters of public interest, were also felt to be kept under Government control. DGH is funded by the Oil Industry Development Board (OIDB).

4 Analysis of ORD Act, 1948 and P&NG Rules, 1959 and Recommendations

4.1 Introduction

4.1.1 The Oilfield (Regulation and Development) Act, 1948, which came into force on October 25, 1949, deals with the regulation of oilfields and for the development of mineral oil² resources. The Act authorises the Government to:

- Make rules for regulating the grant of “mining lease” which includes licence both for prospecting/exploring and producing mineral oils in the whole of India. [Section 5]
- Make rules for conservation and development of mineral oils. [Section 6]
- Levy and realise royalty in respect of any mineral oil mined, quarried, excavated or collected by the holder of the lease, at the rate for the time being specified in the Schedule to the Act. [Section 6A]

4.1.2 In exercise of the powers conferred by Sections 5 and 6 of the Act, the Central Government made the Petroleum and Natural Gas Rules, 1959 which provides for:

- Regulation of grant of exploration licences and mining leases in respect of petroleum and natural gas resources of India;
- Conservation and development of petroleum and natural gas resources of India.

4.1.3 It should be understood that the Act and the Rules do not prescribe the policy to be adopted by the Government for the award of blocks to E&P companies. At the time when the Act and the Rules were framed blocks were awarded to NOCs on nomination basis. Now the acreage is awarded to companies under the New Exploration Licensing Policy (NELP). NELP draws its power to award acreages from Rule 5 of the Rules which provides for an agreement between the Government and the Licensee or Lessee containing additional terms and conditions with respect to the License or Lease.

4.1.4 Therefore, while reviewing the Act and the Rules it has to be kept in mind that only those provisions relating to:

- grant of license or lease in respect of petroleum and natural gas or
- conservation and development of petroleum and natural gas and
- royalty in respect of production of petroleum and natural gas

will qualify to be represented to the Government for amendment in the Act and the Rules. Other provisions relating to the process/policy for award of exploration acreages

² “mineral oils” include natural gas and petroleum.

in India will qualify to be represented as amendments to be made in the existing NELP policy or the proposed Open Acreage Licensing Policy (OALP).

4.1.5 The following suggestions/recommendations have been made keeping in mind the subtle difference as highlighted in point 4.1.4 above.

4.2 Definitions (Sec 3 and Rule 3)

Background

4.2.1 Definitions are given in all Acts and Rules in order to ascribe a specific meaning to a term as used in the provisions contained elsewhere in that Act and/or Rule. The definition of the same term may be different in different Acts or Rules. This, according to legal experts, is technically possible as each Act or Rule is framed with a definite objective in mind and the definitions of various terms used in that Act or Rule are coined so as to meet the stated objective of that Act or Rule. Therefore, unless otherwise conflicting, definition of the same term in different Acts or Rules may continue to be different.

4.2.2 This situation can be seen in the following paragraphs where the definition of a term given in the Act and the Rules is different from the definition of the same term as given in the NELP document. Since the scope and objective of the Act and Rules is different from that of the NELP policy document, it may be inferred that different definitions of the same term, as used in the Act/Rules and as used in the NELP document, is tenable in the eyes of law and hence there is no need to suggest any amendments to make them same/identical.

4.2.3 Instances of such variances in definitions in different upstream legislations is illustrated in Table 4.1 and Table 4.2.

4.2.4 The Act has defined only four terms which are included in the table below. This table also maps the definition against those terms in the Rules and the NELP VI MPSC.

Sl. No.	Term	ORDA, 1948	P&NG Rules, 1959	NELP MPSC
1	Mine	“Mine” means any excavation for the purpose of searching for or obtaining mineral oils and includes an oil-well.	Not defined	Not defined
2	Mineral oils	“Mineral oils” include natural gas and petroleum.	Not defined	Not defined
3	Mining Lease	“Mining lease” means a lease granted for the purpose of searching for, winning, working, getting, making merchantable, carrying away or disposing of mineral oils or for purposes connected therewith, and includes an exploring or a prospecting licence.	Not defined	“Lease” means a petroleum mining lease referred to in the Rules and shall, <i>unless otherwise stated therein</i> , exclude right for exploration and exploitation of coal/lignite bed methane (CBM).

Sl. No.	Term	ORDA, 1948	P&NG Rules, 1959	NELP MPSC
4	Oilfield	“Oilfield” means any area where any operation for the purpose of obtaining natural gas and petroleum, crude oil, refined oil, partially refined oil and any of the products of petroleum in a liquid or solid state, is to be or is being carried on.	Not defined	“Oil Field” means, within the Contract Area, an Oil Reservoir or a group of Oil Reservoirs within a common geological structure or feature.

4.2.5 The Rules have defined a number of terms used in the Rules some of which have been modified or inserted as a result of various amendments that have taken effect from time to time. The table below maps those terms which have different definitions under the Rules and the NELP VI MPSC.

Sl. No.	Term	P&NG Rules, 1959	NELP MPSC
1	Crude Oil	“Crude oil” means petroleum in its natural state in liquid, viscous or solid form before it has been refined or otherwise treated from which water and foreign substances have been extracted.	“Crude Oil” or “Oil” or “Crude” means all kinds of hydrocarbons and bitumen, both in solid and in liquid form, in their natural state or obtained from Natural Gas by condensation or extraction, including distillate and Condensate when commingled with the heavier hydrocarbons and delivered as a blend at the Delivery Point but excluding Natural Gas.
2	Field	“Field” means the general area which is underlaid, or appears to be underlaid, by at least one pool and shall include the underground reservoir or reservoirs containing petroleum or natural gas or both.	“Field” means an Oil Field or a Gas Field or combination of both, as the case may be.
3	Natural Gas	“Natural gas” or “gas” means gas obtained from bore-holes and consisting primarily of hydrocarbons but does not include helium occurring in association with such hydrocarbons.	“Natural Gas” means wet gas, dry gas, all other gaseous hydrocarbons, and all substances contained therein, including Sulphur, Carbon Dioxide and Nitrogen but excluding extraction of Helium, which are produced from Oil or Gas Wells, excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions, and including the residue gas remaining after the condensation or extraction of liquid hydrocarbons from Gas.
4	Petroleum	“Petroleum” means naturally occurring hydrocarbons in a free state, whether in the form of natural gas or in liquid, viscous or solid form, but does not include helium occurring in association with petroleum, or coal, or shale, or	“Petroleum” means Crude Oil and/or Condensate and/or Natural Gas existing in their natural condition but excluding helium occurring in association with Petroleum or shale.

Table 4.2: Definitions in the Petroleum & Natural Gas Rules, 1959			
Sl. No.	Term	P&NG Rules, 1959	NELP MPSC
		any substance which may be extracted from coal, shale, or other rock by the application of heat or by a chemical process.	
	<i>Note: As per the Petroleum Act, 1934, "Petroleum" means any liquid hydro-carbon or mixture of hydrocarbons and any inflammable mixture (liquid, viscous or solid) containing any liquid hydrocarbon. Petroleum Act, 1934, however, applies to the downstream segment of the oil and gas value chain.</i>		

Summary of Discussions in Industry Meeting

- 4.2.6 Ideally, the same term should be defined in the same manner across different legislations involving the same business segment. However, legal experts are of the opinion that such an idealistic situation may be desirable but not essential. This is because as long as the definition ascribed to a term in a given Act/Rule/Policy helps in achieving the stated objective of such Act/Rule/Policy it is immaterial whether it is defined differently in some other Act/Rule/Policy whether or not applicable to the same business segment.
- 4.2.7 During discussions in the industry meeting organised by PetroFed on November 28, 2007, this issue was discussed at length. One group of company representatives desired consistency in definitions across different legislations. According to them, since the definitions in the MPSC are the latest and incorporate the developments that have taken place in the upstream business therefore these definitions better define the term and therefore the definitions in the Act and the Rules should be aligned with the MPSC definitions.
- 4.2.8 The other group implored that MPSC definitions are meant for the purpose of PSC regime while definitions in the Act and the Rules are meant for a larger purpose including grant and administration of Petroleum Exploration Licences (PELs) and Petroleum Mining Leases (PMLs). It was also brought to notice that several pre-NELP and NELP PSCs are in operation and will be so in the next few decades also. These definitions are, therefore, different and evolving and if recent MPSC definitions are adopted into the Act and the Rules it would lead to avoidable inconsistencies.
- 4.2.9 It was also pointed out that some of the definitions are consistent with the terms used in the Constitution of India. For example "Mineral Oil" is used in the Constitution of India's Central List. Amending such definitions may be a tedious job and also since there is linkage to definitions of one legislation with other related legislations there would be a need to look in totality at all the legislations that will be affected by any amendment to the definition and this also will be a long drawn process requiring involvement of legal experts.

Suggestions/Recommendations

- 4.2.10 As long as the different definitions for the same term in different legislations are not in conflict with each other one can live with such a situation. There is, therefore, no need to align the definitions as given in the Act or the Rules with those given in the MPSC. It

was, however, agreed that the definition of “mineral oil” should be amended to include Coal Bed Methane (CBM) and Gas Hydrates. This is explained in detail in the next point.

4.3 Definition of “Mineral Oils” [Sec 3 (c) and (e)]

Background

4.3.1 The Act provides for the regulation of oilfields and for the development of mineral oil resources. The Act defines the term “mineral oils” to “*include natural gas and petroleum*”. The Rules, however, define the term “*petroleum*” as “*naturally occurring hydrocarbons in a free state, whether in the form of natural gas or in liquid.....*”. Thus the definition of the term “petroleum” includes natural gas therefore making the use of “natural gas” along with “petroleum” in the definition of “mineral oils” redundant.

Summary of Discussions in Industry Meeting

4.3.2 In the industry meeting this issue was discussed and the points of view which emerged were that the term mineral oil is defined in the Constitution of India and hence it would not be easy to amend the definition. Also amending the definition in the Act would require similar amendments in any other related legislation which uses the term “mineral oil” as defined in the Act.

4.3.3 Another view was that the definition of mineral oil should be extended to include within its ambit CBM and Gas Hydrates. CBM has reached commercial exploitation stage in India and a separate policy for awarding CBM blocks is already in place in India. Recently in 2003, the Rules have been suitably modified at places to include the term CBM but no amendment has been made to the Act.

Suggestions/Recommendations

4.3.4 Include CBM and Gas Hydrates in the definition of the term “mineral oil” in the Act.

4.4 Royalty on petroleum [Rule 14(1)(a)]

Background

4.4.1 Rule 14(1)(a) states that, notwithstanding anything in any agreement, a lessee shall pay to the Central or State Government, as the case may be, royalty in respect of any **mineral oil** mined, quarried, excavated or collected by him from the leased area at the rate specified in the Schedule of the Act.

4.4.2 The term **mineral oil** is defined in the Act as including natural gas and petroleum. Relying on the definitions of “CBM”³ as given in the Rules and the definition of “natural gas”⁴ as given in the MPSC, it may be inferred that natural gas includes CBM as well.

³ “coal bed methane” means natural gas obtained from bore holes occurring in coal or lignite seams and consisting primarily of hydrocarbons [Rule 3(ab)]

⁴ “Natural Gas” means wet gas, dry gas, all other gaseous hydrocarbons, and all substances contained therein, including sulphur, carbon dioxide and nitrogen but excluding extraction of helium, which are produced from Oil or Gas Wells, excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions, and including the residue gas remaining after the condensation or extraction of liquid hydrocarbons from gas.

Thus, applying the definition of “Petroleum” ,which includes natural gas and thus CBM, royalty becomes payable under Rule 14(1)(a) on the CBM produced from the leased area.

Suggestions/Recommendations

- 4.4.3 In order to remove any doubts it is suggested that the definition of “mineral oil” be amended to specifically include CBM and gas obtained from gas hydrate. This is essentially the same suggestion/recommendation as given in point 4.3.4 above.
- 4.4.4 Alternatively, Rule 14(1)(a) may be amended to replace the term “mineral oil” with “crude oil, casing head condensate, natural gas, coal bed methane or gas obtained from gas hydrate”. Provisio to Rule 14(1)(a) provides that “*no royalty shall be payable in respect of any crude oil, casing head condensate, natural gas, **coal bed methane or gas obtained from gas hydrate** which is unavoidably lost or is returned to the reservoir or is used for drilling or other operations relating to the production of petroleum or natural gas or both*”.

4.5 Extended Well Test (EWT)

Background

- 4.5.1 Determination of reservoir characteristics and behaviour in order to test commerciality of a discovery might require the operator to undertake extended well test (EWT) which involves allowing the well to flow for a period longer than what is considered normal under an Appraisal Programme. The attendant issues include storage and disposal of the produced hydrocarbons, applicability or otherwise of royalty, cess, excise, sales tax/VAT etc, environmental issues relating to handling of such quantities etc.
- 4.5.2 The Act and the Rules do not specifically address the issue of EWT. Rule 7(1)(i) does, however, give an exclusive right to the holder of a Petroleum Exploration Licence (PEL) to carry out “*information drilling and test drilling operations for petroleum*”.
- 4.5.3 The NELP MPSC also does not specifically allow nor does it specifically disallow EWT. Extended well test as a part of the Appraisal Programme, if required to be undertaken is subject to approval of the Management Committee as per the provisions of MPSC. An Appraisal Programme, including the extended well tests, needs to be completed within a period of 18 months for onland and shallow water blocks and 30 months for Deepwater blocks from the date of notification of Discovery.

International Practices – United Kingdom

- 4.5.4 The UK Government has issued Guidance Notes on procedures for regulating both offshore and onshore oil and gas field developments. Under these Guidelines, the Department of Trade and Industry (the Department) may authorise extended periods of test production from exploration or appraisal wells prior to development authorisation if it can be demonstrated that the Licensees will thereby gain the technical understanding or confidence in the performance of the field needed to progress towards a development. The EWT should have realistic and definable appraisal objectives essential to the success of a development and not be prejudicial to ultimate recovery.

- 4.5.5 There are, however, no strict criteria governing the maximum volume to be produced or the duration of a EWT and the duration may be extended if there is a technical justification. EWTs are, however, *not* an alternative to production under an approved Field Development Programme. Also there is no obligation to proceed with a development following a EWT.
- 4.5.6 The primary objective of a EWT is to obtain essential field information and it is recognised that this may necessitate the flaring of substantial quantities of gas and, possibly, oil. The test should be designed so that oil and gas flaring is kept to the minimum that is technically and economically justified and full consideration, in consultation with the Department, should be given to the potential for saving the produced oil.
- 4.5.7 The Department considers any well test with total flow duration of more than 96 hours or which produces a total of more than 2,000 tonnes of oil to be a EWT, which will require application for a specific EWT Consent. A formal Environmental Impact Assessment (EIA) is likely to be required if the oil and gas flared during the duration of the test is significant.
- 4.5.8 A EWT Consent requires a formal letter of application setting out the timetable and objectives of the test and the quantities of oil and gas to be produced, saved or flared. If oil and gas are to be saved during the EWT, a Field Determination may be required for the field in question. In planning EWTs, Licensees have to bear in mind that any necessary EIA will require formal public consultation which can take from 3 to 6 months. A Pipeline Works Authorisation may also be required for the equipments used to carry out the EWT.

International Practices – Pakistan

- 4.5.9 Subject to approval from the Director General, Petroleum Concessions (DGPC), an Operator may be permitted to undertake extended well testing (EWT) during the appraisal phase and before declaration of commerciality and approval of the development plan. Such approval will be granted provided that the Operator, *inter-alia*, complies with the requisite royalty, tax, rentals, and training/social welfare commitments as applicable under the lease.
- 4.5.10 A request for approval for EWT (including associated temporary production facilities) will be made to DGPC providing information with regard to
- technical justification for EWT;
 - proposed duration for EWT; and
 - a plan with regard to disposal of gas during the proposed EWT period.
- 4.5.11 The duration of EWT will be allowed keeping in view the reservoir uncertainty and the proposed investment outlay on EWT. DGPC will not grant approval to undertake flaring for EWT for a period longer than 30 days if the gas infrastructure is located within 25 kms radius of the discovery well, unless under exceptional circumstances.
- 4.5.12 Where the specification and quality of the gas from an approved EWT is acceptable to the buyer, the gas price shall entail a 15% discount from the applicable gas price for that

Zone. The facilities that are required to undertake EWT shall be constructed and operated in accordance with good international oilfield practices.

- 4.5.13 As per Rule 20 of the Pakistan Petroleum (Exploration and Production) Rules, 2001 the licence gives the holder the exclusive right to undertake, within the licence area, all activities related to reconnaissance and exploration, including drilling for petroleum. The holder of the licence shall not be entitled to extract any petroleum from discoveries other than such test and early production as the Government may allow upon a written request submitted by the holder of a licence provided however, that in no event, such test or early production shall cause loss of revenues for the Government.

Summary of Discussions in Industry Meeting

- 4.5.14 During industry discussions it emerged that one of the Public Sector E&P company was paying royalty on the EWT production. It, however, suggested that royalty should be levied on the sale of petroleum and not on production. One of the private sector player argued that fluids produced in EWTs have value and if sold Sales Tax would apply. Also if sold on 'as is where is' basis both royalty and cess (pre-NELP) should not apply because of the definition of "crude oil" in the Rules and in the Oil Industry Development Act, 1974.
- 4.5.15 Another company representative brought to the notice of the participants that royalty under the PSCs signed under NELP regime is payable only when the commerciality of the discovery is established thus EWT production does not qualify for payment of royalty. As per Article 17.4 of MPSC, "*Companies (Lessee) shall be required to pay royalty to the Government (Lessor) for offshore areas at the rate of 10% of the well-head value of Crude Oil and Natural Gas. In case of an onshore area, Companies shall be required to pay to the State Government(s) (Lessor) at the rate of 12.5% of the well-head value of Crude Oil and 10% of the well-head value of Natural Gas. In case of an offshore area falling beyond 400 metre isobath, the rate of royalty payable by Companies (Lessee) to the Government (Lessor) shall be at the rate of 5% of the well-head value of Crude Oil and Natural Gas for the first seven years from the date of commencement of Commercial Production in the Field.*".

Suggestions/Recommendations

- 4.5.16 The Rules should be suitably amended to insert relevant clause(s) relating to Extended Well Tests addressing issues such as approvals, duration, volume, liability to pay royalty, tax obligations, environmental concerns etc. The MPSC should also include provisions to guide the Contractors in case they undertake EWTs to test reservoir characteristics.

4.6 Simultaneous exploration and production of coal bed methane and oil & gas

Background

- 4.6.1 The right to explore and produce oil and gas from blocks is awarded to the Contractor under NELP through a PSC signed by the Contractor with the Government. Besides payment of royalties and other taxes, the PSC calls for sharing of oil and/or natural gas produced in the awarded block between the Government and the Contractor in a pre-determined manner. CBM blocks are offered by the Government under the CBM Policy which invites companies to bid for CBM blocks and the Government evaluates the bids

based on the Production Linked Payments (PLPs) promised by each bidder. Thus two separate sets of policies are in place to exploit two different kinds of resources viz CBM and oil & gas.

- 4.6.2 It may sometimes so happen that both oil and gas and CBM may be found in the same block but in vertically separated geological horizons. Presently, in India, this is possible in the Cambay basin of Gujarat, Barmer Basin of Rajasthan and in Cauvery basin of Tamil Nadu wherein both CBM and oil and natural gas occur in the same basinal areas. The number of such basins may increase once other basins are explored properly.
- 4.6.3 While the Act contains no mention or reference of CBM, the Rules were amended in year 2003 to include the definition of CBM. Thus CBM activities in India are governed by the Act and the Rules. CBM has been defined in the Rules as “*natural gas obtained from bore holes occurring in coal or lignite seams and consisting primarily of hydrocarbons*”. The Rules, however, do not address the issue of simultaneous exploration and production of CBM with oil & gas.
- 4.6.4 While under the MPSC the term CBM has not been defined but the definition of Petroleum Mining Lease (PML) specifically excludes the right to explore and exploit coal/lignite bed methane (CBM). The MPSC does not provide any specific guidance on such simultaneous exploration and production of CBM with oil & gas.
- 4.6.5 The MPSC, however, does provide for prospecting and mining of minerals other than Petroleum. Article 8.2 of the MPSC provides that “*the Government reserves the right to itself, or to grant to others the right, to prospect for and mine minerals or substances **other than Petroleum** within the Contract Area; provided, however, that if after the Effective Date, others are issued rights, or the Government proceeds directly to prospect for and mine in the Contract Area any minerals or substances **other than Petroleum**, the Contractor shall use its best efforts to avoid obstruction to or interference with such operations within the Contract Area and the third parties and/or the Government, as the case may be, shall use best efforts to ensure that operations carried out do not obstruct or unduly interfere with Petroleum Operations in the Contract Area*”.
- 4.6.6 Relying on the definitions of CBM⁵ as given in the Rules and the definition of natural gas⁶ as given in the MPSC, it may be inferred that natural gas includes CBM as well. Thus, applying the definition of “Petroleum”, which includes natural gas and thus CBM, Article 8.2 does not apply to the simultaneous exploration and production of CBM with oil & gas.
- 4.6.7 Various issues are involved in such simultaneous exploration and production of CBM with oil & gas. These include:
- In case of a CBM discovery in a block awarded for exploration and production of oil & gas, should the right to exploit both the CBM and oil & gas resources be given to the same operator or to different operators?

⁵ “coal bed methane” means natural gas obtained from bore holes occurring in coal or lignite seams and consisting primarily of hydrocarbons [Rule 3(ab)]

⁶ “Natural Gas” means wet gas, dry gas, all other gaseous hydrocarbons, and all substances contained therein, including sulphur, carbon dioxide and nitrogen but excluding extraction of helium, which are produced from Oil or Gas Wells, excluding those condensed or extracted liquid hydrocarbons that are liquid at normal temperature and pressure conditions, and including the residue gas remaining after the condensation or extraction of liquid hydrocarbons from gas.

- Is it technically possible (vertical distances between the two geological horizons), operationally convenient and economically feasible (cost benefit analysis between single vs. multiple operators) to award the right to explore and exploit each of the two resources to multiple operators?

4.6.8 The Government is in the process of formalising a policy for simultaneous exploration and production of CBM with oil & gas. According to industry sources, a draft strategy paper has already been circulated to various stakeholders inviting their comments on the draft.

International Practices – United Kingdom

4.6.9 Many coal mines vent methane to the atmosphere, or else accumulate methane that must be dealt with by the mine-owner. Either way, the methane can create a health and safety issue, and as a very powerful greenhouse gas (up to 22 times more potent than CO₂), it presents an environmental problem as well. Technically, capturing the drained methane requires a Licence under UK's Petroleum Act 1998, but safety is the Government's first priority and to regularise methane drainage the Government is generally prepared to issue a Methane Drainage Licence (MDL) for a nominal fee.

4.6.10 An MDL grants permission to get natural gas "*in the course of operations for making and keeping safe mines whether or not disused*". It grants no exclusive rights, so it can overlap geographically with one or more Petroleum Exploration and Development Licences (PEDLs). Mining Development Licences (MDLs) generally cover much smaller areas than PEDLs - typically each covers one mine, although UK's Coal Authority holds a licence that covers the whole country.

4.6.11 As per the Petroleum Licensing (Exploration and Production) (Seaward and Landward Areas) Regulations 2004, the Minister, in exercise of the powers conferred upon him by the Petroleum Act, 1998 grants to the Licensee exclusive licence and liberty during the continuance of this licence and subject to the provisions hereof to search and bore for, and get, Petroleum in the sea bed and subsoil under the seaward area, provided that nothing in this licence shall affect the right of the Minister to grant a **methane drainage licence** in respect of the whole or any part of the Licensed Area or affect the exercise of any rights granted under any such methane drainage licence.

Summary of Discussions in Industry Meeting

4.6.12 In the industry meeting companies were of the opinion that if the operator of an oil and gas block finds CBM or *vice versa* in his block, he should be given the right to produce CBM/oil & gas on nomination basis. There were, however, different opinions as to how to award the mining rights of CBM/oil & gas to the existing operator and what should be the fiscal and commercial arrangements between the Government and the operator. Operational efficiency, in as far as prior knowledge about the reservoir characteristics is concerned, and practical difficulties associated with multiple operator scenario were cited as reasons for single-operator suggestion.

4.6.13 A divergent view emerging from the discussions was based on the fact that separate policies are in place for the award of blocks for exploring and exploiting the two mineral resources viz. oil & gas and CBM. Also in order to ensure best returns to the Government the CBM/oil & gas blocks should be awarded on a competitive bidding basis. In case the existing operator does not bid or is not the winning bidder then the

two operators – one for oil & gas and one for CBM – would be required to enter into joint interaction agreements.

- 4.6.14 It was pointed out in the meeting that the Government has recently issued a draft strategy paper on simultaneous exploration and production of CBM with oil & gas and has invited comments from various stakeholders. In that draft strategy paper the Government has suggested that where the physical vertical separation between the two producing reservoirs is less than 100 metres, it is preferable that the same operator carries out both the operations. However, if vertical separation between the two reservoirs is more than 100 metres the option of different operators is feasible. The Government has put forth the following options for review by stakeholders:
- i. The CBM block (overlapping with existing oil & gas block) or oil & gas block (overlapping with existing CBM block) may be offered through transparent international competitive bidding system as followed in CBM policy or NELP policy respectively. In case different operator wins the bid, joint interaction agreements need to be evolved.
 - ii. Cases where geological conditions are such that CBM and oil & gas are in very close vicinity in the vertical geological sequence and different operators are not possible, the existing operator (either CBM or oil & gas block) may be given right of first refusal in the open transparent bidding process as envisaged in para (i) above. Another option could be to award the block on nomination basis to the existing operator based on the best fiscal and minimum work commitment or the average of fiscal terms and MWP obtained through the last bidding rounds of CBM and NELP may be made applicable.
 - iii. Open acreage system for oil and gas blocks may be made applicable to overlapping CBM blocks.

Suggestions/Recommendations

- 4.6.15 Preference should be given to the existing operator who has made the additional discovery of either CBM or oil & gas. In case the Government decides against awarding such exploration and production rights on nomination basis, it may think of assigning special additional marks to the existing operator under the existing respective bidding process.
- 4.6.16 Both the resources viz oil & gas and CBM are critical for addressing our energy security needs necessitating, therefore, optimum utilisation of both the resources. Any policy designed should address their exploitation in the best possible manner keeping in mind the environmental issues associated with simultaneous exploration of CBM with oil & gas.
- 4.6.17 The Act and/or the Rules will have to be amended suitably in order to address this issue. Certain definitions may need revision or new ones may have to be inserted. Rule 7 relating to grant of Mining Lease, where lessee has exclusive right to carry out oil and gas operation, may have to be suitably amended.

4.7 Disparity in royalty rates for crude oil produced from onshore nominated blocks

Background

- 4.7.1 Currently NOCs are paying royalty @20% of the wellhead value on the crude oil produced from nominated blocks on cum-royalty basis. Whereas, the rate of royalty is fixed on a per MT basis (specific rate) in case of discovered fields awarded to JVs and in the case of NELP blocks the rate of royalty is 12.5% on ex-royalty basis. As a result of this, there is a disparity in the rate if payment of royalty on these fields awarded under different E&P policy regimes.
- 4.7.2 In the new scheme of royalty introduced by the Government, effective from April 1, 2002, it was decided that in case of crude oil from onshore nominated blocks, royalty will be paid @20% of the wellhead value till the year 2006-07, thereafter the same will be gradually made to converge with the royalty rate of 12.5% applicable for NELP blocks. The convergence process of royalty rate was to commence w.e.f. the year 2007-08 with tapering of royalty rates @1.5% each year so as to facilitate convergence with NELP the rate of 12.5% within a period of 5 years, i.e. by 2011-12. The decision of the Government in this regard is, however, still awaited as a result NOCs continue to pay royalty at a higher rate of 20%.

Suggestions/Recommendations

- 4.7.3 Government is requested to gradually taper the royalty rates for crude oil produced from onshore nominated blocks, as decided earlier by the Government under the new scheme of royalty, to bring it at par with the royalty as applicable to NELP blocks.

4.8 Payment of onshore crude royalty on pre-subsidy discount prices

Background

- 4.8.1 As per the instructions of MoPNG, NOCs have been extending subsidy discount on crude oil, domestic LPG and SKO PDS to compensate the oil marketing companies (OMCs) for their under recoveries. As per further directive of MoPNG, NOCs are paying royalty on onshore crude oil at pre-discount prices though they are realising only post discount prices.
- 4.8.2 As a result of the above, ONGC had paid royalty at the rate in excess of the rate stipulated in the Act which governs payment of royalty and provides in Section 6A of the Act: “ *Provided that the Central Government shall not – fix the rate of royalty in respect of any mineral oil so as to exceed twenty percent of the sale price of the mineral oil at the oil fields or the oil well-head, as the case may be.*”
- 4.8.3 In FY 2007, a total of Rs 1,080 crore was paid in excess of the 20% stipulation and the effective rate of royalty was as high as 34%.

Suggestions/Recommendations

- 4.8.4 Allow NOCs to pay royalty on post-discount prices, so that the statutory provisions are complied with and NOCs are saved from the hardship of coughing up more than what is stipulated in the Act.

4.9 **Post wellhead expenses to be deducted to arrive at wellhead price**

Background

4.9.1 Currently, to arrive at the wellhead price of crude oil, NOCs are allowed to deduct a fixed amount as post-wellhead cost, from the selling price to arrive at the wellhead value.

Suggestions/Recommendations

4.9.2 Other statutory levies paid by NOCs such as Oil Industry Development (OID) Cess, National Calamity Contingent Duty (NCCD), Education Cess on OID cess and Education Cess on NCCD are also to be treated as post wellhead cost and hence allowed to be deducted from the selling price to arrive at wellhead value.

4.10 **Reduced royalty rates on production from EOR/IOR schemes**

Background

4.10.1 MoPNG's resolution dated March 17, 2003, provided that effective from April 1, 2002, reduced rates of royalty will be levied for the production from fields under the Enhanced Oil Recovery (EOR)/ Improved Oil Recovery (IOR). However, reduced rate of royalty from crude oil production from each of such EOR/IOR schemes will be notified by MoPNG in consultation with the concerned State Governments for the onland areas and Ministry of Finance for the offshore areas. One of the producers, ONGC, has implemented EOR/IOR schemes in its various fields and has requested MoPNG to notify the reduced rates of royalty for production from such fields, the same is yet to be notified by MoPNG.

Suggestions/Recommendations

4.10.2 The Government is requested to notify reduced rates of royalty for the EOR/IOR projects currently being undertaken by company(ies) in India.

4.11 **Rule making powers with respect to safety**

Background

4.11.1 Oil Mines Regulations (OMR), 1984 applies to the "whole of India" that includes the Territorial Waters of India. OMR, 1984 is made under Mines Act, 1952 and is implemented by DGMS, Ministry of Labour. Definition of mine in Mines Act, 1952 includes upstream operations and hence E&P operations undertaken under the Act in onland areas and up to the territorial waters fall within the preview of DGMS. Beyond territorial waters, OMR, 1984 does not apply. OMR, 1984 does not contain any rules on safety related to offshore operations.

4.11.2 Safety of process/facilities is paramount in offshore, which translates into labour and environment safety. Offshore operations being highly technical in nature, a specialist body would be appropriate to look after HSE related matters.

4.11.3 Parliament by latest Act, "The Offshore Areas Mineral (Development and Regulation) Act, 2002 has modified the definition of Mineral to exclude natural gas and petroleum, whereas these were included in the definition of Minerals in The Mines Act, 1952. This

clearly indicates the mandate that the regulation and development of minerals in the territorial waters, continental shelf, exclusive economic zone and maritime zones should be given to specific authorities created for that purpose to have better results.

Suggestions/Recommendations

- 4.11.4 It is therefore suggested that rule making powers with respect to safety (HSE matters) should be explicitly mentioned in the Act and the Rules for offshore areas.

4.12 Agency for safety in offshore operations to be notified

Background

- 4.12.1 HSE related incidents/accidents can cause loss of assets and human lives in offshore operations. Therefore, regulating safety in offshore is of utmost importance.
- 4.12.2 There has been no agency regulating safety in offshore E&P operations. Oil Industry Safety Directorate (OISD) has been given the mandate of offshore safety, by MoPNG in the year 2005.
- 4.12.3 In this direction, OISD has prepared draft Petroleum & Natural Gas (Safety in Offshore Operations) Rules, 2007. The proposed Rules have been forwarded by MoPNG to Law Ministry for legal vetting.

Suggestions/Recommendations

- 4.12.4 It is therefore suggested that rule making power, to notify agency for supervision of safety in offshore E&P operations, to be provided in the Act and the Rules.

5 Annexure 1: Issues not requiring amendment in the Act and/or the Rules

5.1 Introduction:

- 5.1.1 In discussions with the industry as also the comments received from them on the draft Discussion Paper circulated by PetroFed, some issues which did not require any amendment to the Act or the Rules were also brought to PetroFed's notice. Notwithstanding the limited scope of this assignment, which is restricted to the review of the Act and the Rules and suggesting amendments/additions thereto, we wish to submit before the Government issues which the industry believes are necessary to be addressed for the healthy development of India's E&P industry and which are beyond the scope of this particular review.

5.2 Disputes relating to block boundaries and sharing of resources

Background

- 5.2.1 Controversies over the geographic boundaries of oil blocks are common globally. In the recently concluded NELP VI competitive bid round, the Bangladesh Government claimed that the boundaries of blocks D22 and D23 in the Mahanadi basin, offered under NELP VI by the Government of India, impinged on their Exclusive Economic Zone (EEZ). These two blocks were awarded to Santos, an Australian E&P company. DGH claims that the coordinates of the two blocks were revised based on the complaint received from Bangladesh and that the block boundaries are within the EEZ of India.
- 5.2.2 The moot question, therefore, is whether there is a clearly demarcated map, duly certified by the appropriate authority, which is available with DGH while carving out blocks in the various maritime zones of India. This would avoid unnecessary embarrassment on the part of the Government if the block boundaries are later on disputed by claims of neighbouring countries.
- 5.2.3 Presently, the Ministry of External Affairs, Government of India has entered into agreements with Bangladesh, Myanmar and Thailand governments for the joint development of resources in case of discovery in areas close to each other's boundaries. The provisions under such agreements specify the formalities regarding informing the neighbouring country Government etc to be observed in case of a discovery, the manner in which the hydrocarbon resources will be shared, rights and liabilities of the contractor etc. Neither the Act nor the Rules address this issue. Even the MPSC is silent regarding such an eventuality.

Suggestions/Recommendations

- 5.2.4 DGH should obtain (in case it has not already done so) an updated map of India duly certified by the appropriate authority clearly specifying the extent of the various maritime zones of India over which its sovereign rights to mineral wealth extends. Access to such a map will enable DGH to carve out only those blocks lying within the maritime boundaries of India and offer them to investors under successive bidding rounds.

- 5.2.5 In order to avoid any potential disputes over the maritime boundaries with our neighbouring countries like Pakistan, Sri Lanka, Thailand etc, it would be helpful to address, even by reference in the NELP documents, the inter-governmental treaties as such may be amended from time to time.
- 5.2.6 The NELP PSC may also address the concern of investors regarding any loss of interest as a result of such disputes by incorporating provisions entitling the investor to an adequate amount of compensation to be paid by the Government.

5.3 Frontier Area

Background

- 5.3.1 The Act and the Rules do not define the term “Frontier Area”. The term is, however, defined in the Model Production Sharing Contract (MPSC) under NELP. Frontier Area has been defined in the MPSC of NELP as *any area identified, demarcated and so notified by the Government or its authorised agency(ies) for the purpose of exploration and exploitation of Oil and Gas, which is logistically and technically difficult and lacks infrastructural and/or marketing facilities, etc.*
- 5.3.2 While the term was defined in the MPSC, the Government, while offering blocks, did not identify the blocks as those lying in the Frontier Area and therefore eligible for a relatively longer exploration period. This led to companies submitting bids for a block based on their interpretation of whether or not it qualified as a block in the Frontier Area. This issue surfaced in NELP V when a consortium of bidders emerged as winners based on the bid submitted on the assumption that the block falls in the Frontier Area. Learning from this experience the Government offered the blocks in NELP VI duly identifying the ones that, according to the Government, lie in the Frontier Area.
- 5.3.3 While the Government has identified blocks lying in the Frontier Area under NELP VI, it has not disclosed the basis used for such identification. Questions such as the following come to mind:
- What if the block is “technically difficult” to explore and exploit but has good “infrastructure and/or marketing facilities”?
 - What if the block lies in an area with proved or probable hydrocarbon prospectivity, is technically prospective but lacks infrastructural and/or marketing facilities?
 - What if the block is prospective but located in an area which is perceived to be risky from the security point of view?
 - What if the block is located in a totally unknown/unexplored province or in very great water depths?
 - Or any other permutation or combination of the above possibilities.

International Practices

- 5.3.4 As per UK’s Petroleum Licensing (Exploration and Production) (Seaward and Landward Areas) Regulations, 2004, “Frontier Area” means an area whose exploitation is rendered especially difficult by any one or more of the following factors, namely:

- (a) its distance from existing petroleum-related infrastructure;
- (b) great water depth; or
- (c) the lack of existing pertinent technical data relating to such area;

Suggestions/Recommendations

5.3.5 It is suggested that a provision be included in the NELP documents specifying the conditions subject to which any block will be identified as lying in the Frontier Area and hence qualify for added incentives, if any.

5.4 Right of access to surrounding blocks for economic field development

Background

5.4.1 India has been fortunate to have witnessed some major hydrocarbon discoveries, both onshore and offshore, in the recent past. Optimum development of such discoveries is of paramount importance in India's pursuit towards achieving energy security. Such an optimum development may call for sharing of infrastructure such as pipelines amongst different operators. An operator may have to seek right of way through the block boundary of other operators in order to develop his discovery.

5.4.2 The NELP documents do not address the issue of right of access to surrounding blocks for field development as it is largely an operational and commercial issue to be sorted out between the operators.

International Practices – United Kingdom

5.4.3 A **Code of Practice on Access to Upstream Oil and Gas Infrastructure on the UK Continental Shelf** has been developed by the UK Offshore Operators Association (UKOOA) in consultation with the UK Department of Trade and Industry (DTI) and a wide range of other parties. It supersedes the previous Offshore Infrastructure Code of Practice (agreed in 1996) and became effective in August 2004, with data provisions in place before the end of 2004.

5.4.4 This non-statutory Code sets out principles and procedures to guide all those involved in negotiating third-party access to oil and gas infrastructure on the UK Continental Shelf (UKCS). Its purpose is to facilitate the utilisation of infrastructure for the development of remaining UKCS reserves through timely agreements for access on fair and reasonable terms, where risks taken are reflected by rewards.

5.4.5 By their endorsement of this Code, parties make a commitment to be guided by its principles and procedures. Parties to this Code also commit to take part in the periodic reviews of its effectiveness.

5.4.6 This Code applies to all UK oil and gas infrastructure throughout the hydrocarbon production and supply chain from wellhead through to receiving terminals and initial onshore processing facilities. As well as infrastructure on the UK Continental Shelf and within territorial waters, this includes onshore oil and gas terminals and pipelines which handle

- Oil up to the point at which it has been stabilised (i.e. to the point at which the seller in a sale at arm's length could reasonably make delivery) and
- Gas prior to its introduction into the National Transmission System (NTS) (or other pipeline distribution system operated by a gas transporter) or its introduction into a downstream inter-connector.

5.4.7 This Code does **not** apply to access to the NTS, inter-connectors and LNG import terminals.

5.4.8 This Code applies to:

- All parties negotiating new contracts for access to such infrastructure and the provision of infrastructure services by infrastructure owners
- Infrastructure owners who may be approached from time to time by prospective users requesting information pertaining to such infrastructure
- Prospective users requesting such information
- All parties who have capacity rights in infrastructure systems but do not own the physical infrastructure

5.4.9 This Code applies only to those hydrocarbon volumes not already covered by existing contractual arrangements.

Suggestions/Recommendations

5.4.10 Notwithstanding the fact that this is an operational and commercial issue, a suitable Guideline may be issued by the Government for sharing of common facilities which would enable an operator to undertake field development in the most economically feasible manner.

5.4.11 However, the key assurances one could expect in the NELP document would relate to operations not impacting or affecting the health and/or safety of people and the environment.

6 Annexure 1: Abbreviations

6.1 Companies/Organisations

PetroFed	Petroleum Federation of India
PwC	PricewaterhouseCoopers
MoPNG	Ministry of Petroleum and Natural Gas
DGH	Directorate General of Hydrocarbons
OIL	Oil India Limited
ONGC	Oil and Natural Gas Corporation
OIDB	Oil Industry Development Board
OISD	Oil Industry Safety Directorate

6.2 Others

“the Act”	Oilfield (Regulation and Development) Act, 1948
“the Rules”	Petroleum and Natural Gas Rules, 1959
PEL	Petroleum Exploration Licence
PML	Petroleum Mining Lease
E&P	Exploration and Production
LNG	Liquefied Natural Gas
NOCs	National Oil Companies
PSUs	Public Sector Undertaking
JVs	Joint Ventures
NELP	New Exploration Licensing Policy
PSCs	Production Sharing Contracts
CBM	Coal Bed Methane
OALP	Open Acreage Licensing Policy
MPSC	Model Production Sharing Contract
EWT	Extended Well Test
EEZ	Exclusive Economic Zone
NIO	Notice Inviting Offer
FY	Financial Year
HSE	Health Safety Environment

7 Annexure 2: Amendments proposed in The Oilfields (Regulation and Development) Act, 1948

THE OILFIELDS (REGULATION AND DEVELOPMENT) ACT, 1948

(53 of 1948)

(8TH SEPTEMBER, 1948)

Note: Amendments and additions proposed by Industry are inserted as box items below respective Section.

An Act to provide for the regulation of oilfields and for the development of mineral oil resources. WHEREAS it is expedient in the public interest to provide for the regulation of oilfields and for the development of mineral oil resources;

It is hereby enacted as follows:-

1. Short title, extent and commencement.

- (1) This Act may be called the Oilfields (Regulation and Development) Act, 1948.
- (2) It extends the whole of India.
- (3) It shall come into force on such date* as the Central Government, by notification in the Official Gazette, appoint in this behalf.

2. (Declaration as to expediency of control by Central Government).

Repealed by the Mines and Minerals (Regulation and Development) Act, 1957 (67 of 1957) Section 32 and Third Schedule (w.e.f. 1.6.1958).

3. Definitions.

In this Act, unless there is anything repugnant in the subject or extent.

- (a) The expression "lessor" and "lessee" respectively include a licensor and licensee;
- (b) "mine" means any excavation for the purpose of searching for or obtaining mineral oils and includes an oil-well;
- (c) "Mineral oils" include natural gas and petroleum;
- (d) "mining lease" means a lease granted for the purpose of searching for, winning, working, getting, making merchantable, carrying away or disposing of mineral oils or for purpose connected therewith, and includes an exploring or a prospecting license;
- (e) "oilfield" means any area where any operation for the purpose of obtaining natural gas and petroleum, crude oil, refined oil, partially refined oil and any of the products of petroleum in a liquid or solid state, is to be or is being carried on.

Amendment proposed

Section 3 – Definitions: The definition of “mineral oil” should be amended to include Coal Bed Methane (CBM) and Gas Hydrates. **(Refer Para 4.2 & 4.3 for details)**

4. No mining lease to be valid unless it is in accordance with this Act.

- (1) No mining lease shall be granted after the commencement of this Act otherwise than in accordance with the rules made under this Act.
- (2) Any mining lease granted contrary to the provision of sub-section (1) shall be void and of no effect.

5. Power to make rules as respects mining leases.

- (1) The Central Government may, by notification in the Official Gazette, make rules for regulating the grant of mining leases or for prohibiting the grant of such leases in respect of any mineral oil or any area.
- (2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-
 - (a) the manner in which, the mineral oils or areas in respect of which and the persons by whom, applications for mining lease may be made and fees to be paid on any such applications;
 - (b) the authority by which, the terms on which, and the conditions subject to which, mining leases may be granted;
 - (c) the maximum or minimum area and the period for which any mining lease may be granted and the terms on which leases in respect of contiguous areas may be amalgamated;
 - (d) the fixing of the maximum and minimum rent payable by a lessee, whether the mine is worked or not.

6. Power to make rules as respects development of mineral oil.

- (1) The Central Government may, by notification in the Official Gazette make rules for the conservation and development of mineral oils.
- (2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-
 - (a) & (b) omitted
 - (c) the development of any mineral oil resources in any area by prescribing or regulating the use of any engines, machinery or other equipment;
 - (d) the regulation of the drilling, redrilling, deepening, shutting down, plugging and abandoning of oil-wells in an oilfield and for the limitation or prohibition of such operations and for the taking of remedial measures to prevent waste of or damage to oil;
 - (e) the regulation of methods of providing oil in any oilfield, and the limitation or prohibition of such methods;

- (f) the compulsory notification of all new boring and shaft sinking, and the preservation of boring records and specimens of cores of all new bore-holes;
- (g) the taking of samples from mines and new boreholes;
- (h) the regulation of the arrangements for the storage of mineral oils and the stocks thereof that may be kept by any person;
- (i) the collection of royalties, and the levy and collection of fees or taxes, in respect of mineral oils mined, quarried, excavated or collected.
- (j) the submission by the owners or lessees of mines of special or periodical returns and reports, and the forms in which and the authorities to whom such returns and reports shall be submitted.

6A Royalties in respect of mineral oils.

- (1) The holder of a mining lease granted before the commencement of the 'oilfields (Regulation and Development) Amendment Act, 1969, shall notwithstanding anything contained in the instrument of lease or in any law in force at such commencement, pay royalty in respect of any mineral oil mined, quarried, excavated or collected by him from the leased area after such commencement, at the rate for the time being specified in the Schedule in respect of the mineral oil.
- (2) The holder of a mining lease granted on or after the commencement of the oilfields (Regulation and Development) Amendment Act, 1969 shall pay royalty in respect of any mineral oil mined, quarried, excavated or collected by him from the leased area at the rate for the time being specified in the Schedule in respect of that minerals oil.
- (3) Notwithstanding anything contained in sub-section (1) or subsection (2), no royalty shall be payable in respect of any crude oil, casing head condensate or natural gas which is unavoidably lost or is returned to the reservoir or is used for drilling or other operations relating to the production of petroleum or natural gas, or both.

* (4) The Central Government may, by notification in Official Gazette, amend the Schedule so as to enhance or reduce the rate at which royalty shall be payable in respect of any mineral oil with effect from such date as may be specified in the notification and different rates may be notified in respect of same mineral oil mined, quarried, excavated or collected from the areas covered by different classes of mining leases;

Provided that the Central Government shall not fix the rate of royalty in respect of any mineral oil so as to exceed twenty per cent of the sale price of the mineral oil at the oilfields or the oil well-head, as the case may be.

* (5) If the Central Government, with a view to encourage exploration in offshore areas, is satisfied that it is necessary in the public interest to do so, it may, by notification in the Official Gazette, exempt generally, either absolutely or subject to such conditions as may be specified in the notification, mineral oil produced from such areas from the whole or any part of the royalty leviable thereon.

Amendments proposed

Section 6A which deals with Royalties in respect of mineral oils may be suitably amended to allow NOCs to pay royalty on post-discount prices, so that the statutory provisions are complied with and NOCs are saved from the hardship of coughing up more than what is stipulated in the Act. **(Refer Para 4.8 for details)**

Section 6A which deals with Royalties in respect of mineral oils may be suitably amended to treat other statutory levies paid by NOCs such as Oil Industry Development (OID) Cess, National Calamity Contingent Duty (NCCD), Education Cess on OID cess and Education Cess on NCCD as post

wellhead cost and hence allowed to be deducted from the selling price to arrive at wellhead value. **(Refer Para 4.9 for details)**
Section 6A which deals with Royalties in respect of mineral oils may be suitably amended to notify reduced rates of royalty for the EOR/IOR projects currently being undertaken by company(ies) in India. **(Refer Para 4.10 for details)**

7. Power to make rules for modification of existing leases.

- (1) The Central Government, may, by notification in the Official Gazette, make rules for the purpose of modifying or altering the terms and conditions of any mining lease granted prior to the commencement of this Act so as to bring such lease into conformity with the rules made under sections 5 & 6;

Provided that any rules so made which provide for the matters mentioned in clause © of sub-section (2) shall not come into force until they have been approved, either with or without modifications, by the House of the People.

- (2) The rules made under sub-section (1) shall provide-

- (a) for giving previous notice of the modification or alteration proposed to be made thereunder to the lessee, and where the lessor is not the Central Government, also to the lessor, and for affording them an opportunity or showing cause against the proposal;
- (b) for the payment of compensation by the party who would be benefited by the proposed modification or alteration to the party whose rights under the existing lease would thereby be adversely effected; and
- (c) for the principles on which, the manner in which and the authority by which the said compensation shall be determined.
-

8. Delegation

The Central Government may, by notification in the Official Gazette, direct that any power exercisable under this Act shall be exercised, subject to such conditions, if any, as may be specified therein by such officer or authority as may be specified in the direction.

9. Penalties.

- (1) Any rule made under any of the provisions of this Act may provide that any contravention thereof shall be punishable with imprisonment which may extend to six months or with fine which may extend to one thousand rupees or with both.
- (2) Whoever, after having been convicted of any offence referred to in sub-section (1), continues to commit such offence shall be punishable for each day after the date of the first conviction during which he continues so to offend, with fine which may extend to one hundred rupees.

10. Laying of rules and notifications.

Every rule made under this Act and every notification issued under sub-section (4) * or sub-section (5) of section 6A shall be laid as soon as may be after it is made or issued, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or notification or both Houses agree that the rule or notification should not be made or issued, the rule or notification shall thereafter have effect only in such modified form or be of

no effect, as the case may be; so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or notification.

11. Power to inspection.

(1) For the purpose of ascertaining the position of the working , actual or prospective, of any mine or abandoned mine or for any other purpose mentioned in this Act or the rules made thereunder, any officer authorised by the Central Government in this behalf shall have the right to*:-

(a) enter and inspect any mine;

(b) order the production of any document, book, register or record in the possession or power of any person having the control of or connected with, any mines;

(c) examine any person having the control of, or connected with, any mine.

(2) Any Officer authorised by the Central Government under sub-section (1) shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code.

12. Relaxation of rules in special cases.

The Central Government may, if satisfied that it is in the public interest so to do, authorise in any case the granting of any mining lease or the working of any mine or terms and conditions different from those laid down in the rules made under Section 5 and 6.

13. Act to be binding on the Government.

The provisions of this Act shall be binding on the Government.

14. Protection of action taken in good faith.

No suit, prosecution or other legal proceeding whatever shall lie against any person for anything which is in good faith done or intended to be done under this Act.

SCHEDULE

(See Section 6A)

RATES OF ROYALTY

1. CRUDE OIL

1) PRODUCTION FROM AREAS OUTSIDE NEW EXPLORATION LICENSING POLICY (NELP) REGIME

A. NOMINATION BLOCKS

i. From 1.4.1993 to 31.3.1996: @ Rs.539.20 Per Metric Tonne

ii. From 1.4.1996 to 31.3.1998: @ Rs.539.20 Per Metric Tonne

B. PRODUCTION FROM AREAS AWARDED ON NOMINATION BASIS TO NATIONAL OIL COMPANIES (NOCs), EXPLORATION BLOCKS AWARDED TO PRIVATE/JOINT VENTURE CONTRACTORS PRIOR TO NEW EXPLORATION LICENSING POLICY (NELP) AND ONLAND DISCOVERED FIELDS AWARDED TO PRIVATE/JOINT VENTURE CONTRACTORS.

- i. From 1.4.1998 to 31.3.2002: Monthly average rate per Metric Tonne as per Statement appended,
- ii. With effect from 1.4.2002:
 - a) Onland areas: @ 20% of Well Head Price.
 - b) Shallow water offshore areas (upto 400 Mtr water depth): @ 10% of Well Head Price.
 - c) Deep water offshore areas (>400 Mtr. Water depth): @ 5% of well head price during first 7 years after commercial production and normal rates as applicable to Shallow water areas (upto 400 Mtr. Water depth) during other periods.
 - d) Heavier Crude Oils of 25° API and less: 2.5% lesser than the applicable rates as above.
 - e) Reduced rates of royalty, as may be notified by the Government from time to time, will be levied on production from fields under Enhanced Oil Recovery (EOR)/ Improved Oil Recovery (IOR).

C. PRODUCTION FROM AREAS UNDER NELP REGIME:

At the rates determined in accordance with the provisions under respective Production Sharing Contracts (PSCs).

2. CASING HEAD CONDENSATE

1) PRODUCTION FROM AREAS OUTSIDE NEW EXPLORATION LICENSING POLICY (NELP) REGIME:

A. NOMINATION BLOCKS

- i. From 1.4.1993 to 31.3.1996: @ Rs.539.20 Per Metric Tonne
- ii. From 1.4.1996 to 31.3.1998: @ Rs.539.20 Per Metric Tonne

B. PRODUCTION FROM AREAS AWARDED ON NOMINATION BASIS TO NATIONAL OIL COMPANIES (NOCs), EXPLORATION BLOCKS AWARDED TO PRIVATE/JOINT VENTURE CONTRACTORS PRIOR TO NEW EXPLORATION LICENSING POLICY (NELP) AND ONLAND DISCOVERED FIELDS AWARDED TO PRIVATE/JOINT VENTURE CONTRACTORS.

- i. From 1.4.1998 to 31.3.2002: Monthly average rate per Metric Tonne as per Statement appended,
- ii. With effect from 1.4.2002:
 - a) Onland areas: @ 20% of Well Head Price.
 - b) Shallow water offshore areas (upto 400 Mtr water depth): @ 10% of Well Head Price.

- c) Deep water offshore areas (>400 Mtr. Water depth): @ 5% of well head price during first 7 years after commercial production and normal rates as applicable to Shallow water areas (upto 400 Mtr. Water depth) during other periods.
- d) Reduced rates of royalty, as may be notified by the Government from time to time, will be levied on production from fields under Enhanced Oil Recovery (EOR)/ Improved Oil Recovery (IOR).

C. PRODUCTION FROM OFFSHORE DISCOVERED FIELDS AWARDED TO PRIVATE/JOINT VENTURE CONTRACTORS:

At the rates as specified in respective Production Sharing Contracts (PSCs).

2) PRODUCTION FROM AREAS UNDER NELP REGIME:

At the rates determined in accordance with the provisions under respective Production Sharing Contracts (PSCs).

3) NATURAL GAS: Ten per cent of the value of the natural gas obtained at well-head.

Note 1: (1) The well head price of crude oil and casing head condensate for nominated blocks of Oil and Natural Gas Corporation Limited or Oil India Limited shall be determined by deducting rupees one thousand two hundred and fifty one only per metric tonne and rupees nine hundred and forty seven only per metric tonne for onshore and offshore respectively, from the sale price of crude oil or casing head condensate.

(2) The amounts specified in clause (1) shall be post-well head cost which shall be valid for a period of three years with effect from 1st April, 2007 or such period till the revised rates are notified.

(3) Oil Industry Development Cess and Education Cess thereon shall not form part of post well head cost.

(4) Royalty will be calculated on cum-royalty basis as under:

$$\text{Royalty amount} = \frac{\text{Well head price} \times \text{royalty rate}}{(100 + \text{royalty rate})}$$

Note 2: Since consultations with concerned State Governments took some time, it has become necessary to revise the rate of royalty with retrospective effect. The oil producing States stand to benefit and other States are not likely to be adversely affected.

Note 3: The post well head cost for the purpose of calculating well head price of crude oil or casing head condensate for cases other than nominated blocks of Oil and Natural Gas Corporation Limited or Oil India Limited and for natural gas in all cases other than Administered Price Mechanism Gas of Oil and Natural Gas Corporation Limited or Oil India Limited shall be determined as under:

- 1) Per unit rate of post well head cost, that is, per metric tonne or barrel for crude oil or casing head condensate and per Million Metric British Thermal Unit for natural gas shall be determined based on actual post well head expenditure reported in previous year's audited accounts.

- 2) In case of production from a new field under the Production Sharing Contract, the post well head cost for the first year may be provisionally estimated by the lessee and duly certified by the Directorate General of Hydrocarbons and final adjustments shall be made within one hundred twenty days from the end of the first year, based on the audited accounts of the first year.
- 3) Oil Industry Development Cess and Expenditure Cess, Depreciation expenses, Income tax, surcharge thereon and profit petroleum shall not be allowed as expenditure under post well head cost.
- 4) Full records shall be maintained and got audited by lessees or procedures to assess the Actual post well head cost incurred in previous year.
- 5) Royalty shall be computed on ex-royalty basis: **Provided that for crude produced from production sharing contracts signed with private or joint venture contractors prior to New Exploration Licensing Policy, royalty shall be computed on cum-royalty basis.**

(The highlighted text above in serial no. 5 of Note 3 was inserted vide G.S.R. 615(E) dated 28th August 2009).

STATEMENT OF MONTHLY AVERAGE RATES OF ROYALTY PAYABLE PER METRIC TONNE ON CRUDE OIL & CASING HEAD CONDENSATE AS MENTIONED AT 1(1) B (i) AND 2 (1) B (i) ABOVE

Details of Monthly Royalty Rates

Month	Royalty rates Rs/MT	Month	Royalty rates Rs/MT
Apr-98	411.31	Apr-00	1,055.88
May-98	409.46	May-00	1,037.69
Jun-98	414.09	Jun-00	915.75
Jul-98	431.35	Jul-00	1,100.28
Aug-98	415.32	Aug-00	1,165.03
Sep-98	450.01	Sep-00	1,126.65
Oct-98	431.35	Oct-00	1,180.45
Nov-98	483.15	Nov-00	1,331.69
Dec-98	462.8	Dec-00	1,279.89
Jan-99	406.53	Jan-01	1,298.23
Feb-99	368.45	Feb-01	973.71
Mar-99	398.67	Mar-01	1,009.02
Apr-99	374.77	Apr-01	1,104.29
May-99	511.06	May-01	1,040.62
Jun-99	569.64	Jun-01	1,091.19
01 Jul to 14 Jul-99	569.64	Jul-01	1,165.50
15 Jul to 31 Jul-99	580.74	Aug-01	1,171.05
Aug-99	602.17	Sep-01	1,066.21
Sep-99	706.54	Oct-01	1,113.39
Oct-99	769.29	Nov-01	1,106.76
Nov-99	858.7	Dec-01	904.03
Dec-99	846.99	Jan-02	808.29
Jan-00	942.11	Feb-02	815.23
Feb-00	958.91	Mar-02	851.77
Mar-00	965.39		

8 Annexure 3: Amendments proposed in The Petroleum and Natural Gas Rules, 1959

THE PETROLEUM AND NATURAL GAS RULES, 1959 (As amended from time to time)

NOTIFICATION

Note: Amendments and additions proposed by Industry are inserted as box items below respective Rules.

G.S.R. 1288. In exercise of the powers conferred by sections 5 and 6 of the Oilfields (Regulation and Development) Act, 1948 (53 of 1948) and in supersession of the Petroleum Concession Rules, 1949, the Central Government hereby makes the following rules, regulating the grant of exploration licenses and mining leases in respect of petroleum and natural gas which belongs to Government, and for conservation and development thereof, namely:-

THE PETROLEUM AND NATURAL GAS RULES, 1959

Chapter 1 Preliminary

1. Short title and commencement:-

(1) These rules may be called the Petroleum and Natural Gas Rules, 1959.

(2) They shall come into force on the 25th day of November, 1959.

2. Savings: Nothing in these rules shall affect the provisions of the Petroleum Act, 1934 (30 of 1934), or the rules made thereunder.

3. Definitions: In these rules, unless the context otherwise requires.

(a) "bore-hole" includes an oil well or gas well:

(aa) "Continental Shelf" means the seabed submarine areas adjacent to the coast of island but outside the area of its territorial of 200 metres, or beyond that limit to where superjacent water admits of the exploitation of natural resources of the areas;

(b) "crude oil" means petroleum in its natural state before it has been refined or otherwise treated but from which water and foreign substances have been extracted;

(c) "drilling" or "boring" means perforation of the earth's surface crust by mechanical means (irrespective of whether the hole caused by the perforation is vertical inclined, or horizontal) and includes all operations for preventing collapse of the sides of such hole or for preventing such hole from being filled with extraneous materials including water;

(d) "fields" means the general area which is underlaid, or appears to be underlaid, by at least one pool and shall include the underground reservoir or reservoirs containing petroleum or natural gas or both;

(e) "gas well" means any well the production from which is predominantly natural gas or condensate, or both in quantity;

(f) "geological survey" includes the examination of exposed rocks in the field, the collection of the necessary specimens of rocks and other materials, investigations in the laboratory, the preparation of geological maps and geological sections and all other operations essential for the determination of the geological nature, age and structure of rocks in any area;

(g) "geophysical survey" means the search, by instruments for the presence of suitable underground geological structure and includes the sinking of bore-holes for detonating explosives for the purpose, but not the drilling or deep bore-holes or the sinking of trial shafts, trenches, or other kinds-of large and deep excavations connected with prospecting;

(h) "information drilling" means the drilling of bore-holes for the purpose of procuring scientific information and not with the immediate object of obtaining petroleum;

(i) "natural gas" means gas obtained from bore-holes and consisting primarily of hydrocarbons;

(j) "oil wells" means any well which is capable of producing crude oil and which is not a gas well;

(k) "petroleum" means naturally occurring hydrocarbons in a free state, whether in the form of natural gas or in a liquid, viscous or solid form, but does not include helium occurring in association with petroleum, or coal, or shale, or any substance which may be extracted from coal, shale or other rock by application of heat or by a chemical process;

(l) "petroleum deposit" means any accumulation of petroleum on or below the surface of the earth;

(m) "pool" means an underground reservoir containing a common accumulation of petroleum or natural gas or both and includes each zone of a general structure which is completely separated from any other zone in the structure;

(n) "petroleum product" means any commodity made from petroleum or natural gas and shall include refined crude oil, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, treated crude oil residue, casing head gasoline, natural gas gasoline, naphtha, distillate gasoline, kerosene, waste oil, blended gasoline, lubricating oil, blends or mixture of oil with one or more liquid products or by-products derived from oil or gas, and blends or mixtures of two or more liquid products or by-products derived from oil condensate; gas or petroleum hydrocarbons; whether herein enumerated or not;

(o) "prospect" with its grammatical variations means search for a petroleum deposit;

(P) "stratum" means a layer of rock more or less similar through out a lithological unit;

(q) "the Act" means the Oilfields (Regulation & Development) Act, 1948 (53 of 1948); and

(qq) "territorial waters" means the belt of sea adjacent to the coast of India including its islands or extending into the sea to a distance of six nautical miles measured from the appropriate base line;

(r) "waste" includes the following:-

- (i) The inefficient, excessive, or improper use or dissipation of reservoir energy, and the locating, spacing, drilling, equipping, operating or producing or any oil or gas well in a manner which results or tends to result in reducing the quantity of oil or gas ultimately to be recovered from any pool;
- (ii) the inefficient storing of petroleum; and the locating, spacing, drilling, equipping, operating or producing of any oil or gas well in a manner causing or tending to cause unnecessary or excessive surface loss or destruction of petroleum or natural gas:
- (iii) producing petroleum or natural gas in such a manner as to cause unnecessary channelling of water or gas or both, or coming of water;
- (iv) the submerging with water of any stratum or part thereof capable of producing petroleum or natural gas;
- (v) the creation of necessary fire hazards;
- (vi) the escape into the open air, from a well producing both petroleum and natural gas, of gas in excess of the amount which is necessary for efficient production from the well; and
- (vii) permitting gas produced from a gas well to escape into open air.

Chapter II General

4. No prospecting or mining except under a license or a lease : No person shall prospect for petroleum except in pursuance of a petroleum exploration license (hereinafter referred to as a license) granted under these rules, and no person shall mine petroleum except in pursuance of a petroleum mining lease (hereinafter referred to as a lease) granted under these rules. Every holder of a license and every holder of a lease shall in these rules be referred to as the licensee and the lessee respectively.

5. Grant of license or lease: (1) A license or lease in respect of

- (i) any land or mineral underlying the ocean within the territorial waters or continental shelf of India vested in the Union, shall be granted by the Central Government; and
- (ii) any land vested in a State Government, shall be granted by the State Government with the previous approval of the Central Government.

(2) Every license and lease shall contain such of the terms covenants and conditions prescribed by those rules as are applicable and such additional terms, covenants and conditions as may be provided in the agreement between the Central Government and the licensee or the lessee.

Provided that where the license or the lease has been or is to be granted by the State Government, the Central government shall consult the State Government before agreeing to such additional terms, covenants and conditions.

(3) The Central government, if it deems fit, may from time to time notify in the official Gazette particulars regarding the basis on which the Central Government may be prepared to consider proposals for prospecting or mining operations in any specified areas;

6. Initial license or lease fee: A fee amounting to (i) Rs.10,000 (Rupees ten thousand) in the case of a license and (ii) Rs. 25,000 (Rupees twenty five thousand) in the case of a lease shall be paid to the Central Government or the State Government ,as the case may be, by the licensee or lessee prior to the formal grant of a license or a lease.

7. Right of the licensee and the lessee: Subject to the Act or any rules made thereunder and subject also to terms of agreement that may be arrived at between the Central Government and the licensee or lessee after consultation with the State Government:-

(i) every licensee shall have the exclusive right to carry out in addition to geological and geophysical surveys, information drilling and test drilling operations for petroleum in the area covered by the license and shall have the exclusive right to a lease over such part of the land covered by the license as he may desires;

(ii) every lessee shall have the exclusive right to conduct mining operations for petroleum and natural gas in and on the land demised by such lease together with the right to construct and maintain in and on such land such works, buildings, plants, waterways, roads, pipelines dams, reservoirs, tanks, pumping stations, tram ways, railways, telephone lines, electric power lines and other structures and equipment as are necessary for the full enjoyment of the lease or for fulfilling his obligation under the lease.

Amendment proposed

Rule 7 relating to grant of Mining Lease, where lessee has exclusive right to carry out oil and gas operation, may be suitably amended to provide preference to the existing operator who has made the additional discovery of either CBM or oil & gas for undertaking simultaneous exploration of CBM and Oil & Gas (Refer Para 4.6 for details).

8. Deleted

9. Date of effect of licenses and leases: Every license and every lease shall be effective from the date specified in this behalf in the license or the lease.

Chapter III PETROLEUM EXPLORATION LICENSE AND PETROLEUM MINING LEASE

10. Area and term of license: The area covered by a license shall be specified therein and the term of a license shall in the first instance be valid for a period of four years which may be extended for two further periods of one year each.

11. Security deposit, annual license fee and shedding of areas:

(1) The applicant for a license shall before the license is granted to him, deposit with the Central Government or where the license is to be or has been granted by the State Government, the State

Government, as security for due observance of the terms, covenants and conditions of the license, a sum of Rs.50,000 (Rupees fifty thousand).

(2) The licensee shall pay yearly in advance by way of license fee in respect of his license a sum calculated for each square kilo metre or part thereof covered by the license at the following rates:-

(i) Rs. 8 for the first year of the license;

(ii) Rs.40 for the second year of the license;

(iii) Rs.200 for the third year of the license;

(iv) Rs.400 for the fourth year of the license;

(v) Rs.600 for the first and second years of renewal.

(3) The licensee shall be at liberty to determine the license or relinquish any part of the area covered by the license on giving not less than two months' notice in writing to the Central Government or where the license is to be or has been granted by the State Government, to the State Government and the Central Government.

12. Area and term of a lease: The area covered by a lease shall ordinarily be 250 sq.kms. and the term of a lease shall ordinarily be 20 years.

Provided that the Central Government may, if satisfied that it is necessary in public interest so to do, by notification, relax the condition regarding area aforesaid, in relation to any application for lease.

13. Mining lease fees rent:

(1) The applicant for a lease shall, before the lease is granted to him:-

(a) deposit with the Central or State Government, as the case may be, as security, a sum of Rs. 1,00,000 (Rupees one lac), for due observance of the terms and conditions of their lease;

(b) also deposit with the Central Government or the State Government as the case may be, for meeting the preliminary expenses such sum, not exceeding Rs. 10,000 (Rupees ten thousand) as the Central Government or the State Government with the approval of the Central Government, may determine;

(2) On the grant of a lease, the lessee -

(a) shall pay to the Central Government or the State Government, as the case may be, for every year a fixed yearly dead rent at the following rates:

Rs.12.50 per hectare or part thereof for the first 100 sq. km. and Rs.25 per hectare or part thereof for area exceeding the first 100 sq. km. provided that the lessee shall be liable to pay only the dead rent or the royalty, whichever is higher in amount but not both;

(b) shall also pay to the State Government for the surface area of the land actually used by him for the purpose of the operations conducted under the lease, surface rent at such rate, not exceeding the land revenue and cess assessed or assessable on the land, as may be specified by the State Government with the approval of the Central Government.

14. Royalty on petroleum and furnishing of returns and particulars:

(1) (a) Notwithstanding anything in any agreement, a lessee shall

(i) where the lease has been granted by the Central Government pay to that Government

(ii) where the lease has been granted by the State Government, pay to that Government

a royalty for the period beginning on the first day of April, 1990 and ending on the 31st day of March, 1993, at the rate of four hundred and eighty one rupees per metric tonne of crude oil and casing head condensate and at ten percent of the value at well head of natural gas obtained by the lessee;

Amendment proposed

Rule 14 (1) (a) may be amended to replace the term “mineral oil” with “crude oil, casing head condensate, natural gas, coal bed methane or gas obtained from gas hydrate”. **(Refer Para 4.4 for details)**

Provided that the Central Government or, as the case may be the State Government with the approval of the Central Government may direct that such royalty be paid in petroleum and natural gas;

Provided further that royalty shall not be payable in respect of any crude oil, casing head condensate or natural gas which is unavoidably lost or is returned to the reservoir or is used for drilling or other operations relating to the production of petroleum or natural gas or both.

Amendment proposed

Provisio to Rule 14(1)(a) may be amended to suggest that “no royalty shall be payable in respect of any crude oil, casing head condensate, natural gas, **coal bed methane or gas obtained from gas hydrate** which is unavoidably lost or is returned to the reservoir or is used for drilling or other operations relating to the production of petroleum or natural gas or both”. **(Refer Para 4.4 for details)**

(b) Every lessee shall pay to the State Government where the lease has been granted by that Government, royalty for the period of lease before the first November, 1962 at the rate specified in the lease deed.

(2) The lessee shall, within the first seven days of every month or within such further time as the Central Government or the State Government, as the case may be, may allow, furnish or cause to be furnished to the Central Government or the State Government as the case may be a full and proper return showing the quantity of all crude oil, casing head condensate and natural gas obtained during the preceeding month from mining operations conducted pursuant to the lease. The monthly return required to be furnished shall be, as nearly as may be, in the form specified in the schedule annexed to these rules.

(3) If the Central Government or the State Government as the case may be, is not satisfied with any return furnished in accordance with sub-rule (2), it may require the person furnishing the same to furnish such particulars as it may demand with respect to the crude oil, casing head condensate or natural gas obtained as aforesaid, and may appoint an officer in this behalf to make all necessary enquiries in relation to such crude oil, casing head condensate or natural gas. The officer so appointed may make all such enquiries and may require the lessee or the manager or person acting as manager or secretary of such lessee to produce for his inspection at the office of such lessee, any books accounts, documents, writings papers or instruments in his possession or under his control which such officer may , consider necessary to enable him to ascertain the quantity of the crude oil, casing head condensate and natural gas obtained as aforesaid and may make copies of any entries or matters contained in such books, accounts, documents, writings, papers, or instruments and upon completion of such enquiries such officer shall report thereon to the Central Government or the State Government, as the case may be.

On receipt of such report, the State Government, if it is of the opinion that the quantity of any crude oil casing head condensate or natural gas declared in the return furnished in accordance with this rule is too low, may determine the quantity of such crude oil, casing head condensate or natural gas and royalty shall be paid on the quantity so assessed.

(4) Every officer in the Central or State Government service shall preserve and aid in preserving secrecy with regard to the contents of any return made under this rule which have come to his knowledge in his official capacity and shall not communicate such matter to any other person unless

(5) required in the performance of his official duties or under the authority of a court of competent jurisdiction.

15. Surveys:

If at the time of the grant or at any time during the term of lease, the State Government is of the opinion that survey or re-survey of the land covered by such lease or any part of such land is necessary, such land or part thereof shall be surveyed by a qualified surveyor and the lessee shall within the period specified by the State Government pay to the State Government for such survey or re-survey such fee as the State Government may with the approval of the Central Government, determine.

Chapter IV Other Provisions relating to Licenses and Leases

16. Identification of areas: Within three months from the date referred to in rule 9, the licensee or the lessee shall display notices at all conspicuous points on the area covered by the license or the

lease so as to indicate its boundaries and shall thereafter during the term of such license or lease maintain such notices to the satisfaction of the State Government.

17. Transfer or Assignment: The licensee or the lessee shall not assign or transfer his right, title and interest in respect of the license or the lease or in respect of the land or mineral underlying the ocean within the territorial waters or the continental shelf of India covered by such license or lease granted by the Central Government, without the consent in writing of the Central Government and in the case of land covered by a license or lease granted by the State Government, without the consent in writing of the Central Government being first obtained through the State Government.

18. Pre-emption:

(1) In the case of a national emergency in respect of petroleum, the Central Government shall, at all times, during such emergency, have the right of pre-emption of the refined petroleum or petroleum products produced from the crude oil or natural gas where the lessee is permitted to sell, export or dispose of it without its being refined within India; provided that the fair market price prevailing at the time of pre-emption shall be paid to the lessee by the Central Government, for the petroleum or petroleum products or the crude oil or natural gas taken in pre-emption.

(2) The Central Government shall be the sole judge as to what constitutes a national emergency in respect of petroleum, and its decision in this respect shall be final.

19. General Provision: The licensee or the lessee shall:-

(a) maintain in good repair and conditions all apparatus, appliances and wells capable of producing petroleum on the land covered by the license or the lease.

(b) execute all prospecting or mining operations on such land in a proper and workman like manner in accordance with such methods and practice as are customarily used in modern oilfield practice and abide by all instructions, directions and orders that may be given pursuant to any rules under Chapter IV, and

(c) upon the determination of the license or the lease or upon the relinquishment of any area covered by it shall furnish to the Central Government where a license or lease is granted by that Government, and to the Central Government through the State Government where a license or lease is granted by the State Government confidentially complete records of all the data such as surface geological maps and sections, magnetic and gravity measurements and anomaly maps, seismic profiles, sections and structure contour maps, electrical and telluric current survey data, and other information which have a direct or indirect bearing on the petroleum and mineral possibilities in the area, collected by the licensee or the lessee or his agents or contractors.

Chapter V Suspension and Cancellation

20. Suspension of conditions of license or lease:

(1) Upon written application being made by the licensee or the lessee, or where are two or more of them, by not less than one-half of their number, the Central Government where the license or the lease has been granted by it, or the State Government with the prior approval of the Central

Government where the license or the lease has been granted by the State Government may, from time to time, if it considers that adequate reasons have been furnished, authorise for periods not on any occasions exceeding six months, suspension of any or all of the terms, covenants or conditions relating to the working of the land covered by the license or the lease.

(2) The Central Government or the State Government, as the case may be may, if it authorises suspension as aforesaid, impose such conditions as it may think fit for the protections of any bore-holes, equipment or works on such lands, or for the protection of any petroleum deposits, water or minerals in such land or in any adjacent land, or for any other purpose whatsoever and the licensee or the lessee shall comply with such conditions as if they are incorporated in the license or the lease.

21. Cancellation of licenses and leases:

(1) If the licensee or the lessee or his executor, administrator or assignee at any time during the term of the license or the lease:-

- (a) fails to fulfil, or contravenes, any of the terms, covenants and conditions contained therein, or
- (b) fails to use the land covered by it bonafide for the purposes for which it has been granted, or
- (c) uses such land for a purpose other than that for which it has been granted,

the Central Government or as the case may be, the State Government with the prior approval of the Central Government, may where it is satisfied that the failure, contravention or use is such as cannot be remedied, on giving thirty days' notice to such person and after considering the representation, if any, made by him forfeit the whole or any part of the security deposit made under rule 11 (1) or rule 13 (1) (a) and may cancel the license or the lease. Such cancellation shall be published in the Official Gazette and shall take effect from the date of such publication. If the failure, contravention or use is considered to be of a remediable nature, the Central Government or the State Government, as the case may be shall give notice to such person requiring him to remedy the same within sixty days - from the date of receipt of the notice and informing him that the penalty as aforesaid may be imposed if such remedy is not provided within such period. The State Government may after considering the representation, if any, made by such person, impose the penalty aforesaid if such person fails to do such, remedy within such period:

Provided that the failure on the part of such a person to fulfil any of the terms, covenants and conditions of the license or lease shall not give the State Government any power to impose the penalty as aforesaid in so far as such failure arises from the force majeure and if through force-majeure the fulfilment of any of the terms, covenants and conditions of the license or the lease is delayed, the period of such delay shall be added to the period fixed by the license or the lease for the performance of any act. "Force majeure" includes an act of God, war, insurrection, riot, civil commotion, tide, storm, tidal wave, flood, lightning, explosion, fire, earthquake, and any other happening which the licensee or the lessee could not reasonably prevent or control.

(2) A license or a lease may be cancelled either wholly or part by the Central Government where such license or lease has been granted by it and by the State Government after the approval of the Central Government, where such license or the lease has been granted by it, upon the written request of the licensee or lessee or, where there are two or more of them, of not less than one-half of their number, and such cancellation shall be published in the Official Gazette and shall take effect from the date of such publication. Provided that in the case of a request for cancellation in part of a license or a lease, if the State Government is of the opinion that survey or re-survey is necessary, such survey or re-survey shall be carried out by mining surveyor, and licensee or the lessee shall within the period specified by the State Government pay to the State Government for such survey or re-survey such fee as the Government determine.

(3) If during the term of a license or a lease any part of the land covered by it is required for any public purpose, the Central Government or as the case may be the State Government after approval of the Central Government, may upon one month's notice and after considering the representation, if any, made by the person concerned cancel such license or lease in so far as it relates to the said part of the land subject to such restrictions and conditions as it may impose, and such cancellation shall be published in the Official Gazette and shall take effect from the date of such publication.

22. Delivery of premises upon determination of license or lease:

(1) Upon determination of the license or the lease under these rules the licensee or the lessee shall deliver up the land covered by it, and all wells on that land in good order and condition.

(2) At any time within six months after the determination of the license or the lease under these rules or within such further time as the Central Government or the State Government, as the case may be, may allow, the former licensee or lessee may, subject to these rules, remove or dispose of any petroleum recovered, during the currency of such license or lease, and all stores, equipment, tools and machinery and so much of the improvements on the land covered by the license or the lease as the State Government may permit.

(3) If such petroleum, stores, equipments, tools, machinery and improvements are not so removed or disposed of, they may be sold by auction by order of the Central Government on the State Government as, the case may be, at the risk of the former licensee or lessee. The proceeds of such sale shall be held by the Central Government, or by the State Government, as the case may be, until applied for and obtained by him.

23. Fee, etc. payable by due date:-

(1) All license fees, lease royalties and other payments under these rules shall, if not paid to the Central Government or the State Government as the case may be within the time specified for such payment, be increased by ten per cent for each month or portion of a month during which such fees, royalties or other payments remain unpaid.

(2) Subject to these rules, if any license fee, lease fee, royalty or other payment due in respect of a license or lease is in arrears for more than three months, the Central Government or, as the case may be, the State Government with the prior approval of the Central Government, may cancel such license or lease and shall take effect from the date of such publication.

Chapter VI Conservation and Development

24. Preservation of cores and samples for examination etc.

(1) Every licensee or lessee shall -

(a) so far as is reasonably practicable collect, label and preserve for reference for a period of at least twelve months all bore cores and characteristic samples of the strata encountered in all bore-hole on the land covered by the license or the lease and samples of any petroleum or water discovered in any bore-hole on such land, and

(b) furnish to the Central Government detailed reports of all examinations made of such cores and samples.

(2) Cores and samples preserved as aforesaid shall at all times be made available for examination to the agent authorised by the Central Government and may be taken for the purpose of analysis or other examination but no information obtained as a result of such analysis or examination shall be published without the consent of the licensee or the lessee unless the Central Government deems fit to direct otherwise.

25. Direction to prevent waste: The lessee shall comply with such directions as the Central Government where the lease has been granted by that Government, or where the lease has been granted by the State Government, as the Central Government, or the State Government with the prior consent of the Central Government, may issue restricting the use of petroleum or natural gas for any purpose which the Central Government or the State Government may consider to be uneconomical or conducive to waste.

26. Spacing of wells: The Central Government may issue instructions for

(a) the spacing of oil wells; and

(b) the spacing of gas wells:

Provided that no such well shall be drilled at any point, within a minimum distance, to be prescribed by the Central Government, of any railway, pipeline or other right of way, surveyed road, dwellings, industrial plant, aircraft runway, buildings used for military or public purposes, or within three kilometres of any mines whether active or abandoned, unless the special permission of the Central Government is obtained in advance.

27. Restriction of production: The Central Government may in the interests of conservation of mineral oils by general or special order, restrict the amount of petroleum or natural gas or both that may be produced by a lessee in a particular field.

28. Regulations of operations:

(1) The Central Government may by notification in the Official Gazette prescribe conditions to regulate the conduct of operations by a lessee in a field or area where it has reason to believe that the petroleum deposit extends beyond the boundary of the leased area into areas worked by other lessees and may require the lessee to undertake any operation or prohibit any operation or permit it to be undertaken subject to such conditions as it may deem fit.

(2) Any order under rule 27 or notification issued by the Central Government under sub-rule (1) of this rule shall be deemed to be a condition of the lease.

29. Control of operations to prevent escape of petroleum or access of water:

The Central Government may after reasonable notice to the lessee:-

(a) assume control of the operation of an oil well or gas well and adopt such means as may appear to it necessary or expedient to prevent the escape of petroleum or water from the well, if the lessee fails to do so or appears unable to do so:

(b) assume control of the operation of an oil well or gas well and adopt such means as may appear to it necessary or expedient to prevent the access of water to such well; or to the petroleum bearing or gas bearing strata or both.

(c) for the above purposes appoint such agents as may be deemed necessary and authorise them to enter upon the premises and perform the work and for this purpose to take possession of and use any drilling rig, derrick, tools, machinery and other appliances or materials necessary for the performance of the work which may be upon the location or which may be in the possession or control of the lessee; and

(d) recover from the lessee all the costs and expenses incurred in the performance of the operations so undertaken by the Central Government.

30. Suspension etc., of operations : No licensee or lessee shall:-

(i) suspend normal drilling;

(ii) suspend normal producing operations;

(iii) abandon an oil well or gas well;

(iv) re-condition such a well;

(v) resume drilling operations after a previous completion, suspension or abandonment of such a well; or

(vi) resume producing operations after a previous suspension without priority giving to the Central Government at least a fortnight's notice of any or all of the aforesaid actions, provided that, if normal drilling or normal producing operations have to be suspended immediately due to any unforeseen reason notice thereof shall be given to the Central Government within twenty four hours of such suspension.

31. Shutting down of wells :-

(1) If the Central Government is satisfied after holding an enquiry that an oil well or gas well is being operated in such a way that any provision of these rules or any order of the Central Government pursuant to these rules has been or is being contravened, the Central Government may order that, on and after a date to be fixed by the order, no production is to be permitted from the well and that it is to be shut down and kept shut down until such time as the Central Government may specify.

(2) If, in the opinion of the Central Government, waste, damage to property, or pollution can thereby be prevented, the Central Government may order the well to be shut down pending an enquiry under sub-rule (1), which enquiry shall be held within fifteen days of the making of such order.

32. Agency for supervision:

(1) For the purpose of ascertaining whether the provisions contained in rule 24 to 28 and 30 and any orders, instructions and directions issued thereunder have been or are being complied with by the licensee or the lessee and whether the prospection or mining operations are being carried on by him in accordance with these rules, the Central Government may, by notification in the Official Gazette, constitute a suitable agency consisting of such number of persons as the Central Government thinks fit.

(2) It shall be the duty of such agency for the purpose aforesaid to supervise from time to time any oil well or gas well, or any drilled hole or information well in the process of drilling and submit its report to the Central Government accordingly.

(3) The agency may, in order to carry out its functions under these rules, depute any person authorised by it in this behalf to enter into and inspect any oil well or gas well, or any drilled hole or information well in the process of drilling.

32-A. Penalties:

(1) If the holder of a Petroleum Exploration License or Mining Lease or his transferee or assignee fails, without sufficient cause, to furnish the information or returns or acts in any manner in contravention of sub-rule (2) of rule 14, rule 19 and rule 24, or to allow any authorised person as provided in Rule 32 to enter into and inspect any oil well or gas well or any drilled hole or information well in the process of drilling, he shall be punishable with imprisonment for a term which may extend to six months or with fine which may extend to one thousand rupees or with both.

(2) whoever, after having been convicted of any offence referred to in sub-rule (1), continues to commit such offence shall be punishable for each day after the date of the first conviction during which he continues so to offend, with fine which may extend to one hundred rupees.

**Chapter VII
Miscellaneous**

33. Arbitration of disputes: Every license or lease shall be subject to the following term, namely:- Any dispute (including a dispute regarding the market price referred to in rule 18) between the Government and the licensee or the lessee regarding -

(a) Any right claimed by the licensee or the lessee under the license or lease, or

(b) Any breach alleged to have been committed by the licensee or lessee or any of the term, covenants of the license or lease, or any penalty proposed to be inflicted thereof; or

(c) the fees, royalty or rents payable under the license or the lease, or

(d) any other matter or thing connected with the license or the lease

shall be settled by two arbitrators, one to be nominated by the Central Government and the other by the licensee or lessee; or, in case of disagreement between the arbitrators, by an umpire appointed by the arbitrators by writing under their hands before proceeding with arbitration. The arbitrators or the umpire shall also determine which party shall bear the expenses of the arbitration or whether such expenditure shall be divided between the two parties and if so, in what proportion.

The Arbitrators or the umpires, as the case may be, from time to time, with the consent of all the parties to the contract enlarge the time for making the award. Subject to the aforesaid, the provisions of the arbitration act 1940 and the Rules thereunder for the time being in force, shall apply to the Arbitration proceedings under this clause.

34. Savings or existing licenses and Leases:

Notwithstanding the supersession of Petroleum Concession Rules, 1949, all licenses and leases granted thereunder, which are still in force on the commencement of these rules, shall subject to the provisions contained in sub-rule 1 (a) of Rule 14, continue to be in force, and such supersession shall not affect :-

(i) any right, privilege, obligation or liability acquired, accrued or incurred under the said Petroleum Concession Rules, 1949, or Concession Rules, 1949, or

(ii) any penalty, forfeiture or punishment incurred in respect of any contravention of the provisions of the said Petroleum Concession Rules, 1949, or the said license and leases.

provided that any such license or lease may be modified by mutual agreement between the Central Government and the licensee or lessee, where such license or lease has been granted by the Central Government, or between the State Government and the licensee or the lessee, with the approval of the Central Government where such license or lease, with the approval of the Central Government where such license has been granted by the State Government.

Schedule

Monthly Return of Crude Oil, Casing-Head Condensate and Natural Gas produced

Petroleum Mining Lease No.
 Name of the lease
 Month & Year

A. Crude Oil

Total metric Tonnes obtained	Metric Tonnes unavoidably lost or returned to natural reservoir	Metric tonnes used for purposes of petroleum mining operations approved by the State Government	Metric Tonnes obtained less Col. 2&3	Remarks
1.	2.	3.	4.	5.

B. Casing-head Condensate

Total metric Tonnes obtained	Metric Tonnes unavoidably lost or returned to natural reservoir	Metric tonnes used for purposes of petroleum mining operations approved by the State Government	Metric Tonnes obtained less Col. 2&3	Remarks
1.	2.	3.	4.	5.

C. Natural Gas

Total metric Tonnes obtained	Cubic metres unavoidably lost or returned to natural reservoir	Cubic metres obtained for purposes of petroleum mining operations approved by the State Government	Cubic metres obtained less Col. 2&3	Remarks
1.	2.	3.	4.	5.

I or we do hereby solemnly and sincerely declare and affirm that the information in this return is true and correct in every particular and this solemn declaration conscientiously believing the same to be true.

Additions proposed

The Rules do not specifically address the issue of EWT. Rule 7(1)(i) does, however, give an exclusive right to the holder of a Petroleum Exploration Licence (PEL) to carry out “*information drilling and test drilling operations for petroleum*”. The Rules should be suitably amended to insert relevant clause(s) relating to Extended Well Tests addressing issues such as approvals, duration, volume, liability to pay royalty, tax obligations, environmental concerns etc. **(Refer Para 4.5 for details)**

Rule making powers with respect to safety (HSE matters) should be explicitly mentioned in the Act and the Rules for offshore areas. **(Refer Para 4.11 for details)**

Rule making power, to notify agency for supervision of safety in offshore E&P operations, to be provided in the Act and the Rules. **(Refer Para 4.12 for details)**