

**INDIAN BUREAU OF MINES  
MINES CONTROL AND CONSERVATION OF MINERAL DIVISION**

**MCDR INSPECTION REPORT**

**Bangalore regional office**

**Mine file No :** KRL/QLN/SILIMANITE/3/BNG

**Mine code :** 55KRL09001

- (i) Name of the Inspecting : **J002** ) **V.D.JALNAPURKAR**  
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 21/12/2013
- (v) Prev.inspection date : 28/01/2012

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **CHAVARA**
- (b) Category : A Other than Fully Mech.
- (c) Type of Working : Opencast
- (d) Postal address  
State : KERALA  
District : KOLLAM  
Village : CHAVARA  
Taluka : KARUNAGAPPALLY  
Post office : CHAVARA  
Pin Code : 691583  
FAX No. : 0476-2680141, 022 - 24220:  
E-mail : cgm-ch@IREL.gov.in  
Phone : 0476-2680701,2680702 - 05
- (e) Police Station : CHAVARA
- (f) First opening date : 01/04/1970
2. Address for correspondence : DR.R.N.PATRA, CHAIRMAN & MANAGING DIRECTO  
PLOT NO 1207, OPP SIDHI VINAYAK TEMPLE  
VEER SAVARKAR MARG, PRABHADEVI, MUMBAI- 400028
3. (a) Lease Number : KRL0045  
(b) Lease area : 102.71  
(c) Period of lease : 20  
(d) Date of Expiry : 11/05/2026
4. Mineral worked : ILMENITE Associated  
SILLIMANITE Main  
RUTILE Associated  
ZIRCON Associated

## 5. Name and Address of the

Lessee : INDIAN RARE EARTHS LIMITED  
 CHAVARA, KOLLAM, KOLLAM  
 KERALA  
 Phone:0476-680701,680702  
 FAX :0476-680141

Owner : DR R N PATRA  
 PLOT NO.1207,OPP.  
 S.VINAYAKA TEMPLE VEER  
 SAVRKAR MARG,PRABHADEVI,  
 MUMBAI- 400028 GREATER  
 BOMBAY MAHARASHTRA  
 Phone:  
 FAX :

Agent : V.G.K.PRASAD  
 HEAD ,CHAVARA - KOLLAM DIST  
 KOLLAM KERALA  
 Phone: 0476 - 2680701 TO 5  
 FAX : 0476 - 2680141

## Mining Engineer

Name : C.SUNDER,Full Time  
 Qualification : B.TECH(MINING)  
 Appointment/ : 23/09/1998  
 Termination date

## Geologist

Name : J.K.ANITA,Full Time  
 Qualification : M.Sc(GEOLOGY)  
 Appointment/ : 01/06/1994  
 Termination date

## Manager

Name : GOPAL SAHOO  
 Qualification : AMIE IN MINING ENGG, FCC(R)  
 Appointment/ : 27/04/2010  
 Termination date

6. Date of approval of Mining : 22/06/2009  
 Plan/Scheme of Mining

**PART - II : TECHNICAL DETAILS/COMMENTS****1. Details about Average employment :**

Maximum number of persons employed on any day during the year

Employment category	No.of employment	Av. yearly working days
<b>DIRECT</b>		
Managerial	43	300
Ministrial	43	300
Workers	25	300
Supervisory	56	300

2. Community Development Plan (in and around the mines) : Proposed action and expenditure towards socio-economic development.

Action during the year	Expenditure in Rs. Lakhs for				Remarks
	previous year		current year		
	Proposed	Incurred	Proposed	Incurred	
<b>General</b>					
Health	5.00	11.00	5.00		
Water supply	51.00	203.00	51.00		
Sanitation	2.00	3.00	2.00		
<b>Sub total</b>	<b>58.00</b>	<b>217.00</b>	<b>58.00</b>		
<b>Infrastructure</b>					
Public transport	7.00	7.00	9.00		
<b>Sub total</b>	<b>7.00</b>	<b>7.00</b>	<b>217.00</b>		
<b>Recreation</b>	<b>2.00</b>	<b>2.00</b>	<b>4.00</b>		
<b>Environment management</b>	<b>9.00</b>	<b>9.00</b>	<b>19.00</b>		
<b>Others</b>	<b>42.00</b>	<b>42.00</b>	<b>183.00</b>		
<b>Total</b>	<b>118.00</b>	<b>118.00</b>	<b>432.00</b>		

3. Status of compliance of MCDR, 1988, including therewith the rectification of the outstanding violation of rules.

The violations which were pointed out during earlier inspection i.e., 13(1), 23(B), 23F, 27(4), 46 and 63 have been complied no violation is noticed during the current inspection.

4. A note on the justification in case of suspension of mining operation under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988, if recommended.

Not applicable

**5. Scientific Mining**

Items	Proposal	Actual work done	Remarks
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**A. Exploration (Rule 13)**

a.Type of prospecting and exploration i.e. pitting, drilling	: No proposal as per approved Mining Plan.	Nil	
b.Total area covered	: Beach washing 4 Ha.	Beach washing 4 Ha.	Block II has been dredged out and rehabilitated

**B. Working (Rule 13)**

a.Number and size of each pit (LxWxH)	: No proposal as per approved Mining Plan.	Not applicable
b.Bench size(LxWxH)length can be defined as regular/irregular	: No proposal as per approved Mining Plan.	Not applicable
c.Ore to waste ratio pit wise if possible otherwise for mine	: No proposal as per approved Mining Plan.	Not applicable
d.Total area covered under excavation/pits	: No proposal as per approved Mining Plan.	Not applicable

**C. Waste disposal (Rule 13)**

a.Location of dumps	: No proposal as per approved Mining Plan.	Not applicable
e.Yearly generation of waste quantity.	: 34500 MT	34500 MT
b.Method of dumping whether advancing/retreat	: No proposal as per approved Mining Plan.	Not applicable
c.Total area covered under waste dump.	: No proposal as per approved Mining Plan.	Not applicables
d.No.and size of each waste dump with No of steps/lift/bench	: No proposal as per approved Mining Plan.	Not applicable

**D. Production**

b.Year wise production of last five year.	: Block - IV		
	2008-09 150000	Block - II	
	400000	2008-09 250021	
	2009-10 150000	97423	
	400000	2009-10 206395	
	2010-11 150000	138195	
	400000	2010-11 221024	
	2011-12 150000	129064	
	400000	2011-12 108205	
	2012-13 150000	127588	
	400000	2012-13 117348	
		69800	

**D. Reserve**

a. Reserve position as : Not available                      Not available  
per latest MP/MS and  
at the time of  
inspection.

**RESERVE POSITION AS ON 01/04/2013**

<b>ILMENITE</b>		
Category	Quantity in Tonnes	Grade
Proved	0	0
Probable	0	0
Possible		0
Total	0	0

**PRODUCTION FOR THE PREVIOUS YEAR 2012 - 2013**

Mineral	Production	Unit
ILMENITE		TON

**6. Conservation of Mineral - both quantitative and qualitative****Beneficiation (Rule 20 and 26)**

Efforts for improving low grade and sub grade mineral. : Not applicable

Efforts for improving percentage of recovery of ore. : Not applicable

**Mineral Rule 15**

Percentage of recovery of ore pitwise w.r.t. ROM and total material : 100%

Number of benches in ore and waste. : Not applicable

**Sub/grd mineral/fines (Rule16)**

Qty of yearly generation and total qty available during inspection with grade : Not applicable

Number and size of each stack : Not applicable

Location of stacking. : Not applicable

Separate stacking from waste : Not applicable

Total area covered for stacking : Not applicable

**Exploration data as on 31/03/ 2013**

No. of Boreholes	No. of Pits	No. of Trenches
0	0	0

**OVERBURDEN HANDLED DURING PREVIOUS YEAR 2012 - 2013****Utilisation of Sub Grade Mineral and Mineral Rejects**

Generated	Utilised	Stacked	(In Ton.)

## 7. Environment Management - both quantitative and qualitativ

### A. Land environment

- a. Landscape. : Area is part of beach deposit and the land is flat and mostly covered by parta land owned by private persons.
- b. Aesthetic environment : T.S canal in the area. The patta land area was covered by coconut plantation.
- c. Soil and land use pattern : Soil is sandy in nature. People were constructed houses in most of area
- d. Agriculture : No agriculture except coconut plantation.
- e. Forest(flora and fauna) : Non-forest land and no pronounced fauna in the area.
- f. Vegetation : Coconut and vegetables in residential premises within the lease area. Some plantation by company also undertaken.
- h. Public building, places and monuments (protected, historical), placec of worship and places of tourist : There is no protected and historical monument. Existing churches, temples and schools protected from mining.

### B Water environment.

- a. Surface water : Backwaters observed in canal.
- b. Ground water : Salty and encountered at depth of 2 mts from surface.
- c. Quality of water : Salty and drinking water arranged to residents from Kerala Ground water Authority.

### C. Air environment

- a. Noise : Mining are being carried out without drilling and blasting. Noise due to operation of HEMM is within norms.
- b. Air : The mineral sand is handled in slurry/moisture condition, hence no airborne dust.
- c. Climatic condition : Highly humid and a good seasonal rainfall. Maximum temperature is 38o C and minimum 20o C

### D. Socio economic environment

- a. Social and demographic profile. : About 25,000 nos of people residing in village Chavara. Most of the people in the area dependent on sand mining, fishing etc., for their income. Agriculture provides only a small portion of their income.
- b. Recommending health and safety. : Primary Health faculties are available in Chavara village and better faculty at district H/Q at Kollom. The radioactive mineral monazite is exploited from the mineral deposit (along with other heavy minerals) leaving area frre from radiation, by filling the same in a concrete underground pit duly sealed. The design of the pit and its monitoring being done by AERB.
- c. Human settlement : The lease area is densely populated and about 25,000 Nos. of people residing in village Chavara.
- d. Recreational facility. : All Recreational facilities are available at district H/Q Kollam, about 12 kms from the mine.

7.1 Comments on the steps taken by the lessee towards maintaining environment and monitoring of environmental parameters to ensure the qualitative improvement in the environment and ecology.

<u>Water Management</u>					
Season	Station type	Station name	Parameter	Value	
				Actual	Excess

<u>Air data for excess parameters</u>					
Season	Station name	Type of area	Parameter	Value	
				Actual	Excess

<u>PLANTATION DURING THE PREVIOUS YEAR</u>		<u>2012 - 2013</u>	Area in Hect.
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<u>TOP SOIL MANAGEMENT</u>	
Quantity as on 31/03/2013	



8. Scrutiny of annual returns on cost of production, reserve, production, pit mouth value, stock, land use pattern and fixed assets.

Annual Return for the year 2012-13 has been scrutinised  
Opening Stock is : 3225.9 MT  
Production : 4935.75 MT  
Closing Stock : 3107.550 MT  
Cost of Operation is : 4403  
Reserves Block II : 529816 MT (Sillimanite) (UNFC 111)  
Reserves Block IV 242526 MT (Sillemanite ) (UNFC 111)  
Fixed Assets for plant and machinerics : Rs.25.44/- Crores

**PART - III : PERFORMANCE OF MINE OWNER**  
(In case of lease expiring within 2 years - as per guidelines)

a. Compliance of terms and conditions of lease deed.

NA

b. Compliance of the provisions of MCDR, 88 and advise given.

NA

c. Conduct with regard to adoption of safety measures and forest wealth, ecology and environment in the mining lease area.

NA

d. Whether the mine owner has carried out exploration and exploitation on the basis on surface mapping, pitting, trenching and core drilling taking in to consideration the mode of occurrences of mineral deposit.

NA

e. Whether production from mining area is commensurate with the reserves and the long term progress of utilization of mineral.

NA

f. Whether adequate investment has been made by the lessee on the development of mine on mining machinery, operational and administrative building, residential accommodation for the employees.

NA

g. Measures taken by the lessee for protection of environment and ecology.

NA

h. In case leases where the mineralisation tends to exhaust within the present period, the status of closing operation in phases and the special issues including human issues to be addressed at the time of closing of mine.

NA

**PART - IV : PROPOSALS FOR FURTHER ACTION FOR :**

Indian Bureau of Mines (any issue related to CGPB, SGPB, Assistance, Consultancy, Annual Programme and studies, etc.)

NIL

State Government (Illegal mining, mining dispute, infrastructure, Mineral based industry, Mineral policy, etc.)

NIL

The Central Government (Infrastructure, Development, Mineral policy and Legislation, Mineral based industry, etc.)

NIL

Date :

(V.D.JALNAPURKAR)

Indian Bureau of Mines