

CHAPTER 5

EFFICIENCY AND ECONOMY IN DRILLING OPERATION

In order to determine OIL's efficiency of drilling operations and to review how far economy was achieved in its drilling contract management, audit reviewed the operational efficiency of its own and hired rigs, while looking at exploratory drilling vis-à-vis development drilling including drilling meterage, drilling speed, non productive time (NPT), vintage of rigs etc. as well as performance of workover rigs. Audit also looked at management of contracts for acquisition and refurbishment of own rigs as well as chartered hire rigs.

5.1 Operational Efficiency of Drilling

The success of drilling operation mainly depends on efficiency of rigs. OIL utilizes own as well as hired rigs for its drilling operations.

5.1.1 Operational Efficiency of Own and Hired Rigs

The performance of drilling operations through own and hired rigs are discussed in subsequent paragraphs.

5.1.1.1 Exploratory Drilling vis-à-vis Development Drilling

OIL carries out exploratory and development drilling for hydrocarbon exploration. OIL's target and actual of exploratory drilling and development drilling for the five years from 2009-10 to 2013-14 are detailed in table 5.1 and 5.2 respectively:

Table 5.1 - Target and Actual of Exploratory Drilling

Year	B.E Target		R.E Target		Actuals		Excess/(Shortfall) to BE target		Excess/(Shortfall) to RE target	
	Meterage	Wells	Meterage	Wells	Meterage	Wells	Meterage	Wells	Meterage	Wells
2009-10	71920	22	72957	20	58375	16	(13545)	(6)	(14582)	(4)
2010-11	103050	31	63650	20	45875	13	(57175)	(18)	(17775)	(7)
2011-12	101900	33	91642	24	56568	16	(45332)	(17)	(35074)	(8)
2012-13	114040	33	77044	25	66435	19	(47605)	(14)	(10609)	(6)
2013-14	100750	31	52404	17	35699	9	(65051)	(22)	(16705)	(8)
Total	491660	150	357697	106	262952	73	(228708)	(77)	(94745)	(33)

Source: Tour Register of Rigs

Table 5.2 - Target and Actual of Development Drilling

Year	B.E Target		R.E Target		Actuals		Excess/(Shortfall) to BE target		Excess/(Shortfall) to RE target	
	Meterage	Wells	Meterage	Wells	Meterage	Wells	Meterage	Wells	Meterage	Wells
2009-10	121680	44	109350	39	84076	30	(37604)	(14)	(25274)	(9)
2010-11	117000	46	70700	26	71253	24	(45747)	(22)	553	(2)
2011-12	92600	34	67529	28	71426	22	(21174)	(12)	3897	(6)
2012-13	91375	27	69051	29	62478	19	(28897)	(8)	(6573)	(10)
2013-14	105110	38	94042	33	69412	25	(35698)	(13)	(24630)	(8)
Total	527765	189	410672	155	358645	120	(169120)	(69)	(52027)	(35)

Source: Tour Register of Rigs

Audit observed that:

In **Exploratory Drilling**, there were significant shortfalls in the drilling of exploratory wells during the period from 2009-10 to 2013-14. In terms of meterage, RE targets for exploratory drilling were reduced from BE targets in the range between 10 and 48 per cent during 2010-11 to 2013-14. Even after reduction of BE targets for exploratory drilling, the meterage achievement fell short in the range between 14 and 38 per cent in all the years. In terms of wells, RE targets for exploratory drilling were reduced from BE targets in the range between 9 and 45 per cent during 2009-10 to 2013-14. Even after reduction of BE targets for exploratory drilling, the achievement in number of wells fell short in the range between 20 and 47 per cent in all the years.

In **Development Drilling**, there was significant cumulative shortfall in the drilling of development wells during the period from 2009-10 to 2013-14. Though OIL achieved its RE targets for development drilling in terms of meterage during 2010-11 and 2011-12, there were shortfall of 8 wells in the aforesaid period. In terms of meterage, OIL reduced its RE targets from its BE targets for development drilling ranging between 11 and 40 per cent during 2009-10 to 2013-14 without any recorded reasons. Even after reduction of BE targets, the shortfall in actual drilling ranged between 10 and 26 per cent in 2009-10, 2012-13 and 2013-14. In terms of wells, OIL reduced its BE targets for development drilling ranging between 11 per cent and 43 per cent during 2009-10 to 2013-14 except 2012-13. Even after reduction of RE targets, the shortfall ranged between 8 and 34 per cent in all the years.

Though OIL could not achieve the target for exploratory drilling over the years, it failed to execute the contract for one chartered hire rig which expired in December 2012.

Audit also compared the details of exploratory vis-à-vis development wells drilled in terms of meterage and wells during the period from 2009-10 to 2013-14. The results of Audit analysis are given in the table 5.3 and figure 5.1 and 5.2:

Table 5.3 - Percentage of Exploratory Drilling and Development Drilling

Year	Exploratory Drilling		Development Drilling		Total Meterage	Total Wells	Percentage of exploratory drilling to total drilling	Percentage of exploratory wells to total wells	Percentage of Development drilling to total drilling	Percentage of development wells to total wells
	Meterage	Wells	Meterage	Wells						
(I)	(II)	(III)	(IV)	(V)	(VI = II+IV)	(VII = III+V)	(VIII)	(IX)	(X)	(XI)
2009-10	58375	16	84076	30	142451	46	41	35	59	65
2010-11	45875	13	71253	24	117128	37	39	35	61	65
2011-12	56568	16	71426	22	127994	38	44	42	56	58
2012-13	66435	19	62478	19	128913	38	52	50	48	50
2013-14	35699	9	69412	25	105111	34	34	26	66	74
Total	262952	73	358645	120	621597	193	42	38	58	62

Figure 5.1 – Exploratory Drilling and Development Drilling (In Meterage)

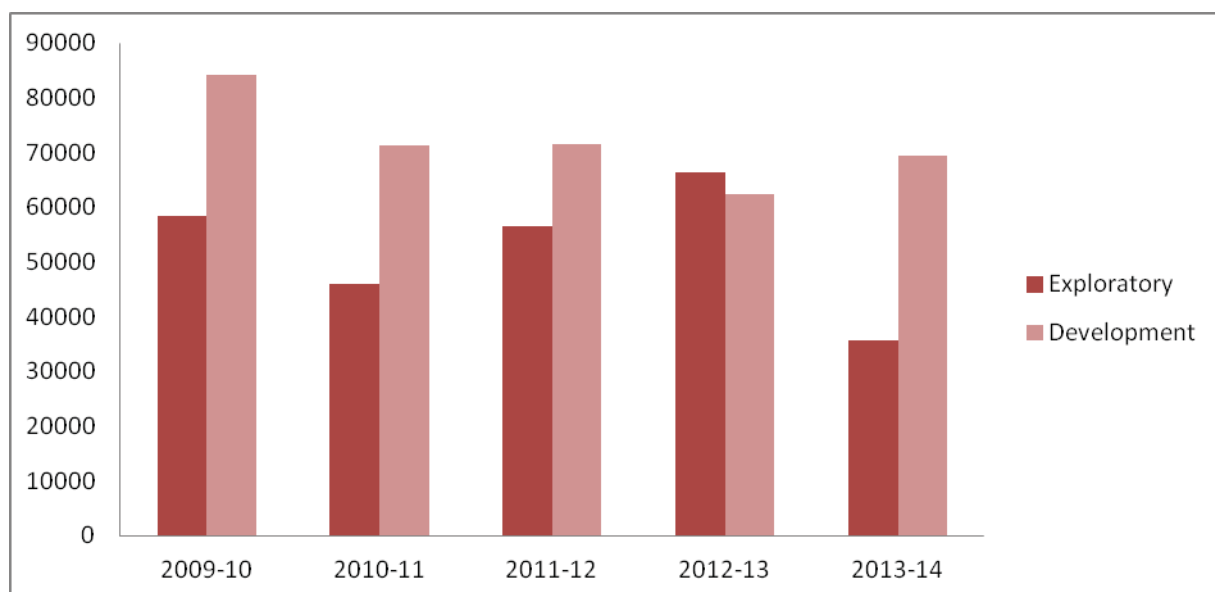
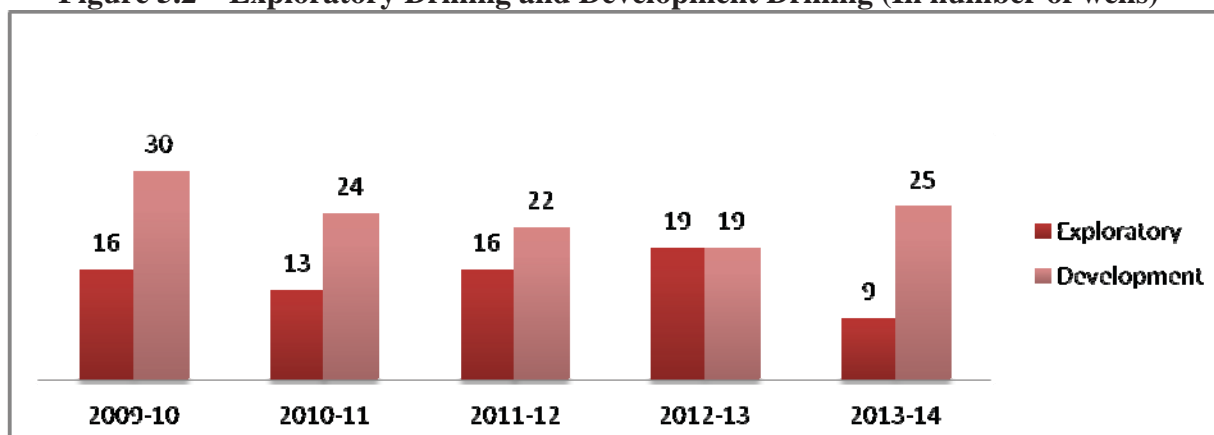


Figure 5.2 – Exploratory Drilling and Development Drilling (In number of wells)



It was observed that

- Except for 2012-13 when the ratio was almost 50:50, in other years, development drilling activities got preference over exploratory drilling during the period from 2009-10 to 2013-14.
- OIL depended more on development drilling (ranging from 48 to 66 per cent) and less on exploratory drilling (ranging from 34 to 52 per cent) resulting in shortfall in exploratory drilling as compared to development drilling.
- In order to add more proven field for development and to have better reserve replacement ratio, more and more new areas needed to be explored through exploratory drilling. The low prioritization of exploration efforts undermined the overall objective of adding new fields of hydrocarbon as envisioned in Hydrocarbon Vision 2025.

OIL stated (April 2015) that the variance of the drilling plans with the targets of the 12th five year plan was mainly due to long lead time for acquisition of land, forest clearance, defence clearance, litigation, prolonged production testing, difficult down hole problems leading to loss of rig years and local problems etc. OIL further stated that replacement contract for chartered hire of drilling rig was awarded but the contractor failed to mobilize the rig which was subsequently scrapped.

While accepting the Audit contention regarding more reliance on development drilling and less on exploratory drilling, OIL stated (April 2015) that exploratory drilling efforts from

2010 -11 to 2013-14 was a bit low, which was due to OIL's commitment to fulfill the production target and also due to many potential exploration areas coming under reserve forests / wild life sanctuaries.

The reply (April 2015) of OIL is not convincing as none of the factors mentioned were new to OIL and these should have been addressed to overcome the deficiencies, keeping in view that the targets were set by OIL considering all the above constraints. As regards deployment of chartered hire rig, the fact remains that no chartered hire rig as a replacement was available since January 2013 for exploration activities. OIL reduced its RE targets drastically compared to its BE targets and there were significant shortfalls in achievement even after such reduction. Though OIL had reported its performance of exploratory and development drilling regularly to BOD and MOPNG, no specific analysis of reasons for such shortfall and cause of downward revision of RE targets was available on record.

The contention of OIL about its commitment to fulfill production target and consequent less emphasis on exploratory drilling is not convincing. Considering the fact that OIL being an NOC in the E&P field, it fixes exploratory drilling target considering all aspects of its functioning.

The Standing Committee on Petroleum and Natural Gas (2013-14, 15th Lok Sabha) in its 21st report commented that under achievement of drilling targets of NOCs was mainly due to difficulties faced on account of geographic conditions/non availability of required permissions and clearances by MOD and MOEF, DRDO etc. The committee recommended that MOPNG/OIL should rigorously pursue the matter of obtaining permissions/clearances from the concerned authorities to seek early action for timely achievement of exploration targets. The Hydrocarbon Vision 2025 also emphasized on aggressive persuasion for extensive exploration and to focus on oil security through intensification of exploration efforts and achievement of 100 per cent coverage of unexplored basins in a time bound manner to enhance domestic availability of oil and gas. The committee also recommended that considering the shortfall in the drilling targets, MOPNG should take necessary steps to ensure that NOCs abide by the exploration targets assigned to them. The same committee in 2012-13 pointed out that in view of the need to explore more domestic hydrocarbon resources, the shortfall in the exploratory and development drilling targets would seriously impact the programme.

In the Exit Conference (July 2015) MOPNG/ OIL accepted the views of audit.

5.1.1.2 Performance in drilling depth and drilling time

OIL prepares yearly and three years Tentative Drilling Programme, in which it plans the numbers of wells to be drilled, its depth and planned days required for each well. Test check of records of 142 wells, out of total 193 wells drilled during the last five years ending 2013-14 revealed that:

- In 31 wells, due to difference in planned depth and actual depth, OIL drilled 1714 meters less than planned. However, it took 2084 excess days in aggregate for these wells. Delays for drilling the wells ranged between 6 and 277 days;
- In 6 wells, the actual drilling time taken was much more than the planned days although the actual and planned depth was equal. OIL took 637 excess days in aggregate for these wells. Delays for drilling of wells ranged between 19 and 276 days.

While accepting the Audit contention, OIL stated (April 2015) that the reasons for excess time taken were mainly due to downhole complications during drilling of deep development wells, drilling of J bend/ horizontal/S bend wells, local problems and difficulty in land acquisitions.

Audit has pointed out systemic deficiency of excess drilling time taken in majority of wells. Also the issues cited are well known to OIL and proper planning to curb the delays should have been resorted to.

5.1.1.3 Cycle speed and commercial speed of own and hired rigs

The efficiency of drilling rigs is judged on the basis of commercial speed³⁰ and cycle speed³¹. The commercial speed and cycle speed of own rigs and hired rigs for the period from 2009-10 to 2013-14 are tabulated in table 5.4:

³⁰ The commercial speed is the efficiency of operations during the drilling phase and is calculated in terms of meterage/ rig months. It includes the date from which the rig is on location and ready to resume operation to the final stage where production casing is tested. This covers only the actual drilling time.

³¹ Cycle speed is the time taken during the entire cycle of rig deployment and is calculated in terms of rig months. It includes the date from which rig was released from its previous location to the rig release from its present location after drilling of well. It includes rig movement time, drilling time, production testing time, and completion / well abandoning time.

Table 5.4 – Commercial speed and cycle speed of own and hired rigs

(Metres per month)

Drilling performance indicator		2009-10	2010-11	2011-12	2012-13	2013-14
Commercial Speed	Own rigs	1259.42	1405.95	1241.64	1886.21	1532.49
	Hired rigs	1068.03	1293.48	1640.07	1885.74	976.70
Cycle Speed	Own rigs	834.61	487.44	573.40	1091.30	708.59
	Hired rigs	650.13	696.22	856.50	1579.15	578.19

Audit observed that:

- There were abnormal fluctuations in commercial speed and cycle speed of own rigs and hired rigs during the period from 2009-10 to 2013-14, while the number of rigs remained the same.
- The commercial speed and cycle speed of hired rigs reduced to 52 and 37 per cent respectively in the year 2013-14 as compared to 2012-13. OIL, however, did not incorporate any clause in the agreement for chartered hire of rigs to control the inefficiency in operation of hired rigs.
- OIL did not fix norms for commercial speed and cycle speed for its own rigs and also did not incorporate the same in the contracts for hired rigs.

While accepting the Audit contention, OIL stated (April 2015) that the commercial speed and the cycle speed for each rig and for each particular drilling location would not be the same and differ from location to location both for own rigs and chartered hire rigs due to sub-surface problem, different sub-surface geology, target depth, efficiency of equipment as well as operations, bit selection and local environmental problem. In view of the above it was inappropriate to compare the commercial and cycle speed in a generalized way. Further, the norm for planned commercial and cycle speed of OIL is guided by annual Tentative Drilling Programme (TDP). In the annual TDP against each rig, the time required for rig movement and spud³² date to completion date was shown for each well earmarked which was used as basis of calculating planned commercial speed and cycle speed. This time line was applicable to both in-house and chartered hire rig. As for the efficiency of chartered hire rigs, penalty was being imposed i.e. zero rate wherever applicable as per the contract clauses.

³² the process of beginning to drill a well.

The contention of OIL needs to be viewed in the light of the fact that even if situation varies from location to location, fluctuation may be in a reasonable range. Audit has pointed out abnormal fluctuation and uneven/skewed trend of the speed, for which no proper analysis was on record. Further, regarding imposition of penalty for lower commercial and cycle speed in respect of chartered hire rig, the reply is not convincing as OIL penalized the contractor only in case of rig remaining idle due to fault of the contractor and not due to lower commercial or cycle speed.

5.1.1.4 Non Productive Time of Rigs

As on 31 March 2014, OIL was in possession of 9 in-house drilling rigs and 13 work-over rigs of various capacities. In addition to own fleet, OIL also used 5 chartered hire drilling rigs and 4 chartered hire work-over rigs for drilling activities.

a) Own and Hired Drilling rigs

More efficiency can be achieved by reducing the non-productive time (NPT) with active co-ordination between logistic and other service providers of rigs. The year-wise details of NPT in respect of own drilling rigs and chartered hire drilling rigs for the period from 2009-10 to 2013-14 are given in table 5.5 :

Table 5.5 – NPT of own and hired drilling rigs
(Figures in hours)

Year	Own drilling rigs			Chartered hire drilling rigs		
	Total hours	Productive hours	NPT	Total hours	Productive hours	NPT
2009-10	63528	43550	19978	35064	28408	6656
2010-11	61320	34144	27176	36528	26842	9686
2011-12	68664	41980	26684	43800	22468	21332
2012-13	64272	41956	22316	43104	27488	15616
2013-14	40344	24676	15668	25680	14072	11608

Source: Tour register of Rigs

Audit observed that:

- The percentage of NPT in case of own drilling rigs increased from 31 per cent in 2009-10 to 39 per cent in 2013-14.
- In case of chartered hire drilling rigs, the percentage of NPT increased from 19 per cent in 2009-10 to 45 per cent in 2013-14.
- Although the ONGC norm for NPT is less than 10 per cent and international norm is less than 5 per cent, the average NPT of own drilling rigs of OIL was 38 per cent and

chartered hire drilling rigs was 35 per cent. Norm for NPT of drilling rigs has not yet been fixed by OIL.

- In the case of three chartered hire drilling rigs, OIL had to pay ₹ 5.34 crore towards standby charges to the contractors due to failure of OIL to provide equipment and materials in time.
- Out of 142 wells drilled in Assam & Assam-Arakan during the period from 2009-10 and 2013-14, there were delays in 33 wells in mobilization of drilling rigs calculated from the day of rig-down at present location to rig-up in next location. The delays ranged between 8 and 205 days.
- Apart from above, during the period from 2009-10 to 2013-14, six chartered hire drilling rigs were not available for a total span of 108 months.

While accepting the Audit contention, OIL stated (April 2015) that the exploratory drilling target could not be achieved for the period mentioned due to high rate of NPT which mainly constituted local problems, bundh, blockade and contractor's problem relating to chartered hire rig etc. OIL further stated (May 2015) that considering the DGH norm for calculation of NPT, besides taking surface and sub-surface problems and absenteeism the NPT ranged between 5 and 13 per cent during 2009-10 to 2013-14.

The contention of OIL is not convincing as the various reasons for NPT should have been addressed by it with the experience gained over a long period of time during its operations in E&P business. The bottlenecks and problems are also not new to OIL.

It is pertinent to note that the Standing Committee on Petroleum and Natural Gas (2014-15, Sixteenth Lok Sabha) in its fourth report noted that rigs were the key equipment for carrying out exploration and production activities. The committee also noted that the idle time for the chartered hire rigs was quite high for NOCs due to some avoidable and manageable constraints like rigs waiting for logistics and waiting on locations on ready sites which affected the productive period of rigs. The committee recommended that NOCs should concentrate in effective planning and management of exploration programmes so as to ensure optimum utilisation of rigs. The committee also desired that NOCs should strive to achieve the productivity level of rigs in line with international benchmark.

In the Exit Conference (July 2015), MOPNG/OIL stated that the audit observation was based on facts.

b) Workover rigs

Workover activities include one or more remedial operation on a producing well to increase production. It also refers to any kind of oil well intervention involving invasive techniques, such as wireline, coiled tubing or snubbing. In order to carry out workover activities, OIL engaged 13³³ in-house workover rigs and 4 chartered hire rigs during the period from 2009-10 to 2013-14 except in the year 2011-12 where only 2 chartered hire rigs were deployed. The year-wise details of NPT of own workover rigs and chartered hire workover rigs for the period from 2009-10 to 2013-14 are given in table 5.6:

Table 5.6 – NPT of own and chartered hire workover rigs

(Figures in hours)

Year	Own workover rigs				Chartered hire of workover rigs			
	Total hours	Productive time	NPT	Percentage of NPT to total hours	Total hours	Productive time	NPT	Percentage of NPT to total hours
2009-10	32776	29632	3144	10	25920	24524	1397	5
2010-11	50512	45906	4606	9	28632	25588	3044	11
2011-12	49600	46325	3275	7	17288	15264	2024	12
2012-13	51936	44935	7001	13	28968	25287	3681	13
2013-14	50528	44371	6158	12	35928	29436	6493	18

Audit observed that:

- NPT of own workover rigs ranged between 7 and 13 per cent and chartered hire workover rigs ranged between 5 and 18 per cent during the period from 2009-10 to 2013-14;
- NPT registered an increasing trend for both own and chartered hire workover rigs from 2009-10 to 2013-14;
- The percentage of NPT of chartered hire workover rigs was much higher than own workover rigs.

In this connection, it is pertinent to mention that the norm for NPT in respect of workover rigs has not yet been fixed by OIL.

While accepting the Audit contention, OIL stated (April 2015) that it had total 12 own workover rigs out of which seven rigs were almost 30 years old where NPT was more due to maintenance and thus increasing the NPT trend. In respect of chartered hire workover rigs,

³³ including one workover rig earmarked for training purpose in the year 2011-12

NPT increased mainly due to external problems in operational areas faced by the rig operators.

The fact remains that OIL did not finalize its procurement plan in time to replace the vintage workover rigs. In respect of chartered hire workover rigs, reasons for increasing NPT are known to OIL for taking timely remedial action.

In the Exit Conference (July 2015), MOPNG/OIL stated that the audit observation was based on facts.

5.1.1.5 Production testing of wells

Production testing in oil well is carried out to determine its flow capacity at specific conditions of reservoir and flowing pressures. OIL has fixed target days for completion of production testing, which is 15 days in case of an exploratory well and 10 days for development well.

Out of 193 wells drilled during last five years, the time taken for production testing in respect of 142 wells (92 wells with own rigs and 50 wells with chartered hire rigs) selected based on materiality were test checked.

Audit observed that:

- In 59 wells (30 wells by own rigs and 29 wells by chartered hire rigs), OIL failed to complete the production testing as planned. The delay in completion of production testing ranged between 6 and 94 days.
- As per the status report of the wells as on 31 March 2014, in 8 wells the production testing remained incomplete even after a lapse of one month to four years.
- Total delay for production testing in case of own rigs was 1005 days and in case of chartered hire rigs was 980 days during the period from 2009-10 to 2013-14.
- On account of delay in production testing, OIL paid ₹ 88.02 crore in 29 cases towards standby charges to the contractors against the chartered hire rigs.

The delay in production testing resulted in under utilization of rigs and loss of meterage which resulted in increase in NPT.

OIL replied (April 2015) that in general the time required for the production testing was dependent on various factors like number of zones identified for testing, downhole challenges

etc. OIL has furnished the well wise reasons for the delay in production testing which included non-availability of drilling crew, road breach, repair of isolation failure, local problem, poor cement squeezing job, internal issues, recovery of tubing fish, leakage in valves etc. apart from additional perforation carried out in single/multiple sands.

The reply of OIL is needs to be viewed in the light of the fact that most of the factors as considered by OIL for higher production testing time were controllable by proper planning. Besides, the norm for production testing for exploratory and development wells were adopted by OIL after duly considering all the down-hole challenges likely to be encountered during production testing.

5.1.1.6 Vintage of own rigs

OIL has a dedicated drilling department to accrete hydrocarbon reserves through drilling operation. Drilling Department uses both in-house rigs as well as chartered hire rigs. As on 31.03.2014, the Drilling Department had a fleet of nine in-house drilling rigs and five chartered hire drilling rigs.

The requirement of rigs for exploratory and development drilling in the nominated blocks is assessed on the basis of OIL's drilling commitments in the five year plan and deployment pattern as per three year Tentative Drilling Programme. In case of NELP blocks, the requirement of rigs is worked out by the concerned project based on the Minimum Work Programme (MWP) pertaining to the block. Commensurate with the type and nature of wells, rig types/capacities are determined and the need for additional rigs for exploratory effort is worked out considering the availability of in-house and currently engaged hired rigs.

It was noticed in Audit that the vintage of in-house drilling rigs were in the range of 9 and 36 years as on 31 March 2014. Similarly, out of 13 existing in-house workover rigs, the vintage of 8 workover rigs was in the range of 25 and 35 years and 5 workover rigs were commissioned in July/December 2008.

The ideal life span of a drilling rig ranged between 20 and 25 years depending on various factors viz. use, maintenance etc. Since OIL is operating with a fleet of very aged equipment, it affected the exploratory drilling of OIL due to high NPT.

OIL stated (April 2015) that its own rigs were refurbished since 2009 onwards except two rigs. In order to phase out the old workover/drilling rigs, procurement processes of nine new workover/drilling rigs were in progress.

OIL itself accepted that out of total 12 own work over rigs, seven rigs are almost 30 years old where NPT was more due to maintenance, leading to increase in NPT trend.

In the Exit Conference MOPNG/OIL stated (July 2015) that a number of new rigs were under procurement and old vintage rigs would be gradually replaced.

5.2. Management of Contracts

Procurement of rigs

Audit reviewed all the 4 procurement of rig contracts executed during 2009-10 to 2013-14. Certain deficiencies noticed in management of contracts are listed in Annexure III.

Chartered Hire rigs

Out of 20 executed contracts for chartered hire of rigs, audit reviewed 8 contracts selected based on materiality. Certain deficiencies noticed in management of contracts are listed in Annexure IV.

5.2.1 Dependence on hired rigs

OIL engaged chartered hire rigs in its operational area since 2004 and the practice continued thereafter in order to meet shortfall of its own drilling fleet. During the period from 2009-10 to 2013-14, OIL engaged five chartered hire drilling rigs. Similarly, it also engaged two to four chartered hire work-over rigs in all these years.

Audit observed that OIL did not initiate any action till April 2010 for procuring drilling rig to reduce its dependence on the hired rigs as the last procurement of drilling rigs made by OIL was in 2005 only for replacement of old drilling rigs. Subsequent action of OIL in April 2010 for procurement/commissioning of drilling rigs did not materialize on account of legal dispute and an accident of the rig carrying vehicle. As such, OIL depended on the engagement of hired rigs.

OIL in its reply (April 2015) stated that it engaged chartered hire rigs in its operational areas continuously since 2004 and the practice continued thereafter to meet the drilling requirement as envisaged in three yearly drilling plan. The procurement process of four 2000

HP drilling rigs were in progress to reduce the dependency on chartered hire rig. However, due to easy deployment, chartered hire rigs in certain areas were preferable than own rigs. Further, if more own rigs were used it might lead to redundancy of rig inventory due to non-sustaining of drilling activities.

The reply of OIL is not convincing since there was continuous requirement of drilling rigs as it failed to meet the exploration target over the years. The vintage of drilling rigs of OIL were in the range between 9 and 36 years and for workover rigs it ranged between 5 and 35 years. OIL itself admitted that vintage of workover rigs led to increase in non productive time due to maintenance. Further, the procurement action for four 2000 HP drilling rigs has not been completed (April 2015).

5.2.2 Illustrative Cases in Drilling Operation

(i) Procurement of rigs

OIL invited (January 2006) bids from rig manufacturers/ suppliers for supply of four 600 HP mobile workover/drilling rigs. In response to the tender, four bids from different manufacturers/suppliers³⁴ were received.

During technical scrutiny (April 2006), OIL, sought further information from two bidders, otherwise eligible {i.e. M/s China Petroleum Technology Development Corporation, China (CPTDC) and M/s SC TC UPET SRL, Romania(SCTC)}, by 25 May 2006.

Considering the CPTDC offer and subsequent clarifications, the technical committee concluded (July 2006) that the offer of CPTDC had serious limitations. However, GM (OD & RS) suggested that the bid of CPTDC was technically qualified by drilling department and recommended CPTDC as proven source as the 1000 HP mobile rig supplied by CPTDC earlier was working satisfactorily at Rajasthan. He also noted that performance of the rig quoted by M/s SC TC UPET SRL, Romania (SCTC), even though technically acceptable, was poor.

CPTDC in response to the clarification sought stated (September 2006) that the characteristics of 600 HP rigs were the same with that of 1000 HP rig supplied by them in

³⁴ 1. M/s National OilWell Varco, USA,
2. M/s China Petroleum Technology Development Corporation, China,
3. M/s SC TC UPET SRL, Romania and
4. M/s PMP, UK/ Ukraine

2005. CBC approved (September 2006) to send a team to manufacturer's site at China to obtain the requisite clarification and directed that they must visit the field where such rigs are being used in China. Accordingly, the team visited China and reported (October 2006) that the performance of the rigs was satisfactory and the offer of the party was technically acceptable.

OIL decided (October 2006) to open the price bid of only CPTDC. OIL rejected SCTC's presentation (November 2006), and concluded that the offered rig model by SCTC was not technically suitable.

The price bid of CPTDC was opened in January 2007 and the purchase order for supply of four 600 HP self propelled mobile workover/drilling rigs placed (February 2007) at total value of ₹ 28.15 crore to CPTDC which included ₹ 0.07 crore towards commission payable to their Indian agent (i.e. M/s Comet Energy Solution India Pvt. Ltd., New Delhi).

Subsequently, OIL modified (August 2007) the purchase order by issuing an amendment order which included change in various specifications³⁵ of the rigs. OIL issued another amendment (August 2007) for supply of one more rig with same specification at total value of ₹ 6.20 crore which include ₹ 0.02 crore towards agency commission payable to Indian agent without resorting to fresh tender. The contractor delivered the rigs in July-December 2008. OIL noticed that the rig did not adhere to the specification.

Audit observed that the procedure adopted by OIL lacked transparency on various counts:-

- OIL accepted the technical bid of CPTDC on the issue of weight and other issues rejecting the clarification of SCTC.
- OIL gave preference to CPTDC, a supplier of rig, over SCTC which was a manufacturer. The procurement of rigs from supplier had the risk of increased cost and non-availability of spares in future.
- OIL paid ₹ 0.09 crore towards agency commission to M/s Comet Energy Solutions India Pvt. Ltd. though the same was not included in the bid.
- CPTDC supplied a rig not confirming to specification. As per the Bid Rejection Criteria (BRC), bidders were not allowed to substitute the rig make/ model/

³⁵ rotary speed, weight of the compound gear box, weight of the elevated gear box, engine model and transmission model

specification once offered by them in their bid during the period of bid validity. OIL, however, violated the above provision.

OIL stated (April 2015) that it broadly followed the guideline of in-house contract and purchase manual and thus procedure followed was transparent. Further, clubbing of additional requirement against a purchase order was permitted as per the provisions of the Manual and it had been done as per operational urgency. OIL's contract manual had not fixed timeline for finalisation of rig contract. OIL also justified technical selection of CPTDC over SCTC.

OIL's reply was silent on subsequent change in specification by CPTDC after finalization of the contract. As explained above OIL's action lacked transparency and was against CVC guidelines.

(ii) Award of chartered hire rig contract without resorting to tender procedure

OIL required two chartered hire rigs and floated tender in April 2010 with a provision for an additional rig. It awarded (March 2012) the contract of one drilling rig to Simplex infrastructure, Mumbai (Simplex), as L1 bidder, at a total contract price of ₹ 51.67 crore, and Simplex offered only one rig in their bid. Subsequently, OIL awarded (May 2012) contract³⁶ for second rig to Jaybee Energy Pvt. Ltd. (JEPL) under the same tender at the price of L1. In July 2012, OIL decided to obtain the third rig on urgent basis by October 2012.

Instead of floating a fresh tender, OIL decided to exercise the third rig option to meet the requirement of additional rig as available in the tender³⁷ which was finalized in March 2012. OIL awarded (March 2013) the contract for third rig to JEPL for a period of two years at the rate of second rig (i.e. ₹ 51.67 crore).

Audit observed that:

- OIL had opened the technical and price bid in June 2010 and December 2011 respectively. However, OIL finalized the award of third rig in March 2013, after a lapse of almost three years, at the rate offered by JEPL in April 2010. Audit noticed from another contract³⁸ finalized in June 2012 that there was declining trend in the rate of hired rigs.

³⁶ No. CONT/GL/DRLG/288/12

³⁷ No. CONT/GL/DRLG/259/10

³⁸ Contract No. OIL/CDG4167/DRLG/12

- In audit view, OIL deprived itself of getting the lower and competitive rate prevailing in 2013 by not going in for fresh tender for the third rig. OIL's action was lacking in transparency as OIL did not go for open tender.
- The proposal for obtaining third rig was processed on fast track basis in July 2012 without calling for fresh tender as the said rig was required by October 2012 and the contract was given to JEPL. Audit noticed that LOA was issued in March 2013. This ultimately defeated the purpose of bypassing of tendering system for expeditious availability of third rig as rig was not available till September 2013 even if the contractor mobilized the rig in time (i.e. 180 days of mobilization time from the date of awarding of contract).
- The contract value included mobilization charges of ₹ 0.54 crore. As the drilling rig offered by JEPL was working with OIL at Duliajan under another contract³⁹, the mobilization charges of ₹ 0.54 crore should have been excluded from the contractual value as it has been done in case of replacement of rig contracts⁴⁰.

OIL replied (April 2015) that the contract were awarded after deliberation of urgency of requirement and to avoid time required for floating fresh tender to hire third rig. The decision to award third rig was within the provisions of the tender which was floated on international competitive bidding basis and was also based on legal opinion.

The reply is not convincing as the procedure adopted by OIL not only lacked transparency but was also against the CVC guidelines issued in July 2007. Further, approval of Board of Directors was not obtained though the contract value exceeded the delegation of power of CBC for which Board approval was required.

³⁹ Contract No. OIL/CCO/DRLG/204/2008

⁴⁰ No.OIL/CCO/DRLG/GLOBAL/165/2007