

## MINERAL EXPLORATION CORPORATION LIMITED (MECL)

The Mineral Exploration Corporation Limited (MECL) since its inception in the year 1972 is carrying out mineral exploration activities. MECL is the premier exploration agency in the country and carries out its exploration activities under Promotional programme funded by Govt. of India and contractual programme on behalf of other agencies including Public Sector & Private Sector and State Governments on agreed terms and conditions. So far, it has added 142713 million tonnes of mineral reserves to National Mineral Inventory (upto 31-12-2010). The authorised share capital and paid-up equity of the company is `125 crore and `119.55 crore respectively. The equity is fully held by Govt. of India.

The Company's registered office is at Nagpur, (Maharashtra) and it manages the functioning of projects, the main production centres, through a two tier system from the Corporate Office at Nagpur. To facilitate the prompt maintenance of plants and machineries deployed at various projects, three Regional Maintenance Centres at Ranchi, Nagpur and Hyderabad are being operated. Technical guidance to the projects, finalisation of geological reports, close liaisoning with the clients and looking for new business opportunities is being carried out through the Zonal Offices located at Ranchi, Nagpur, and Hyderabad. The commercial activities of the Company are being looked after by Business Development and Planning Division. In addition, two Business Development Centers are in operation at New Delhi and Kolkata.

MECL is continuing its detailed exploration programme of various minerals as per national priorities identified in the Five Year Plan and potentiality of the prospect. Accordingly, detailed exploration schemes are formulated and after due approval of Standing Committee on Promotional Projects (SCPP) and Ministry of Mines, projects are executed. Since its inception, MECL has carried out detailed exploration for ferrous, non ferrous, precious, industrial and other minerals on behalf of Ministry of Mines and a total of 4080 million tonnes of reserves has been established.

MECL is also engaged for regional exploration of coal & lignite on behalf of Ministry of Coal. The schemes of exploration are being finalised by the Core Group of Committee on Energy Minerals and Resources, Group V of Central Geological Programming Board (CGPB). So far, a total of 42715 million tonnes of coal and 27868 million tonnes of lignite resources have been established by MECL on behalf of Ministry of Coal.

In addition to mineral exploration activities, MECL has taken up diversification programme(s) in the field of slim hole drilling for CBM & deep drilling for evaporites, etc.

### Physico-Financial Performance 2010-11

The physical performance in drilling, developmental mining and geological reports for 2008-09, 2009-10, 2010-11 (upto December'10) is given in **Table 10.10** and the financial performance is given in **Table 10.11**.

**Table 10.10**  
**Physical Performance of MECL**

Items	2008-09 Actuals	2009-10 Actual	2010-11 MoU Target	2009-10 Upto Dec., '09 Achievement	2010-11 Upto Dec., '10 Achievement
Drilling (Mtrs)	2,21,847	2,53,550	2,75,000	1,83,090	1,66,081

Mining (Mtrs)	5,900	6,607	7,500	4,518	6,090
Final Geological Reports (Nos.)	32	32	30	24	19

**Table 10.11**  
**Financial Performance of MECL**

Items	(` in crores)				
	2008-09 Actuals	2009-10 Actual	2010-11 MoU Target	2009-10 Upto Dec., '09 Achievement	2010-11 Upto Dec., '10 Achievement
Gross Revenue	105.90	127.06	142.00	82.86	89.35
Operating Cost	99.54	101.54	111.92	74.09	75.25
Interest	-	-	-	-	-
Depreciation and amortisation	2.93	3.21	4.52	2.45	2.70
Net profit After Taxes	1.24*	14.46	16.87	8.79	7.54

\* After making provision of `15.30 crores towards wage revision for executives w.e.f 1-1-2007 and non-executives w.e.f. 1-4-2007.

### Monitoring System

For effective monitoring of the projects, regular management level meetings are being taken to review the performance of projects and actions were initiated for implementation of remedial measures at projects. The project(s) are closely monitored on day-to-day basis and corrective measures were taken to achieve the set monthly targets. Further, all the units of MECL have been well connected through effective communication system.

MoU Performance - The MoU score for the year 2009-10 was categorised under the "Very Good" category (provisional).

### Perspective on Non-ferrous metals

During the year 2010-11 upto December'10 MECL is carrying out detailed exploration in Wari (Copper), Dhol-ki-Patti (Rock phosphate) both in Rajasthan, Rupa (Dolomite) in Arunachal Pradesh and Tongnub South East Sub block (Limestone) in the state of Meghalaya. The brief account of exploration by MECL is as under :

#### r **Wari Copper Block, District Chittorgarh, Rajasthan**

Detailed exploration proposal was approved in 20<sup>th</sup> SCPP held on 18-2-2009. The work involves 4020 m of drilling in 23 numbers of boreholes with matching geological and laboratory work. A total of 2.56 million tonnes of reserves with 1.09% Cu has been placed under 332 of UNFC.

MECL commenced physical work in July'2009 and completed in May'2010. A total of 3994 m of drilling has been carried out. Thickness of mineralised zone as intersected in boreholes vary from 2 - 4 m with +1% Cu based on visual estimates. The chemical analysis work is in progress.

r **Dhol-ki-patti Rock Phosphate Block, District Udaipur, Rajasthan**

Detailed exploration proposal of the block was approved in 20th SCPP held on 18-2-2009, involving 2155 m of drilling in 24 number of boreholes along with matching geological and laboratory work. Field work was commenced in June '2009, and upto December'2010, 1784.90 m of drilling has been carried out in 19 number of boreholes. Significant phosphorite zone has been intersected in boreholes based on analytical estimates. The physical work is completed and the chemical analysis job is in progress.

r **Rupa Dolomite Block, District West Kameng, Arunachal Pradesh**

Detailed exploration proposal was approved in 19<sup>th</sup> SCPP held on 10.9.2008. The work involves 800 m in 8 number of boreholes with matching geological and laboratory work. After constant persuasion with forest authorities, MECL finally obtained the forest entry permission and commenced the physical work on 5-7-2010 and 163.50 m of drilling has been carried out in two progressive boreholes upto December 2010. The work is under progress.

r **Tongnub Limestone South East Sub Block, District Jaintia Hills, Meghalaya**

Detailed exploration proposal was approved in 21<sup>st</sup> SCPP held on 04-8-2009. The work involves 1310 m of drilling in 8 numbers of boreholes with matching geological and laboratory work. MECL commenced the field work on 22-1-2010. A total of 986.50 m of drilling has been carried out in 6 completed and one progressive borehole upto December 2010. The work is under progress.

10.46 In addition to above, detailed exploration in two schemes was also completed as per following:

r **Parasi Central Gold Block Phase-II, District Ranchi, Jharkhand**

Exploration proposal in Parasi Central block for gold, Phase-II was approved in 19<sup>th</sup> SCPP held on 10-9-2008 involving 1500 m of drilling in 6 number of boreholes with matching geological and laboratory work.

MECL has completed Phase-I work in the block. A total of 2806 m of drilling with matching geological and laboratory work was completed. Detailed geological report of the block was submitted in November 2009.

The physical work of Phase-II was commenced in September '2008 and completed in June '2009. A total of 1963 m of drilling in 8 boreholes with matching geological and laboratory work was completed. Second phase work has proved the depth continuity of mineralised zone with good thickness (3 - 5 m with 2 -3 g/t of Au) has been intersected in boreholes. MECL has estimated 7.467 million tonnes of gold ore reserves with 0.98 g/t of Au at 0.50 g/t cut off over a 700 m of strike length both in Phase-I & II. The resource has been placed under 331 "A" of UNFC.

r **Jiajury Friable Quartzite (Glass Sand) Block Ph-II, District Nagaon, Assam**

Detailed exploration proposal was approved in 19<sup>th</sup> SCPP held on 10-9-2008 involving 600 m of drilling in 10 boreholes.



MECL commenced field work in March' 2009, after getting forest entry permission and completed the same in June' 2009. A total of 655 m of drilling in 9 boreholes was carried out. Good quality of quartzite has been intersected in boreholes. Thickness of silica sand vary from 40 - 60 m with 85 - 90% SiO<sub>2</sub>. MECL has estimated 320.53 million tonnes of friable quartzite (silica sand) reserves with average grade of 88.42 % SiO<sub>2</sub>, 0.93% Fe<sub>2</sub>O<sub>3</sub>, 5.12% Al<sub>2</sub>O<sub>3</sub>, 0.13% CaO and 0.11% of MgO. The resource has been placed under 331 "A" of UNFC.

#### **Sale of Report**

MECL conducts promotional exploration for metallic and non metallic minerals using promotional grants made available by Ministry of Mines. The detailed exploration reports are available for sale to intending entrepreneurs. As per revised guidelines for sale of reports finalised during November 2009, MECL is making all possible efforts for sale of reports of promotional projects completed on behalf of Ministry of Mines. MECL has summarised the executive summaries of the exploration report as per the format suggested by the committee and executive summaries of various category i.e. "A", "B", "C" & "D" category (221A, 331A, 332B, 332C, 332D & 333D) have been uploaded in MECL website for easy access to the investors. To increase the sale of report and find promising investors, MECL has written letters along with modalities for its dissemination to different DMG / DGMs of State Government for the knowledge of promising investors of their states and encourage them for purchase of reports. During the year MECL has displayed and distributed the soft and hard copies of executive summaries of exploration report for sale in 47th CGPB meeting held on 25<sup>th</sup> - 26<sup>th</sup> August 2010 at New Delhi and in Canada - India Mining & Metal Forum 2010 (CIMMF-2010) held at Toronto during 27 - 29 September 2010. Recently, MECL also participated in Global Mining Summit 2010 concurrently with International Mining & Machinery exhibition 2010 held at Kolkata during 10 - 13 November 2010, Organized by Confederation of Indian Industry (CII) wherein soft and hard copies of executive summaries of exploration reports were displayed and distributed to the prospective buyers. Further, MECL has also participated in the 6<sup>th</sup> North-East Business Summit from 21-22 January, 2011 at Mumbai to look for the investors for purchase of MECL reports with specified emphasis on Jiajuri Glass and Project.

So far, 15 reports have been sold out which includes 8 reports were of "A" category.

#### **Action taken on abatement of Pollution and Environment**

The exploration activities of MECL do not cause any significant pollution. However, as a part of exploration work, MECL is carrying out environmental studies to generate baseline environmental data such as : Geology & Geomorphology, Meteorology, Air Quality, Noise, Land use/Land cover Studies, Soil quality, Biota, Water regime & Socio-economic Studies.

For helping the exploration agencies to plan measures for abating possible pollution and Environmental Impact Assessment (EIA) in various exploration projects a report on the same is included as a part of Geological Report of various exploration projects.

New Design of MECL Website [www.mecl.gov.in](http://www.mecl.gov.in) having Hindi Version as the Home Page, was introduced during the period. Quarterly updating of the MECL Website is carried out in respect of the following.

- a. Assisting in Uploading of Tenders, "Suppliers Bills Status", "Vigilance", "Reports for Sale", RTI, Annual Reports and Contracts as and when required.
- b. Link for Vendor Registration was introduced. Technical Papers in Hindi was also uploaded on Website.
- c. Quarterly Updating of information of Physical Performance Since Inception.
- d. Designing and uploading of latest Executive Summaries in "Reports for Sale".

#### **Business Development Activity**

Through business development group, vigorous efforts are being made to obtain work from both private and public sectors through competitive bidding and a series of technical discussions. As a result during 2010-11 upto October'10, a total of 18 number of work orders were received valued at `20.54 crore.

#### **Diversification Activity**

MECL diversified its activities in the following fields.

- i) Deep slim hole drilling for Coal Bed Methane (CBM) studies on behalf of ONGC and other organisations.
- ii) Remote Sensing and Environmental studies.
- iii) Reverse circulation drilling for iron ore.
- iv) Deep Drilling for evaporite along with hydrological investigations.

Further, MECL plans to enter in the following new areas for its growth & business development :

- Drilling for geo-thermal energy & geo-technical studies
- Production Support drilling for mine services.
- Production well drilling for CBM assessment.
- Drilling for underground coal gasification.
- Lumpsum turn key project implementation.
- Production mining of minerals and their marketing.
- Services of work over rig.

### **Manufacturing Unit**

MECL has a well equipped central workshop and manufacturing unit at Nagpur to cater to the needs of drilling and developmental mining projects and to provide engineering support to field operations. It carries out repairing/overhauling of drilling and mining equipments and light/heavy vehicles. It manufactures TC bits and spares & accessories for coring and non-coring drill machines. Also, it has CNC lathe machine for the manufacturing of drill tubulars. During 2010-11, upto December'10, a total of 13130 items were manufactured, which include 3004 Nos. of TC bits and 1980 Nos. of other drill accessories and 7846 Nos. threading/re-threading of drill rods & casings.

### **Salient aspects of the work being done by advisory boards/councils.**

During the period April to December 2010, MECL participated in the following meetings and had close interaction with various Central / State / Public Sector organizations in connection with formulation /review of exploration schemes and also for work generation.

- Participated in the 5<sup>th</sup> meeting of NER (North East Region) at Gangtok.
- Participated in the meeting with M.D., CMDCL and Secretary (Mines), Govt. of Chhattisgarh on 13-4-2010 at Raipur.
- SCPP Meeting on 14<sup>th</sup>/15<sup>th</sup> June 2006 at New Delhi and MoEF meeting of Env. & Forest on 17-6-2010 at New Delhi.
- Participated in the meeting of CGPB Sub-Committee - V (Coal & Lignite) on 7-7-2010 at Kolkata.
- Participated in 47th CGPB (Main) meeting on 25-08-2010 to 26-08-2010 at New Delhi.
- Attended the meeting of CMDCL & Secretary (Mining), Govt. of Chhattisgarh on 21-9-2010 at Raipur.



## North Eastern Region

MECL has been associated with mineral exploration activities and geo-technical studies for the development of mineral industry in the North Eastern Region in last 29 years. It has completed exploration for coal in 15 blocks in the states of Assam, Arunachal Pradesh, Nagaland and Meghalaya on behalf of Ministry of Coal, North Eastern Council and CMPDIL. Under its promotional programme funded by Ministry of Mines, it has completed mine schemes which include copper, sillimanite, glass sand, shell limestone and Ferro-Silicon grade quartzite in the states of Assam, Meghalaya, Mizoram, Sikkim and Arunachal Pradesh. In addition, it has carried out geo-technical studies on behalf of Brahmaputra Flood Control Board in the state of Assam and Arunachal Pradesh and consultancy work for remote sensing studies at Tripura on behalf of Ministry of Mines. Exploration services were also rendered to Atomic Mineral division involving survey, drilling & mining in Umarangaon/Domiaset block, West Kasi Hill district.

During 2010-11, detailed exploration for limestone in Western part of Tongnub South East Sub Block, Litang River Valley in Jaintia hills distt. of Meghalaya and exploration for dolomite in Rupa dolomite prospect in West Kameng district Arunachal Pradesh, were taken up and physical activities, i.e., geological mapping and exploratory drilling in both the projects are under progress.

In addition to above, detailed exploration of limestone at Nimi-Pyakatsu block, district Kiphire, Nagaland at an estimated cost of `113.57 lakhs will also be taken up in which field work shall be carried out by DGM, Nagaland and laboratory & report writing work will be taken up by MECL.

Further to above, on behalf of Directorate General of Hydrocarbon, Govt. of India, MECL with BRGM France has completed studies for resource estimation in respect of oil shale deposit in an area of 254 sq.km. of Assam & Arunachal Pradesh. this will help in revealing the oil potential in the shales of North Eastern Region of the country. The physical work includes input of 2818 m of drilling in 8 borehole along with associated geological activities. The detailed project report has been submitted as scheduled