SCHEME FOR SITE SPECIFIC COMPENSATORY AFFORESTATION OVER 329.7743 HA OF NON-FOREST GOVT. LAND IDENTIFIED IN VILLAGE KHAMARPADAR UNDER THUAMULRAMPUR TAHASIL IN KALAHANDI DISTRICT AGAINST GANDHAMARDAN, BLOCK-A IRON ORE MINING LEASE OF M/s ODISHA MINING CORPORATION LTD.

INTRODUCTION:

Gandhamardan Block-A, over an area of 618.567 ha is held by OMC Ltd under mining lease with effect from 29.11.1963 for a period of 30 years for extraction of Iron Ore. Application for renewal of Mining Lease after expiry of the lease period has been filed over an area of 618.5670 ha, which consists of 519.7472 ha of forest land and 98.8288 ha of non-forest land. The total forest area broken prior to 25.10.1980 is 64.7242 ha. As per condition No.1 (i) & (ii) of the Stage-I forest clearance granted by MoEF, Govt. of India in its letter No.8-105/2006-FC dt 17.02.2009, scheme for compensatory afforestation over 117.9648 ha. OMC has submitted a proposal for diversion of balance forest land over 401.7824 ha (including 7.2807 ha earmarked for safety zone). Hence the requirement of non-forest Govt. land for compensatory afforestation comes to 329.7743 ha (Total Forest Area: 519.7472-SZ area: 7.2807 ha – Broken up area: 64.7274 ha – CA land over which scheme has been approved: 117.9648 ha). In accordance with the provision of F.C. Act 1980, compensatory afforestation scheme over 329.7743 ha of non-forest land has to be covered to compensate the loss of forest and environment in general against the forest land proposed to be utilized for non-forestry activity pertaining to Gandhamardan Block-A iron ore mines.

So, the present scheme aim at preparation of site specific compensatory afforestation scheme over 329.7743 ha of non-forest land with suitable soil and water conservation measures for regeneration, rehabilitation and restocking of existing forest growth followed by gap plantation with suitable indigenous species to restore the biodiversity. The non-forest land will be rehabilitated through different silvicultural operations and plantations with the active participation and awareness of the local villagers and NGOs through entry point activities and JFM mode.

SELECTION OF SITE:

Non-forest Govt. land to the extent of 329.7743 ha in a compact patch was not available in the district of Keonjhar in which the mine is located. Therefore, considering the urgency and request made by OMC equivalent non-forest Govt. land for the purpose of raising compensatory afforestation has been identified in the village Khamarpadar under Jubarajpur R.I. circle of Thuamulrampur Tahasil in Kalahandi District. The details of plot wise land schedule are furnished below. The site is located on survey of India topo sheet No. 65 I/15 between latitude: 19°21'29.85511" - 19°22'28.97327" N, longitude: 82°47'06.47024"- 82°48'43.96325" E (**Plate No-IX**) and at a distance of 80 KM from Tahasil headquarters. The proposed area is free from encroachment and encumbrances and suitable for plantation is outlined as below. Moreover, the local people most of whom are tribal are very much interested in rehabilitation of the degraded forest to reap the usufructs & to meet their social, cultural and economic needs.

Land schedule of the proposed compensatory afforestation area

Tahasil	Village	Khata No.	Plot No.	Area of the plot (Acr)	Area considered (Acr)	Kissam
THUAMULRAMPUR	KHAMARPADAR	246 Abada Ajogya Anabadi	881	10.73	9.90	Dangar
			977	58.00	23.53	Dangar
			978	20.00	20.00	Dangar
			982	5.05	4.65	Dangar
			989	26.25	24.37	Dangar
			990	4.83	3.84	Dangar
			991	25.00	25.00	Dangar
			992	8.68	8.68	Dangar
			993	35.48	31.81	Dangar
			998	33.43	27.39	Dangar
			999	10.00	9.95	Dangar
			1033	23.86	19.15	Dangar
			1036	13.41	9.89	Dangar
			1070	23.32	16.00	Dangar
			1267	10.07	9.47	Dangar
			1270	7.84	6.64	Dangar
			1324	11.15	10.85	Dangar
			1327	29.21	28.21	Dangar
			1397	4.26	4.16	Dangar
			1398	2.17	2.15	Dangar
			1403	11.50	11.25	Dangar
			1404	60.00	60.00	Dangar
		246 Abada Ajogya Anabadi	1405	50.00	50.00	Dangar
			1406	44.55	44.55	Dangar
			1407	70.63	70.63	Dangar
			1408	37.50	37.50	Dangar
			1409	27.83	27.03	Dangar
			1410	16.83	16.13	Dangar
			1411	27.78	27.78	Dangar
			1413	3.80	3.60	Dangar
			1437	4.13	2.53	Dangar
			1449	3.20	2.40	Dangar
			1457	30.00	29.40	Dangar
			1460	35.85	32.35	Dangar
			1464	20.05	19.05	Dangar
			1484	3.47	3.00	Dangar
			1537	6.98	6.75	Dangar
			1550	4.30	3.80	Dangar
			1553	11.63	11.33	Dangar
			1554	17.75	17.25	Dangar
			1575	18.08	18.08	Dangar
			1576	9.93	9.43	Dangar
			1584	15.80	15.50	Dangar
Total Area: 905.82 Acr Area Considered: 814.98 Acr or 329.811 ha						

An area of 329.7743 ha has been found suitable and is covered under the present scheme. The village map showing the above land details for the proposed compensatory afforestation is enclosed as **Annexure-IX (A).**

DESCRIPTION OF THE EXISTING VEGITATION:

The site although categorized as non-forest land kissam in revenue record still comprises forest growth crops like Sal, Mahul, Kusum, Kendu, Bela, Kurei, Gambhari, Bamboo, Asana, Sisoo, Amba and Misc. species in pole condition in a degraded state having canopy density 0.1 to 0.2. The floor of the forest is devoid of under growth due to heavy soil erosion, repeated annual fire and "podu cultivation".

SOIL & TOPOGRAPHY:

The topography of the area is mainly hilly with its lower slope fairly gentle in nature. The valleys are moderately plain and the hill top is almost flat and balled. The minimum height of the area is 620 above MSL occurring to SW and maximum height occurs at 808 AMSL, the highest hill peak to the NW of village Khamarpadar. The seasonal streams are parallel to dendritic in nature. The overall slope of the ground in the south of the area is towards SW and towards North is north-

westerly direction. The south-westerly streams drains to Dokadhar Nadi which in turn is a tributary of Hati Nadi flowing towards North. The 1st and 2nd order streams flowing northerly directly discharges to Hati Nadi. The soil is eroded at the lowest slope of the mounds with formation of gullies and small ravines. However, good depth of soil (1ft to 4ft) of loam and sandy loam are found in blank areas at patches in the plots and on podu ravaged areas. Podu cultivation is not very conspicuous but remnants are found at places. The effect of past "podu cultivation" is experienced due to presence of even aged crop at places. The drainage is dendritic type due to heavy soil erosion.

RAINFALL & TEMPERATURE:

The annual rainfall varies from 1200 mm to 1500 mm. The maximum rainfall is received during the rainy season from July to September. The average temperature varies from 13.5°C minimum in December to 45° C maximum in May.

OBJECTIVE OF THE SCHEME:

The main objective of the present scheme is to **(i)** restock the degraded non-forest area by taking up plantation, **(ii)** tending the existing degraded crop where ever available with suitable silvicultural practices, **(iii)** clearly demarcating the area with posting up RCC pillars and **(iv)** providing strong barbed wire fencing to dispense with the biotic interferences, **(v)** enforcing protection measures by involving people around under JFM and **(vi)** above all checking soil erosion and run off which will go in combination for enrichment of the vegetation and soil and building up ecosystem. Out of 329.7743 ha of non-forest land, around 53.0 ha, scattered in different locations with varying area from 1 ha. to 2ha. shall be covered under Block Plantation mode with 1600 plant/ha. and the rest 276.7743 ha shall be covered under ANR (Gap plantation) mode with 300 plant/ha. Some rocky patches inside the area are retained as such for smooth management point of view and providing shelter to the wild fauna in the caves, crevices, talus etc.

ITEMS OF WORKS TO BE TAKEN UP:

To achieve the above objectives, the following items of work are mainly prescribed to be taken up with the full involvement and co-operation of local villagers.

1. **Survey and demarcation of Boundary:** The identified non-forest land is very close to the agricultural fields. Hence the boundary should be surveyed clearly by the User Agency with reference to the village maps and demarcated by posting R.C.C. pillars of size 1.25 mtr x 20 cm x 20 cm which shall be embedded at every corner/turning points of boundary line. The RCC pillars shall be embedded 0.625mtr deep in to the ground with a foundation of 50 cm x 40 cm. in C.C. Top of the pillar shall have a slanting cut facing outside the area for numbering the pillars which will be done in the same sequence as done in the map. Numbering should start from North-Western Corner and proceed in a clock wise direction. The distance between the corner points, forward and back ward bearing of each point, its GPS reading and the perimeter of the area to be afforested is given in **Annexure-I.**
2. **Fencing:** To protect the plantation and regeneration cleaning area from grazing and other biotic interferences, fencing shall be taken up around the entire compensatory afforestation site by using 5 stranded barbed wire fencing with concrete posts. A model estimate for barbed wire fencing for 1 Km has been provided in **Annexure-II.** In addition agave bulbils will be planted at a spacing of 2mt. along the boundary as a permanent feature of boundary.

3. **Block Plantation and Gap Plantation**: The identified site is subjected to podu cultivation in patches of one acre to two acre, mostly occurring in moderate hill slopes and plains. Such patches having sporadic forest species will be covered under block plantation with indigenous, hardy and light demander species, at the rate of 1600 saplings per ha (2.5mx 2.5 m spacing). Other degraded areas having stock ranging from 2000 to 2200 per ha. will be covered by ANR practices followed by gap plantation at the rate of 300 sapling per ha. It is estimated that about 53 ha. (sum total of individual blank area) will be covered by block plantation and balance 276.7743 ha. by ANR gap plantation with same species as in case of block plantation in a staggered manner without any proper spacing as per site condition. The sites which are almost subjected to Podu Cultivation and occurring in patches. Plantation over the those areas shall be taken up at a spacing of 2.5m x 2.5m taking care of existing forest crops, if any.

Care should be taken to select only indigenous species as far as possible keeping in view of the existing natural vegetation in and around the area and also the climatic and edaphic factors. The choices of species are as follows:

Amla	Emblica officinalis
Bamboo kanda	Bambusa arundinacea
Karanja	Pongomia pinnata
Teak	Tectona grandis

Sisoo	Dalbergia sisoo
Neem	Azadirachta indica
Mahul	Madhuca indica
Bahada	Terminalia belerica

In the peripheral areas of the site, susceptible to grazing may be planted with non browsable species like teak, karanja etc.

The soil being eroded and lack of humus, it is proposed to take up pitting with a pit size of 30cm x 30cm x 30 cm at a spacing of 2.5 m x 2.5 m during February/March for allowing weathering of the soil. It is advisable to use an "A" frame for alignment of the pitting line along the contour. The planting should be taken up only with two year old seedlings having height more than one meter. The size of P. bags will be 12 inch x 9 inch with desired quantity of input. The seedlings will be graded and sorted at regular intervals to make those healthy and sound and to avoid root coiling.

While taking up the block plantation in Podu ravaged areas species like Kusum, Mohul, Amla, Karanj, Neem, Asan, Teak, Jack fruit and specially Mango in more number shall only be planted which will help the tribal of Juang and Bhuyan to collect the NTFP items for their livelihood and socio-economic upliftment.

Staggered trenches of size 2 mt X 50 cm x 50 cm should be dug in between the planting rows at an interval of 2.0 mt along the contour, and the excavated earth be piled on the downhill side to form a bund. The staggered contour bunds should be stabilized with turf if necessary. The staggered contour trenches will not only arrest, soil erosion but also conserve moisture and micronutrient for the planted saplings. It will retard the velocity of runoff and will be helpful in feeding ground water to the plants below it. If necessary, half moon trenches may be created at sloppy terrain for the same purpose on or before 2nd weeding.

3.2 **Development of Nursery:** A good nursery is the pre-requisite for a successful plantation. Therefore, all care should be taken to raise healthy and sound seedling of required sizes before they are put to the plantation site. The site being heavily eroded and subjected to other biotic interference, it is proposed to raise two year old seedlings for plantation. This should be particularly adopted in case of slow growing species like Mahul, Neem, Amla, Harida, Karanja,

etc. In case of species like Sisoo & Gambhar, one year old seedling is good enough for plantation purpose. In case of Bamboo and Teak, pre-sprouted seedling from rhizomes and stumps should be raised for plantation purpose. Accordingly, the nursery programme can be planned out one year in advance. The two year seedling should be raised in poly-bags of 12 inch x 9 inch and one year old seedling can be raised in 10 inch x 6 inch poly bags. All care as per the guideline of the plantation manual should be taken up at all stages of nursery operation so that a good stock of healthy seedling can be raised. 10% extra seedlings should be raised to cover the short fall due to casualty in the nursery stage. In case of all the seedlings, shifting, grading of polythene bags should be done from time to time not to allow the tap roots to strike the ground. Nursery site should be selected, preferably near to the plantation site and in a well drained locality having perennial water sources.

3.3 **Planting:** The best time of planting of the potted seedling is soon after the on-set of regular monsoon or after a good shower of rain. Before planting, the pits are to be prepared by putting mixture of half cubic feet, of alluvial soil and farmyard manure. Basal dose of 30 gram of NPK fertilizer and 5 gram of Aldrin dust or phorate pesticide are to be applied to the pits before planting as basal dose. The excavated earth from the pits already weathered and free from stones should be filled in the pits. Before removal of the plants from the Nursery the following precaution should be taken

(i) Roots escaping from the container should be trimmed.
(ii) Posts containing the plant be watered, if necessary.
(iii)Maximum care should be taken at the time of transportation and handling of seedling so that the ball of earth of the poly pots does not get disturbed and the primary leading shoots are broken. Manual transportation should be given preference.

Planting should be taken up on rainy/cloudy days by adopting all standard techniques of plantation. As far as possible, Bamboo should be put as a fourth plant in the row and planting up other species should be mixed with poly culture design.

Casualty of seedlings occurs due to various causes like heavy rains, drought, fire, grazing etc. But in a well managed plantation, where the planting stock consists of healthy and stout seedlings, say, about 5% may die during the period between planting and 1st weeding. The operation of casualty replacement may be done in combination with weeding. Seedlings to be used for casualty replacement should be earmarked and kept reserved at the time of planting. Only healthy and stout seedlings slightly larger than those planted at the time of operation should be used. This is important because only such seedlings can catch up growth with those that have survived and are growing. Before planting for casualty replacement, the following operations are to be taken up:

(a) The failure pit is to be dug again.
(b) Another dose of fertilizer, and insecticide should be given to the pit.
(c) If the casualties are due to white ant attack, little more quantity of phorate pesticide may be applied to the pit.
(d) If the casualties are due to water logging and wilting, care should be taken to drain out the pits by making small channels to downhill side.
(e) Watering is to be done generally directly after planting, if the planting is done on a dry day.

Casualty replacement can also be taken up in the 2nd year formation and this time should not exceed 20%.

3.4 **Weeding, Manuring & Soil working:** To improve and enhance the growth of plants, it is necessary to see that the plants get as much nutrients as for as possible and that no other wild plants are contesting for space, light and nutrients. Therefore, weeding and soil working must be undertaken in a newly established plantation. Weeding consist of loosening soil around the plant with a hoe or even with a pick-axe and pulling out all unwanted growth along with their roots, rhizomes, stools etc. While doing so, care should be taken to see that the root system of the planted seedling is not damaged. Weeds within a radius of 0.5 meters around the plant should be removed. Under the prevailing conditions, two weeding are considered sufficient, the first to take place a few weeks after the main plantation is over, say, in August and the second weeding in early winter, i.e., in October or November. Strip weeding which involves cutting of weeds flush to the ground may be confined to the place in between the planted lines. The cut material may be placed along the contour between two rows of plantation, which will ultimately help in conservation of soil and moisture. Soil working is equally an important operation and it should be carried out at the time of each weeding. While loosening the soil, it is important to see that the soil is not pulverized but left in clods. This not only helps in improving soil erosion but also helps in moisture conservation by breaking soil capacity.

The best time for application of fertilizer is at the time of soil working and weeding. In organic fertilizer like NPK @ 50gm/plant shall be applied at the time of soil working. Chemical fertilizer should not be placed too close to the plants as it may burn the roots and kill the plants. A small dose of urea @ 20gm/plant may be applied by crow bar hole method before 1st weeding, if possible for root penetration and growth of seedlings.

It is advisable to apply fertilizer on a rainy day soon after the weeding has been completed.

3.5 **Mulching:** Mulching is an operation where cut vegetative materials are placed around planted seedling covering the soil around it. This helps soil climate to considerable extent from desiccation. Mulching affects soil temperature, helps condensation, and prevents soil erosion and loss of soil moisture through evaporation. Further, it is to be carried out at the time of 2nd weeding. Weeds which have not lowered may be pulled out from around the planted seedlings and may be used as mulches around the seedlings.

Pruning of lower branches of the seedlings planted should be done in the third and subsequent years. This operation is beneficial for the following reasons.

(a) They allow the plants to be healthy and stout and have knot free stems.
(b) It reduces fire hazards by lessening the chance of ground fire.
(c) The plants will be straight with clear bole.

The detailed cost estimate of various operations to be taken up in Block plantation mode and ANR plantation (300 seedlings) mode has been furnished in **Annexure – III & IV** respectively.

4. **Silvicultural operation through ANR practices**: The natural vegetation existing over 276.7743 ha. is in a degraded stage as rooted wastes, bushes and poles will be tended by silvicultural

practices viz. coppicing, cleaning, thinning shoot manipulation, singling, climber cutting etc. to enable the degraded vegetation to establish as trees. The permanent small gaps will be restocked by planting indigenous seedlings @ 300/ha. according to planting operation narrated above. Considering the site condition germinated seeds of the natural grown trees may be dibbled by minor hoeing without any spacing during 1st week of July. It can also enrich the vegetative cover to some extent. Germinated mango carnel, bamboo rhizome and jackfruit carnel will be more appreciated by the tribal.

5. **Soil Conservation Measures:** The slope of the identified area varies from gentle to moderate slopes and therefore, soil conservation measures are indispensable and are to be appropriately addressed. The following measures are proposed to be taken up inside the plantation area and regeneration cleaning area.
   i) In the slopes, staggered trenches of 2m x 50Cm x 50Cm should be dug in between the planting line along the contours at an interval of 2.0m, and the excavated earth be piled on the downhill side to form a bund. The staggered contour bunds should be stabilized with plantation on it. The staggered contour trenches will act as place of deposit of eroded soil and will check soil erosion. It will retard the velocity of run-off and will be helpful in feeding ground water to the plants planted below it.
   ii) Check dams are proposed to be constructed with dry rubble stone across in small nallahs specially to be given on the upper reaches of the nallahs.

   The detailed cost estimate of soil conservation measures has been furnished in **Annexure** - V.

6. **People's Participation:** In the recent times, no scheme shall be effective if the local villagers are not involved in the implementation of the scheme itself. The villagers who are having a right on the NTFP items in the adjoining forest area are to be associated with the implementation of the scheme at all different levels. For that, Van Samrakhyana Samittee (VSS) is proposed to be constituted in all the villages around the compensatory afforestation site. In accordance with the guidelines of the Government of Odisha issued on 3rd July'1993, the villagers are to be motivated and inspired and above all, explained the benefits they will be getting if plantation is protected by them.

   To protect the plantation, extra care shall be taken to develop the living standard of the local tribes who were making the podu cultivation in the proponent compensatory afforestation site. To develop their living standard, through eco development programmes like land development programme of their tenanted area, plantation of fruit bearing trees in their home stead land and farm house, providing them with high breed vegetable seeds and providing goat, sheep and chicks for rearing shall be taken up as a part of income generation programme offer conducting PRA through resourceful agencies. Moreover, their culture and religious sentiments are also be taken care of and to keep them in good humor, incentives on developmental/cultural activities shall be given which will have a long benefit on the success of plantation programme. All forest conservation events shall be celebrated in their village for creating awareness among them for protection of the plantation.

7. **Monitoring & Execution:** Establishment & Infrastructure: The scheme will be executed by the Forest Department and shall be monitored from time to time by responsible officers including DFO. Nursery, plantation journal and other relevant documents shall be maintained as per the

provision of the Plantation Manual. A plantation shed with drinking water facilities may be constructed at the site for execution of different works and from future protection point of view.

8. **Total cost of the project:** The total cost of the project will be **Rs 3, 19, 61,400.00** as detailed in **Annexure-VI**, which will be deposited in an account as per the direction of the DFO in favour of State specific CAMPA.

Divisional Forest Officer
Kalahandi (South) Division

ANNEXURE-I

GPS READING OF THE CORNER POINTS OF THE AREA PROPOSED COMPENSATORY AFFORESTATION AREA

A. Patch-1

Corner points		Bearing		Distance in mtr	Co-ordinates by GPS		Corner points		Bearing		Distance in mtr	Co-ordinates by GPS	
Fm	To	Forward	Backward		Longitude	Latitude	Fm	To	Forward	Backward		Longitude	Latitude
1	2	179°49'00"	359°49'00"	201.96	82°48'34.93170"	19°22'15.70039"	43	44	64°4'00"	244°4'00"	51.48	82°48'17.68388"	19°21'06.91806"
2	3	209°41'00"	29°41'00"	467.28	82°48'34.87537"	19°22'09.14716"	44	45	141°28'00"	321°28'00"	170.28	82°48'19.26261"	19°21'07.55256"
3	4	204°54'00"	24°54'00"	396.00	82°48'26.90918"	19°21'55.91868"	45	46	195°27'00"	15°27'00"	95.04	82°48'22.69987"	19°21'03.27705"
4	5	298°12'00"	118°12'00"	467.28	82°48'21.03419"	19°21'44.26155"	46	47	124°51'00"	304°51'00"	146.52	82°48'21.84810"	19°21'00.39782"
5	6	197°00'00"	17°00'00"	336.60	82°48'20.09579"	19°21'44.76322"	47	48	14°12'00"	194°12'00"	154.44	82°48'25.85854"	19°20'57.57464"
6	7	219°44'00"	39°44'00"	285.12	82°48'16.57899"	19°21'34.16656"	48	49	99°33'00"	279°33'00"	55.44	82°48'27.19148"	19°21'02.42743"
7	8	315°32'00"	135°32'00"	75.24	82°48'10.18912"	19°21'27.05234"	49	50	8°7'00"	188°7'00"	35.64	82°48'28.97172"	19°21'02.11335"
8	9	272°04'00"	92° 04'00"	134.64	82°48'08.46194"	19°21'28.75064"	50	51	269°34'00"	89°34'00"	63.36	82°48'29.19839"	19°21'03.25868"
9	10	186°33'00"	06° 33'00"	55.44	82°48'03.86738"	19°21'28.96441"	51	52	321°26'00"	141°26'00"	91.08	82°48'27.03126"	19°21'03.30217"
10	11	110°26'00"	290°26'00"	190.08	82°48'03.63795"	19°21'27.22050"	52	53	312°10'00"	132°10'00"	67.32	82°48'25.10100"	19°21'05.63130"
11	12	205°14'00"	25°14'00"	99.00	82°48'09.59119"	19°21'24.98234"	53	54	336°00'00"	156°00'00"	134.64	82°48'23.46871"	19°21'07.08887"
12	13	161°21'00"	341°21'00"	289.08	82°48'08.17547"	19°21'22.02000"	54	55	13°58'00"	193°58'00"	419.76	82°48'21.65233"	19°21'11.12142"
13	14	195°49'00"	15°49'00"	265.32	82°48'11.21283"	19°21'12.99275"	55	56	149°35'00"	329°35'00"	392.04	82°48'25.26940"	19°21'24.43744"
14	15	222°39'00"	42°39'00"	83.16	82°48'08.63779"	19°21'04.71885"	56	57	170°11'00"	350°11'00"	79.20	82°48'31.97527"	19°21'13.24715"
15	16	196°16'00"	16°22'00"	138.60	82°48'06.76398"	19°21'02.63678"	57	58	272°44'00"	92°44'00"	83.16	82°48'32.39689"	19°21'10.62156"
16	17	274°49'00"	94°49'00"	566.28	82°48'05.26361"	19°20'58.36885"	58	59	153°16'00"	333°16'00"	384.12	82°48'29.59377"	19°21'10.89337"
17	18	310°50'00"	130°50'00"	142.56	82°47'46.00598"	19°21'00.13171"	59	60	188°43'00"	08°43'00"	106.92	82°48'35.32370"	19°20'59.62617"
18	19	290°25'00"	110°25'00"	59.40	82°47'42.48448"	19°21'03.07805"	60	61	239°58'00"	59°58'00"	79.20	82°48'34.77996"	19°20'56.29198"
19	20	213°19'00"	33°19'00"	23.76	82°47'40.57727"	19°21'03.71204"	61	62	269°31'00"	89°31'00"	122.76	82°48'32.41206"	19°20'54.94780"
20	21	136°55'00"	316°55'00"	150.48	82°47'40.19117"	19°21'03.21951"	62	63	252°11'00"	72°11'00"	217.80	82°48'28.04051"	19°20'54.95503"
21	22	173°5'00"	353°5'00"	241.56	82°47'43.59561"	19°20'59.60815"	63	64	273°32'00"	93°32'00"	106.92	82°48'21.24035"	19°20'52.91469"
22	23	71°20'00"	251°20'00"	162.36	82°47'44.49601"	19°20'51.80523"	64	65	245°35'00"	65°35'00"	63.36	82°48'17.68951"	19°20'53.16922"
23	24	25°43'00"	205°43'00"	67.32	82°47'49.73952"	19°20'53.49638"	65	66	267°48'00"	87°48'00"	39.60	82°48'15.76185"	19°20'52.32108"
24	25	81°36'00"	261°36'00"	257.40	82°47'50.81091"	19°20'55.48359"	66	67	245°03'00"	65°03'00"	106.92	82°48'14.46304"	19°20'52.29111"
25	26	190°13'00"	10°13'00"	304.92	82°47'59.56859"	19°20'56.62508"	67	68	215°07'00"	35°07'00"	87.12	82°48'11.21062"	19°20'50.88907"
26	27	105°45'00"	285°45'00"	55.44	82°47'57.63394"	19°20'46.82345"	68	69	291°15'00"	111°15'00"	35.64	82°48'09.49549"	19°20'48.66276"
27	28	15°51'00"	195°51'00"	217.80	82°47'59.43176"	19°20'46.33334"	69	70	272°46'00"	92°46'00"	67.32	82°48'08.48135"	19°20'49.05053"
28	29	89°52'00"	269°52'00"	114.84	82°48'01.63623"	19°20'53.19571"	70	71	215°52'00"	35°52'00"	51.48	82°48'06.23317"	19°20'49.18554"
29	30	23°15'00"	203°15'00"	23.76	82°48'05.49175"	19°20'53.21724"	71	72	194°26'00"	14°26'00"	63.36	82°48'05.22130"	19°20'47.94733"
30	31	294°47'00"	114°47'00"	47.52	82°48'05.71306"	19°20'53.80174"	72	73	230°10'00"	50°10'00"	134.64	82°48'04.66343"	19°20'45.89724"
31	32	22°55'00"	202°55'00"	59.40	82°48'04.35766"	19°20'54.44328"	73	74	291°47'00"	111°47'00"	293.04	82°48'01.17147"	19°20'43.08788"
32	33	79°41'00"	259°41'00"	55.44	82°48'05.02446"	19°20'56.08471"	74	75	261°51'00"	81°51'00"	138.60	82°47'51.92275"	19°20'46.70571"
33	34	23°4'00"	203°4'00"	31.68	82°48'06.58921"	19°20'56.49463"	75	76	306°43'00"	126°43'00"	146.52	82°47'47.32945"	19°20'46.15101"
34	35	356°2'00"	176°2'00"	67.32	82°48'07.29341"	19°20'57.44539"	76	77	345°23'00"	165°23'00"	178.20	82°47'43.37608"	19°20'49.05001"
35	36	26°48'00"	206°48'00"	132.66	82°48'07.25853"	19°20'59.57525"	77	78	292°7'00"	112°7'00"	170.28	82°47'41.93204"	19°20'54.67966"
36	37	50°32'00"	230°32'00"	87.12	82°48'09.22913"	19°21'03.35874"	78	79	262°39'00"	82°39'00"	142.56	82°47'36.57897"	19°20'56.87341"
37	38	93°14'00"	273°14'00"	43.56	82°48'11.38872"	19°21'05.14676"	79	80	265°37'00"	85°37'00"	97.02	82°47'31.84740"	19°20'56.33408"
38	39	177°51'00"	357°51'00"	75.24	82°48'12.71154"	19°21'05.00908"	80	81	348°20'00"	168°20'00"	194.04	82°47'28.58455"	19°20'56.10906"
39	40	84°55'00"	264°55'00"	134.64	82°48'12.79486"	19°21'02.52523"	81	82	272°59'00"	92°59'00"	71.28	82°47'27.32178"	19°21'02.34092"
40	41	184°40'00"	4°40'00"	43.56	82°48'17.31585"	19°21'02.83513"	82	83	295°40'00"	115°40'00"	83.16	82°47'24.99390"	19°21'02.51131"
41	42	82°3'00"	262°3'00"	23.76	82°48'17.23508"	19°21'01.37544"	83	84	336°42'00"	156°42'00"	114.84	82°47'22.44427"	19°21'03.64843"
42	43	354°34'00"	174°34'00"	166.32	82°48'18.16001"	19°21'01.39678"	84	85	318°49'00"	138°49'00"	114.84	82°47'20.91696"	19°21'07.14543"

Corner points		Bearing		Distance in mtr	Co-ordinates by GPS		Corner points		Bearing		Distance in mtr	Co-ordinates by GPS	
Fm	To	Forward	Backward		Longitude	Latitude	Fm	To	Forward	Backward		Longitude	Latitude
85	86	309°51'00"	129°51'00"	154.44	82°47'18.38216"	19°21'10.00233"	103	104	275°18'00"	95°18'00"	126.72	82°47'56.40944"	19°21'36.36597"
86	87	336°49'00"	156°49'00"	304.92	82°47'14.41745"	19°21'13.33070"	104	105	178°50'00"	358°50'00"	59.40	82°47'52.23231"	19°21'36.84414"
87	88	323°15'00"	143°15'00"	75.24	82°47'10.39828"	19°21'22.60112"	105	106	98°59'00"	278°59'00"	186.12	82°47'52.23549"	19°21'34.99390"
88	89	342°35'00"	162°35'00"	67.32	82°47'08.95105"	19°21'24.51130"	106	107	25°46'00"	205°46'00"	419.76	82°47'58.49557"	19°21'33.91907"
89	90	335°2'00"	155°2'00"	51.48	82°47'08.26746"	19°21'26.58870"	107	108	89°32'00"	269°32'00"	27.72	82°48'04.89893"	19°21'46.26223"
90	91	329°27'00"	149°27'00"	63.36	82°47'07.61942"	19°21'28.05016"	108	109	31°18'00"	211°18'00"	249.48	82°48'05.78636"	19°21'46.21264"
91	92	89°34'00"	269°34'00"	542.52	82°47'06.47024"	19°21'29.85511"	109	110	5°58'00"	185°58'00"	122.76	82°48'10.24339"	19°21'53.25425"
92	93	89°34'00"	269°34'00"	498.96	82°47'24.99593"	19°21'29.82926"	110	111	75819'00"	238°19'00"	67.32	82°48'10.77646"	19°21'57.23352"
93	94	89°34'00"	269°34'00"	174.24	82°47'42.01093"	19°21'29.77451"	111	112	179°45'00"	359°45'00"	114.84	82°48'12.63963"	19°21'58.29983"
94	95	359°28'00"	179°28'00"	506.88	82°47'48.31194"	19°21'29.89936"	112	113	89°56'00"	269°56'00"	186.12	82°48'12.68042"	19°21'54.40390"
95	96	88°16'00"	268°16'00"	27.72	82°47'47.97287"	19°21'46.29796"	113	114	358°54'00"	178°54'00"	47.52	82°48'19.03009"	19°21'54.45237"
96	97	359°53'00"	179°53'00"	403.92	82°47'48.91919"	19°21'46.32773"	114	115	298°35'00"	118°35'00"	209.88	82°48'19.06548"	19°21'55.95306"
97	98	89°34'00"	269°34'00"	198.00	82°47'48.97288"	19°21'59.46598"	115	116	359°26'00"	179°26'00"	178.20	82°48'12.80638"	19°21'59.28491"
98	99	179°41'00"	359°41'00"	201.96	82°47'55.76020"	19°21'59.47867"	116	117	33°5'00"	213°5'00"	213.84	82°48'12.74301"	19°22'05.21286"
99	100	88°3'00"	268°3'00"	31.68	82°47'55.72987"	19°21'52.87575"	117	118	90°11'00"	270°11'00"	281.16	82°48'16.89161"	19°22'11.04182"
100	101	132°54'00"	312°54'00"	154.44	82°47'56.80290"	19°21'52.93209"	118	119	359°24'00"	179°24'00"	67.32	82°48'26.40540"	19°22'10.96706"
101	102	218°34'00"	38°34'00"	114.84	82°48'00.46817"	19°21'49.52645"	119	120	82°45'00"	262°45'00"	130.68	82°48'26.42393"	19°22'13.12619"
102	103	187°45'00"	07°45'00"	316.80	82°47'58.06928"	19°21'46.74812"	120	1	60°55'00"	240°55'00"	134.64	82°48'30.93121"	19°22'13.60866"

Perimeter = 19004.04 mtr

B. Patch-2

1	2	170°43'00	15°43'00"	110.88	82°48'43.96325"	19°21'48.53792"	10	11	273°03'00"	93°03'00"	162.36	82°48'31.20028"	19°21'37.85200"
2	3	266°20'00	86°20'00"	95.04	82°48'44.96338"	19°21'42.54272"	11	12	07°44'00"	187°44'00"	102.96	82°48'28.73351"	19°21'38.05678"
3	4	162°47'00	342°47'00"	87.12	82°48'43.56795"	19°21'42.43581"	12	13	112°47'00"	292°47'00"	166.32	82°48'29.92275"	19°21'45.50597"
4	5	192°00'00	12°00'00"	59.40	82°48'44.42637"	19°21'39.67075"	13	14	18°42'00"	198°42'00"	146.52	82°48'33.23957"	19°21'44.34712"
5	6	204°14'00	24°14'00"	186.12	82°48'42.58500"	19°21'31.59154"	14	15	147°24'00"	327°24'00"	71.28	82°48'35.35180"	19°21'50.30191"
6	7	269°36'00	89°36'00"	39.60	82°48'40.06240"	19°21'26.28148"	15	16	115°08'00"	295°8'00"	233.64	82°48'37.37910"	19°21'47.26477"
7	8	297°26'00	117°26'00"	91.08	82°48'34.48953"	19°21'26.28387"	16	17	36°23'00"	216°23'00"	102.96	82°48'40.26773"	19°21'45.96697"
8	9	349°05'00	169°05'00"	253.44	82°48'31.54148"	19°21'27.59898"	17	1	76° 21'00"	256°21'00"	194.04	82°48'41.98407"	19°21'48.15589"
9	10	07°50'00	187°50'00"	178.20	82°48'30.43658"	19°21'33.06841"	Perimeter = 2280.96 mtr						

C. Patch-3

1	2	179°34'00	359°34'00"	76.30	82°48'36.67877"	19°22'28.97327"	12	13	22° 33'00	202°33'00"	34.00	82°48'26.10423"	19°22'18.16939"
2	3	179°34'00	359°34'00"	34.85	82°48'36.72414"	19°22'26.43246"	13	14	3421600	16216'00"	168.97	82°48'26.35489"	19°22'19.14706"
3	4	224°6'00	44°6'00"	87.77	82°48'36.65921"	19°22'25.12265"	14	15	2734900	93°49'00"	28.91	82°48'28.28559"	19°22'24.49960"
4	5	201°44'00	21°44'00"	88.06	82°48'34.58376"	19°22'23.11231"	15	16	4° 59'00"	184°59'00"	51.92	82°48'27.33750"	19°22'24.60855"
5	6	156°35'00	336°35'00"	64.32	82°48'33.50630"	19°22'20.58298"	16	17	91° 3'00"	271°03'00"	66.09	82°48'27.45379"	19°22'26.21859"
6	7	114°52'00	294°52'00"	41.85	82°48'34.28237"	19°22'18.73187"	17	18	8° 38'00"	188°38'00"	25.91	82°48'29.69996"	19°22'26.17697"
7	8	212°16'00	32°16'00"	23.28	82°48'35.50019"	19°22'18.08711"	18	19	95° 6'00"	275°06'00"	28.90	82°48'29.81764"	19°22'26.96467"
8	9	240°50'00	60°50'00"	119.80	82°48'35.14154"	19°22'17.48076"	19	20	12°55'00"	192°55'00"	34.96	82°48'30.80271"	19°22'26.95002"
9	10	305°19'00	125°19'00"	36.06	82°48'31.56120"	19°22'15.79082"	20	21	312°10'00"	132°10'00"	19.50	82°48'31.05147"	19°22'28.00240"
10	11	272° 07'00	92°7'00"	34.04	82°48'30.52435"	19°22'16.29023"	21	22	283°48'00"	103°48'00"	65.40	82°48'30.68809"	19°22'28.34913"
11	12	298° 44'00	18° 44' 00"	117.96	82°48'29.39721"	19°22'16.46981"	22	1	89°35'00"	269°35'00"	244.45	82°48'28.36755"	19°22'28.98712"

Perimeter = 1493.30 mtr

Total Perimeter : 19004.04 mtr + 2280.96 mtr +1493.30 mtr = 22778.30 mtr or 22.78 km

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ANNEXURE – II

ESTIMATE FOR BARBED WIRE FENCING

Estimate for 1 Kilometer		
1	No. of pillars required 500 nos.	
	Cost of 1 pillar	Rs 568.00
	Transportation charges	Rs 244.00
	Cost of base fixing	Rs 244.00
	Cost of fixing barbed wire @ 25.00	Rs 49.00
	Total cost for fixing 1 pillar	Rs 1105.00
	Cost for 500 pillars	**Rs 5,52,500.00**
	Cost of barbed wire (1 Qntls) @ 8000.00. Cost of barbed wire (5+2) strand, 7500 mtrs or 24.75 Qntls @ 0.33kg/rmt.	Rs 1,98,000.00
	Total cost for 1 Km.	**Rs 7,50,500.00**
	Total cost for fencing: Perimeter of the area i.e. 22.78 km-5.923 km = 16.857 km X Rs 7,50,500.00 (Excluding 5.923 km out of which 2.352 km of stretch that bears common with the area allotted against Gandhamardan-B Mines of OMC to North and 3.571 km of common boundary it bears with Udaygiri Reserved Forest to the West)	Rs 1,26,51,178.00
	Maintenance 5% of Rs. 6,32,559.00 per annum for 4 year	Rs 25,30,236.00
	Total barbed wire fencing of 16.025 Km	**Rs 1,51,81,414.00**

ANNEXURE-III

COST ESTIMATE FOR BLOCK PLANTATION OF 1600 PLANTS/HECTARE

1.	Type of the Plantation.	Block Plantation.
2.	No. of seedlings to be planted.	1600 Nos. per hectare
3.	Spacing to be adopted.	2.5 m x 2.5 m
4.	Size of pits.	30 cm x 30 cm x 30 cm
5.	Wage rate.	Rs 150.00 per manday.

0th year (Advance work) Pre-planting operation.

Sl. No.	Item of work	Person days	Labour cost @ Rs 150/-	Material cost (Rs)	Total Cost (Rs)
1	2	3	4	5	6
1	Survey, Demarcation & pillar posting.	2	300.00	0	300.00
2	Site preparation.	8	1200.00	0	1200.00
3	Alignment and stacking of pits	2	300.00	0	300.00
4	Digging of Pits (30 cm. cube)	40	6000.00	0	6000.00
5	Nursery cost (one year old seedling) part	80	6000.00	6000.00	12000.00
	Sub Total	**132**	**13800.00**	**6000.00**	**19800.00**
1stYear/ Planting					
1	Nursery cost (one year old seedling) balance	16	2100.00	300.00	2400.00
2	Carriage & planting, CR, Manuring, insecticide application.	21	3150.00	0	3150.00
3	Cost of insecticide and fertilizer	21	0	3150	3150.00
4	1st weeding (complete weeding)	7	1050.00	0	1050.00

5	Manuring	5	750.00	0	750.00
6	2nd weeding (complete weeding)	5	750.00	0	750.00
7	Soil working (50 cms. Radius around plants)	7	1050.00	0	1050.00
8	Fire line tracing & inspection path	3	450.00	0	450.00
9	Soil conservation measures in the form of staggered trenches	10	1050.00	0	1050.00
10	Watch & Ward	7	1050.00	0	1050.00
Sub Total		**102**	**11850.00**	**3450.00**	**15300.00**
2nd Year Maintenance					
1	Casualty replacement with nursery cost	12	1800	0	1800.00
2	Weeding (complete weeding)	6	900	0	900.00
3	Application of fertilizer	4	600	0	600.00
4	Cost fertilizer	12	0	1800	1800.00
5	Soil working (50 cms Radius around plants)	7	1050	0	1050.00
6	Fire line tracing (2m wide fire line over 400m long)	3	450	0	450.00
7	Watch and Ward	15	2250	0	2250.00
Sub Total		**59**	**7050**	**1800**	**8850.00**
3rd Year maintenance					
1	Weeding and application of fertilizer	7	1050	0	1050.00
2	Cost of fertilizer	12	0	1800	1800.00
3	Soil working (50 cms. Radius around plants)	7	1050	0	1050.00
4	Fire line tracing (2m wide fire line over 400 m long)	3	450	0	450.00
5	Watch & Ward	15	2250	0	2250.00
Sub Total		**44**	**4800**	**1800**	**6600.00**
4th Year maintenance					
1	Fire line tracing.(2 mt. wide fire line over 400 mt. long) pruning	3	450.00	0	450.00
2	Watch and ward	15	2250	0	2250.00
Sub Total		**18**	**2700**	**0**	**2700.00**
5th Year maintenance					
1	Fire line tracing.(2 mt. wide fire line over 400 mt. long)	3	450.00	0	450.00
2	Watch and ward	15	2250	0	2250.00
Sub Total		**18**	**2700**	**0**	**2700.00**
6th Year maintenance					
1	Fire line tracing.(2 mt. wide fire line over 400 mt. long)	3	450.00	0	450.00
2	Watch and ward	15	2250	0	2250.00
Sub Total		**18**	**2700**	**0**	**2700.00**
7th Year Maintenance					
1	Fire line tracing (2m wide fire line over 400 m long) pruning	3	450.00	0	450.00
2	Watch & Ward	15	2250	0	2250.00
Sub Total		**18**	**2700**	**0**	**2700.00**
8th Year Maintenance					
1	Fire line tracing (2m wide fire line over 400 m long) pruning	3	450	0	450.00
2	Watch & Ward	15	2250	0	2250.00
Sub Total		**18**	**2700**	**0**	**2700.00**
9th Year Maintenance					
1	Fire line tracing (2m wide fire line over 400 m long) pruning	3	450	0	450.00

2	Watch & Ward	15	2250	0	2250.00
	Sub Total	**18**	**2700**	**0**	**2700.00**
10th Year Maintenance					
1	Fire line tracing (2m wide fire line over 400 m long) pruning	3	450	0	450.00
2	Watch & Ward	15	2250	0	2250.00
	Sub Total	**18**	**2700**	**0**	**2700.00**
	Grand Total	**463**	**56400**	**13050**	**69450.00**

ABSTRACT OF COST OF PLANTATION FOR @ 1600 SEEDLINGS PER HA.

Year	Person Days	Labour (Rs)	Material (Rs.)	Total Cost (Rs)
0th Year	132	13800	6000	19800
1st. Year	102	11850	3450	15300
2nd. Year	59	7050	1800	8850
3rd. Year	44	4800	1800	6600
4th Year	18	2700	0	2700
5th Year	18	2700	0	2700
6th Year	18	2700	0	2700
7th Year	18	2700	0	2700
8th Year	18	2700	0	2700
9th Year	18	2700	0	2700
10th Year	18	2700	0	2700
Total	**463**	**56400**	**13050**	**69450**
Additional incentive (3%) for VSS/Fr./FG proposed for more than 80% survival and very good growth during 4th year of maintenance as per recommendation of DFO and RCCF.				**2083.50**
Additional EPA expenses if implemented through VSS at rate Rs1200/- in 0th Year, Rs 2400/- in 1st Year, Rs 1800/- in 2nd Year, Rs 600/- per year from 3rd Year to 10th year = Rs 600/- in 4th Year, Rs 600/- in 5th Year and Rs 600/- in 6th year.				**10200.00**
Total Norm per ha. in Non-JFM mode with incentives.				**Rs 81, 733.50**

Cost for 53.0 ha plantation in non-JFM mode x Rs.81, 733.50.00 = **Rs 43, 31,875.50.**

ANNEXURE-IV

COST ESTIMATE FOR ANR WITH GAP PLANTATION OF 300 SEEDLINGS/HECTARE

1.	Type of the Plantation.	Block Plantation.
2.	No. of seedlings to be planted.	300 Nos. per hectare
3.	Spacing to be adopted.	2.5 m x 2.5 m
4.	Size of pits.	30 cm x 30 cm x 30 cm
5.	Wage rate.	Rs 150.00 per manday.

Sl. No.	Item of Work	Person days	Labour (Rs)	Material (Rs)	Total (Rs)
0th Year (Advanced work) pre-planting operation					
1	Survey, Demarcation and Pillar Posting, GPS Reading with mapping	2	300	0	300
2	Site Preparation	2	300	0	300

3	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots	5	750	0	750
4	Raising Nursery @ 220 seedling / ha (including 10 % Casualty replacement) and watch & ward (Part-1)	8	900	300	1200
5	Contingency and Unforeseen Expenditure	1	0	150	150
	Sub Total	**18**	**2250**	**450**	**2700**
1st Year Planting					
1	Maintenance of Nursery (Balance)	4	600	0	600
2	Pitting 30 cm cube size	7	1050	0	1050
3	Carriage and planting including casualty replacement	4.5	675	0	675
4	Complete weeding, Soil working, manuring	5.5	825	0	825
5	Cost of Vermi compost and insecticide for Plantation	3	0	450	450
6	Cost of Chemical Fertilizer	1	0	150	150
7	Fire line tracing and inspection path	3	450	0	450
8	Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoot etc.	15	2250	0	2250
9	Soil conservation measures	20	3000	0	3000
10	Watch & Ward	8	1200	0	1200
11	Contingency and unforeseen expenditure	2	0	300	300
	Sub Total	**73**	**10050**	**900**	**10950**
2nd Year Maintenance					
1	Casualty Replacement including cost of seedling, carriage and planting.	2	300	0	300
2	Complete weeding and pruning	2	300	0	300
3	Soil working and manuring	2	300	0	300
4	Cost of fertilizers and Insecticides	1	0	150	150
5	Fire line tracing and inspection path	1	150	0	150
6	Soil conservation measures	8	1200	0	1200
7	Watch & Ward (Whole Year)	8	1200	0	1200
8	Contingency and unforeseen expenditure	1	0	150	150
	Sub Total	**25**	**3450**	**300**	**3750**
3rd Year Maintenance					
1	Compete weeding and pruning	1	150	0	150
2	Soil working	1	150	0	150
3	Fire line tracing and inspection path	1	150	0	150
4	Watch & Ward (Whole Year)	8	1200	0	1200
5	Contingency and unforeseen expenditure	**0**	0	0	0
	Sub Total	**11**	**1650**	**0**	**1650**
4th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
	Sub Total	**3**	**450**	**0**	**450**
5th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
	Sub Total	**3**	**450**	**0**	**450**
6th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
	Sub Total	**3**	**450**	**0**	**450**
7th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
	Sub Total	**3**	**450**	**0**	**450**

8th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
Sub Total		**3**	**450**	**0**	**450**
9th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
Sub Total		**3**	**450**	**0**	**450**
10th Year Maintenance					
1	Fire line tracing and inspection path	1	150	0	150
2	Watch, Ward & Pruning	2	300	0	300
Sub Total		**3**	**450**	**0**	**450**
Grand Total		**148**	**20550**	**1650**	**22200**

ABSTRACT OF COST OF PLANTATION FOR @ 300 SEEDLINGS PER HECTARE

Year	Person Days	Labour (Rs)	Material (Rs.)	Total Cost (Rs)
0th Year	18	2250	450	2700
1st Year	73	10050	900	10950
2nd Year	25	3450	300	3750
3rd Year	11	1650	0	1650
4th Year	3	450	0	450
5th Year	3	450	0	450
6th Year	3	450	0	450
7th Year	3	450	0	450
8th Year	3	450	0	450
9th Year	3	450	0	450
10th Year	3	450	0	450
TOTAL	**148**	**20550**	**1650**	**22200**

Additional incentive (3%) for VSS/Fr./FG proposed for more than 80% survival and very good growth during 4th year of maintenance as per recommendation of DFO and RCCF.	**666.00**
Additional EPA expenses if implemented through VSS at rate Rs 1200/- in 0th Year, Rs 2400/- in 1st Year, Rs 1800/- in 2nd Year, Rs 600/- per year from 3rd Year to 10th year.	**10200.00**
Total Norm per ha. in non-JFM mode with incentives.	**33066.00**

Cost for 276.7743 Ha (ANR) plantation in non-JFM mode x Rs.33, 066.00 = **Rs 91, 51,819.00.**

ANNEXURE-V (A)

Details Estimate of Loose Boulder Structure (S.C.M)

Span-1mtr, Height = 0.6mtr, Slope-U/S: 1:1:5 D/S Slope: 1:2

1	Leaving the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD	@ Rs.152.50 / per MD		Rs.152.50
2	Excavation of foundation in hard soil within initial lead of 50 mtr. including rough dressing and breaking of clods to maximum size 5 cm. to 7 cm laying in layer not exceeding 0.3 in depth to strengthening both side U/S approx. bund of loose boulder structure. Base with apron- 1 x 3.60 x 1.60 x 0.30			

	Wing wall-4 x 0.50 x 0.30 x 0.30	1.728		
	@ Rs. 5556.00 per 100 cum.	0.180	1.908	Rs.106.00
3	Rough stone dry packing up to GL			
	Base with apron-1 x 3.60 x 1.60 0.30	1.728		
	Wing wall-4 x 0.50 x 0.30 x 0.30	0.180		
	Above GL		1.908	
	Super structure-1 x 1.00 x $\frac{2.60+0.50}{2}$ x 0.60	0.930		
	Wing wall-4 x 0.50 x 0.30 x 0.30	0.180		
	Side wall			
i	2 x $\frac{0.3+0.9}{2}$ x 0.3	0.360		
ii	2 x $\frac{0.3+0.9}{2}$ x 1.2 x 0.3	0.432		
iii	2 x 0.5 x 0.9 x 0.3	0.270		
iv	2 x 1.0 x 0.3 x 0.3	0.180	2.316 cum	
			4.26cum	
	@ Rs. 476.56 per cum			Rs.2,030.00
		Grand Total		**Rs 2271.50**
	Cost of 15 nos of 1 mtr loose boulder structure = Rs 2271.50 X 15 = **Rs 34, 072.00**			

ANNEXURE-V (B)

Details Estimate of Loose Boulder Structure (S.C.M)
Span-2mt,Ht.=0.6mt,slope-U/S:1:1:5, D/S Slope: 1:2

1	Leaving the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD	@ Rs.152.50 / per MD		Rs.152.50
2	Excavation of foundation in hard soil within initial lead of 50mtr.including rough dressing and braking of clods to maximum size 5 cm. to 7 cm laying in layer not exceeding 0.3 in depth to strengthening both side U/S approx. bund of loose boulder structure.			
	Base with apron- 1 x 3.70 x 3.00 x 0.30	3.33		
	Wing wall-4 x 0.50 x 0.50 x 0.30	0.30		
	@ Rs. 5510.00 per 100 cum.		3.63 cum	Rs.200.00
3	Rough stone dry packing up to GL			
	Base with apron-1 x 3.70 x 3.00 x 0.30	3.33		
	Wing wall-4 x 0.50 x 0.50 x 0.30	0.30		
	Above GL			
	Super structure-1 x 2.00 x $\frac{2.70+0.60}{2}$ x 0.60	1.980		
	Wing wall-4 x 0.50 x 0.50 x 0.50	0.50		
	Side wall			
	i) 2 x $\frac{0.50+1.10}{2}$ x 0.9 x 0.5	0.72		

	2			
	ii) 2 x 0.5+1.10 x 1.2 x 0.5 / 2	0.96		
	iii) 2 x 0.6 x 0.6 x 0.5	0.36		
	iv) 2 x1.0 x 0.5 x 0.5	0.50	8.65 cum	
	@ Rs. 476.18 per cum			Rs.4,119.00
			Grand Total	**Rs 4471.50**
	Cost of 15 nos of 2 mtr loose boulder structure = Rs 4471.50 X 15 = **Rs 67,072.00**			

ANNEXURE-V (C)

Details Estimate of Loose Boulder Structure (S.C.M)
Span-3mtr,Ht.=1.0mtr,slope-U/S:1:1:5, D/S Slope: 1:2:0

1	Leaving the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD	@ Rs.152.50 / per MD		Rs.152.50
2	Excavation of foundation in hard soil within initial lead of 50mtr.including rough dressing and braking of clods to maximum size 5 cm. to 7 cm laying in layer not exceeding 0.3 in depth to strengthening both side U/S approx. bund of loose boulder structure. Base with apron- 1 x 5.10 x 4.00 x 0.30 Wing wall-4 x 0.50 x 0.50 x 0.30 @ Rs.5498.00 per 100 cum.	6.12 0.30	6.42 cum @ 54.98 per cum	Rs.353.00
3	Rough stone dry packing up to GL Base with apron-1 x 5.10 x 4.00 x 0.30 Wing wall-4 x 0.50 x 0.50 0.30 Above GL Super structure-1 x 4.10 x 2.70+0.60 / 2 x 1.00 x 3.0 Wing wall-4 x 0.50 x 0.50 x 0.50 Side wall	6.12 0.30 7.05 0.50		
i	2 x 0.50+1.50 / 2 x 1.5 x 0.5	1.50		
ii	2 x 0.5+1.50 / 2 x 2.0 x 0.5	2.00		
iii	2 x 0.6 x 1.0 x 0.5	0.60		
Iv	2 x1.0 x 0.5 x 0.5	0.50		
			18.57 cum	
	@ Rs. 476.38 per cum			Rs.8,847.00
			Grand Total	**Rs 9352.50**
	Cost of 10 nos of 3 mtr loose boulder structure = Rs 9352.50 X 10 = **Rs 93,525.00**			

ANNEXURE-V (D)

Details Estimate of Loose Boulder Structure (S.C.M)

Span-4mtr. Ht. =1.3 mtr. slope-U/S: 1:1:5, D/S Slope: 1:2:0

1	Leaving the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD	@ Rs.152.50 / per MD		Rs.152.50
2	Excavation of foundation in hard soil within initial lead of 50mtr.including rough dressing and braking of clods to maximum size 5 cm. to 7 cm laying in layer not exceeding 0.3 in depth to strengthening both side U/S approx. bund of loose boulder structure. Base with apron- 1 x 3.70 x 3.00 x 0.30 Wing wall-4 x 0.50 x 0.50 x 0.30 @ Rs. 5510.00 per 100 cum.	9.225 0.30	9.525	Rs.522.00
3	Rough stone dry packing up to GL Base with apron-1 x 6.15 x 5.00 x 0.30 Wing wall-4 x 0.50 x 0.50 x 0.30 Above GL Super structure-1 x $\frac{5.15+0.60}{2}$ x 1.30 x 4.0 Wing wall-4 x 0.50 x 0.50 x 0.50 Side wall	9.225 0.30 14.95 0.50		
i	2 x $\frac{0.50+1.80}{2}$ x 1.95 x 0.5	2.24		
ii	2 x $\frac{0.5+1.80}{2}$ x 1.95 x 0.5	2.99		
iii	2 x 0.6 x 1.8 x 0.5	1.08		
iv	2 x1.0 x 0.5 x 0.5	0.50		
			31.785	
	@ Rs. 476.45 per cum			Rs.15,144.00
			Grand Total	**Rs.18,818.50**
Cost of 10 nos of 4mtr loose boulder structure = Rs 18818.50 X 10 = **Rs 1,88,185.00**				

ANNEXURE-V (E)

Estimate for digging one no of staggered trench of size 2 mtr x 0.54 mtr x 0.5 mtr Along with Agave Plantation on the dugout soil

i) Earth work in excavation of staggered trench in hard soil including rough dressing and leveling the beds and heaping the dugout soil at the downhill side of the trench and leaving the same too. Size of a trench =2.0 mt x 0.5 mt x 0.5 mt = 0.5 cum @ 246.80 per 2.83 cum	Rs. 43.60
ii) Cost for Agave planting on the dugout soil and its maintenance including weeding. Soil working, manuring, cost of fertilizer etc.	Rs. 54.00

for three years. 3 nos. of Agave plants per trench @ Rs.18/- per plants on LS	
Total	Rs.97.60 or Rs 98.00 (Rupees Ninety eight)only
Cost of 80 nos. of staggered trenches covering one ha = 80 x 98=	Rs.7840.00

ANNEXURE-VI

TOTAL COST OF THE COMPENSATORY AFFORESTATION SCHEME

Sl.No.	Item of Work	Estimated cost in Rs.
1	Barbed wire fencing around non-forest land over 16.857 km	Rs 1,51,81,414.00
2	Block plantation over 53.00 ha of non-forest land @ Rs 81,733.50 per hectare	Rs 43, 31,875.50.
3	ANR (300 Seedlings) plantation over 276.7743 ha of non-forest land @ Rs 33,066.00 per hectare	Rs 91, 51,819.00.
	Sub-total	Rs 2,86,65,108.50
4	Special soil conservation measures (Rs.7840.00+ Rs 1,88,185.00+ Rs 93,525.00+ Rs 67,072.00+ Rs 34, 072.00)	Rs 3,90,694.00
	Total	Rs 2,90,55,802.50
5	Escalation (10%)	Rs 29,05,580.25
	Grand Total	Rs 3,19,61,382.75 OR Rs 3,19,61,400.00

(Rupees three crores nineteen lakhs sixty one thousand and four hundred only)

Divisional Forest Officer,
Kalahandi (South) Division.

OFFICE OF THE COLLECTOR & DISTRICT MAGISTRATE: KALAHANDI

No. 737 /Rev- Date: 30.04.2013

To,

Divisional Forest Officer (South)
Kalahandi, Bhawanipatna

Sub: Filing of requisition for Compensatory Aforestation – allocation of non-forest Govt. land.

Ref: Your memo No.4258 dated 06.12.2012 and letter No. 1492 dated 18.04.2013.

Sir,

I am to say that the enclosed schedule of non-forest Government land measuring Ac. 3718.14 equivalent to 1504.78 Ha under Th.Rampur Tahasil has been identified and allotted for raising compensatory aforestation in lieu of the forest land pertaining to lease hold area of the granted mining lease in favour of "Gandhamardan A & B" Iron Ore of OMC Ltd. Located at Keonjhar District.

Therefore, in enclosing herewith the copy of joint inquiry report, I am to request you to file necessary requisition before the concerned Tahasildar for processing alienation proposal for sanction of the land in favour of Forest Department immediately.
Enc: as above.

Yours faithfully,

Collector,
Kalahandi

Memo No. 738 /Rev. Date: 30.04.2013

Copy to Tahasildar, Th.Rampur for information. He is requested to process the alienation proposal in favour of the Forest Department on obtaining the requisition from the Divisional Forest Officer (South), Kalahandi.

Collector,
Kalahandi

Memo No. 739 /Rev. Date: 30.04.2013

Copy to Sub-Collector, Bhawanipatna for information and necessary action.

Collector,
Kalahandi

Memo No. 740 /Rev. Date: 30.04.2013

Copy to Chairman-cum-Managing Director, Odisha Mining Corporation, Bhubaneswar for information and necessary action.

Collector,
Kalahandi

Annexure-II

LAND SCHEDULE OVER 1500.00 HA OF REVENUE LAND IDENTIFIED IN VILLAGE-KHAMARPADAR UNDER THUAMULRAMPUR TAHASIL OF KALAHANDI DISTRICT FOR RAISING COMPENSATORY AFFORESTATION IN LIEU OF THE FOREST LAND PROPOSED FOR DIVERSION AGAINST GANDHAMARDAN BLOCK-A & BLOCK-B OF M/s O.M.C.Ltd LOCATED IN KEONJHAR DISTRICT OF ODISHA.

Plot No.	Khata No.	Kissam	Area in Acrs
1	246 (Abad Ajogya Anabadi)	Dangar	20.23
2		Dangar	30.00
3		Dangar	15.00
4		Dangar	22.50
5		Dangar	22.50
6		Dangar	20.63
7		Dangar	22.50
8		Dangar	22.50
9		Dangar	13.13
10		Dangar	12.73
11		Dangar	59.38
12		Dangar	71.50
13		Dangar	75.13
14		Dangar	56.63
15		Dangar	40.45
16		Dangar	37.50
17		Dangar	25.00
18		Dangar	20.00
19		Dangar	26.68
20		Dangar	25.00
21		Dangar	37.50
22		Dangar	37.50
37		Dangar	16.88
68		Dangar	38.08
72		Dangar	11.55
75		Dangar	18.58
76		Dangar	45.00
77		Dangar	39.63
78		Dangar	15.00
79		Dangar	22.50
80		Dangar	21.50
81		Dangar	16.08
82		Dangar	22.50
83		Dangar	30.00
84		Dangar	29.93
85		Dangar	23.63
86		Dangar	19.33
87		Dangar	35.50

Plot No.	Khata No.	Kissam	Area in Acrs
88	246 (Abad Ajogya Anabadi)	Dangar	41.30
89		Dangar	29.45
90		Dangar	30.00
91		Dangar	30.00
92		Dangar	30.00
93		Dangar	22.50
94		Dangar	22.50
95		Dangar	19.90
96		Dangar	31.80
97		Dangar	75.83
98		Dangar	63.90
99		Dangar	30.00
100		Dangar	30.00
101		Dangar	30.00
102		Dangar	24.55
115		Dangar	9.38
119		Dangar	22.53
120		Dangar	15.05
186		Dangar	12.10
260		Dangar	4.10
724		Dangar	25.83
725		Dangar	13.80
726		Dangar	17.48
732		Dangar	12.00
734		Dangar	4.03
736		Dangar	17.50
738		Dangar	21.88
739		Dangar	15.00
740		Dangar	14.90
742		Dangar	21.00
747		Dangar	14.33
748		Dangar	30.00
749		Dangar	30.00
750		Dangar	22.50
751		Dangar	22.50
752		Dangar	25.00
753		Dangar	14.95
758		Dangar	11.35

Plot No.	Khata No.	Kissam	Area in Acrs
766	246 (Abad Ajogya Anabadi)	Dangar	8.45
771		Dangar	13.83
772		Dangar	12.38
777		Dangar	14.75
778		Dangar	4.25
779		Dangar	1.40
780		Dangar	1.23
782		Dangar	2.62
787		Dangar	40.10
801		Dangar	3.19
805		Dangar	3.22
806		Dangar	7.50
807		Dangar	5.48
881		Dangar	10.73
914		Dangar	10.83
922		Dangar	9.30
924		Dangar	9.48
927		Dangar	6.25
938		Dangar	2.95
941		Dangar	8.58
944		Dangar	1.59
948		Dangar	5.25
952		Dangar	15.45
968		Dangar	80.75
969		Dangar	94.83
970		Dangar	60.00
971		Dangar	51.20
972		Dangar	52.78
973		Dangar	55.00
974		Dangar	67.08
975		Dangar	71.75
976		Dangar	62.50
977		Dangar	58.00
978		Dangar	20.00
982		Dangar	5.05
989		Dangar	26.25
990		Dangar	4.83
991		Dangar	25.00
992		Dangar	8.68
993		Dangar	35.48
998		Dangar	33.43
999		Dangar	10.00
1033		Dangar	23.86
1036	246 (Abad Ajogya Anabadi)	Dangar	13.41
1042		Dangar	3.26
1070		Dangar	23.32
1078		Dangar	8.23
1267		Dangar	10.07
1270		Dangar	7.84
1324		Dangar	11.15
1327		Dangar	29.21
1397		Dangar	4.26
1398		Dangar	2.17
1403		Dangar	11.50
1404		Dangar	60.00
1405		Dangar	50.00
1406		Dangar	44.55
1407		Dangar	70.63
1408		Dangar	37.50
1409		Dangar	27.83
1410		Dangar	16.83
1411		Dangar	27.78
1413		Dangar	3.80
1437		Dangar	4.13
1449		Dangar	3.20
1457		Dangar	30.00
1460		Dangar	35.85
1464		Dangar	20.05
1484		Dangar	3.47
1537		Pathar Chatan	6.98
1550		Dangar	4.30
1553		Dangar	11.63
1554		Dangar	17.75
1575		Dangar	18.08
1576		Dangar	9.93
1584		Dangar	15.80

Total: 3718.14 Acr or 1504.78 ha

28.12.12
Forester
Senakhamar Section

28/12/12
Forest Range Officer
Jaipatna Range

25.12.12
Revenue Inspector
Juburajpur

25.12.12
Tahasildar
Th.Rampur

25/12/12
Divisional Forest Officer,
Kalahandi South Division

196 (xiii)

Joint verification on Non-Forest Govt.Land in Khamarpadar village under Thuamul Rampur Tahasil of Kalahandi district for Raising Compensatory afforestation against Gandhamardan Block-A and Gandhamardan Block-B Iron ore mines of M/s Orissa Mining Corporation Ltd. located in Keonjhar District, Odisha.

Certified that on joint verification of 1500.00 Ha. of Non-Forest Govt. land (Kissam-Dongar) in Khamarpadar village of Thuamul Rampur Tahasil of Kalahandi District, it is found that , 250 Ha. of above said land is suitable for block plantation (AR) and Rest of 1250 Ha. is suitable for ANR with gap planting.

196 (xiv)

25.12.12
Revenue Inspector
Jubarajpur
Revenue Inspector
Jubarajpur

25.12.12
Forester
Benakhamar
Section
Forester
Benakhamar Section

25/12/12
Range Officer
Jaipatna
Forest Range Officer
Jaipatna (T) Range

25.12.12
Tahasildar
Th.Rampur
TAHASILDAR
Th. Rampur

25/12/12
D.F.O
Kalahandi (South)
Divisional Forest Officer
Kalahandi South Division

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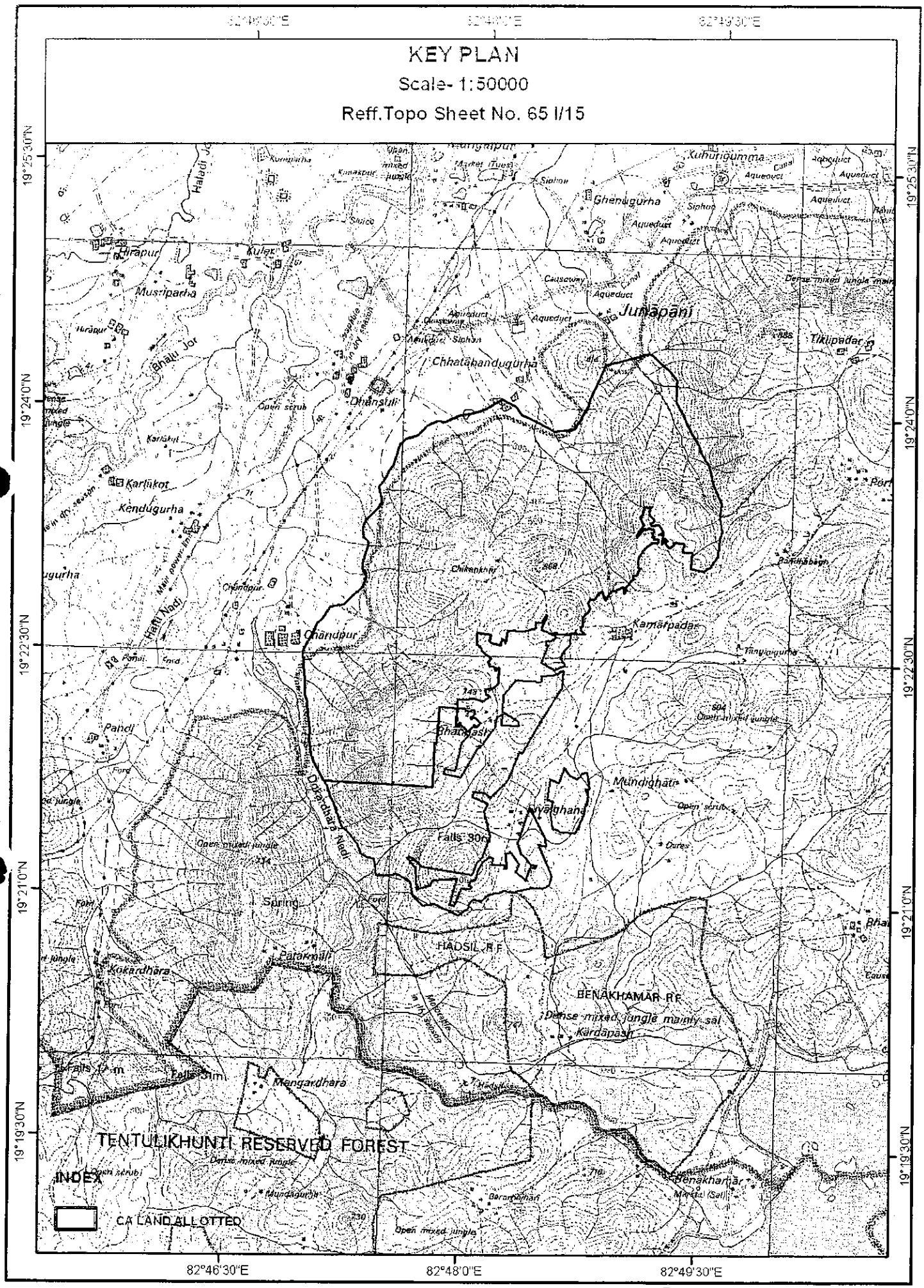
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82°49'30"E
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19°24'0"N
19°22'30"N
19°21'0"N
19°19'30"N
Junapani
Ghenugurha
Kulupur
Hirapur
Musriparha
Bhalu Jor
Chhatahandugurha
Ohanstuli
Karlikot
Kendugurha
Chandipur
Hati Nadi
Kamarpadar
Bhatkasir
Mundighati
Falls 30m
Dopardhara Nadi
Spring
Patakmali
Kokardhara
HADSIL R F
BENAKHAMAR RF
Dense mixed jungle mainly sal
Kardapasir
Falls 15 m
Falls 3mt
Mangardhara
TENTULIKHUNTI RESERVED FOREST
INDEX
CA LAND ALLOTTED
Benakhamar
Open mixed jungle

196 (XV)

DETAILS OF NON-FOREST GOVT. LAND ALLOTTED IN VILLAGE KHAMARPADAR UNDER THUAMULRAMPUR TAHASIL OF KALAHANDI DISTRICT FOR RAISING COMPENSATORY AFFORESTATION AGAINST GANDHAMARDAN BLOCK-A IRON ORE MINES OF M/s O.M.C.Ltd LOCATED IN KEONJHAR DISTRICT, ODISHA.

Tahasil	Village	Khata No	Plot No	Total area of the plot (Acr)	Area considered (Acr)	Kissam	Boundary Description				Remarks (Full/Part)
							North	South	East	West	
THUAMULRAMPUR	KHAMARPADAR	246 Abad Ajogya Anabadi	881	10.73	9.90	Dangar	878,880	991	993	885,887	Part
			977	58.00	23.53	Dangar	968,978	1404,1405	989,983	976	Part
			978	20.00	20.00	Dangar	922	977	914,982	968	Full
			982	5.05	4.65	Dangar	914,979	977	890,891,981	978	Part
			989	26.25	24.37	Dangar	990,987,988	1404	991	977	Part
			990	4.83	3.84	Dangar	1593,888	989	991	985,986	Part
			991	25.00	25.00	Dangar	881	1398,1403	992,1397	990,989	Full
			992	8.68	8.68	Dangar	993	1397	1388,1385	991	Full
			993	35.48	31.81	Dangar	998,995,994	992,1383	1314,1315	991,881	Part
			998	33.43	27.39	Dangar	1033	993	1250,1251	999,881	Part
			999	10.00	9.95	Dangar	1033	998	998	876,877	Part
			1033	23.86	19.15	Dangar	1032,1034	999,998	1036,1241	1000,1002	Part
			1036	13.41	9.89	Dangar	Road, 1039	1033	1220,1236	1033	Part
			1070	23.32	16.00	Dangar	772	Road,1039	1078,1077	1069,1067	Part
			1267	10.07	9.47	Dangar	1068,1266	1324	Nala,1024	1270	Part
			1270	7.84	6.64	Dangar	1271,1269	1324	1267	1322,1321	Part
			1324	11.15	10.85	Dangar	1270,1267	1327	1325	1644,1329	Part
			1327	29.21	28.21	Dangar	1324	1537	1326,Nala	1344,1346	Part
			1397	4.26	4.16	Dangar	992	1396	1395	991	Part
			1398	2.17	2.15	Dangar	991	1402,1401	1656	1403	Part
			1403	11.50	11.25	Dangar	989	1411	1412,1400	1404	Part
			1404	60.00	60.00	Dangar	977,989	1408	1403	1405	Full
			1405	50.00	50.00	Dangar	974,977	1407	1404	1406	Full
			1406	44.55	44.55	Dangar	975,974	1407	1405	Udayagiri RF	Full
			1407	70.63	70.63	Dangar	1406,1405	1457	1408	Udayagiri RF	Full
			1408	37.50	37.50	Dangar	1404	1409	1411	1407	Full
			1409	27.83	27.03	Dangar	1408	1446,1451,45	1412	1047,1455	Part
			1410	16.83	16.13	Dangar	1411	1433,34,35	1417,1418	1409	Part
			1411	27.78	27.78	Dangar	1403	1410	1413	1408,1404	Full

25/12/12
Revenue Inspector
Revenue Inspector
Junagarjpur

25.12.12
Forester
Forester
Benakhamar Section

Forest Range Officer
Forest Range Officer

25.12.12
TAHASILDAR
Tahasildar
Thuamulrampur

Divisional Forest Officer
Divisional Forest Officer
Kalahandi (South)

Tahasil	Village	Khata No	Plot No	Total area of the plot (Acr)	Area considered (Acr)	Kissam	Boundary Description				Remar. (Full/Part)
							North	South	East	West	
THUAMULRAMPUR	KHAMARPADAR	246 Abad Ajogya Anabadi	1413	3.80	3.60	Dangar	1412	1410	1414	1411	Part
			1437	4.13	2.53	Dangar	1436,1435	1460	1461	1449	Part
			1449	3.20	2.40	Dangar	1448,1439	1460	1437	1450	Part
			1457	30.00	29.40	Dangar	1407	Hadasila	1458,1453	Hadasila	Part
			1460	35.85	32.35	Dangar	1437,1449	Hadasila	1462,1463	1457	Full
			1464	20.05	19.05	Dangar	Road,1465,	Kardapasa	1575	1460,1429	Part
			1484	3.47	3.00	Dangar	1567,1483	1575	1570	1576,1575	Part
			1537	6.98	6.75	Dangar	1327	1601	1600	1538,1536	Part
			1550	4.30	3.80	Dangar	1555	1553	Mundighati	1554	Part
			1553	11.63	11.33	Dangar	1550,1554	1584	Mundighati	1571,1569	Part
			1554	17.75	17.25	Dangar	1556,1557	1553	1550,1535	1560,1561	Part
			1575	18.08	18.08	Dangar	1471,1472	Kardapas	1576	1464	Full
			1576	9.93	9.43	Dangar	1575,1579	Kardapas	1584	1575	Part
			1584	15.80	15.50	Dangar	1553	Kardapas	Mundighati	1576	Part

TOTAL AREA: 814.98 Acr or 329.811 ha

(1396 xvii)

1. Certified that the above non-forest Government land is in compact patches and in continuity fit for compensatory plantation (ANR: 276.811 ha & Block: 53.0 ha) and are more than 4.0 ha area patch.
2. Certified that these lands are not coming under reserve category like Gochar, Smasana (burning ghat), village forest etc.
3. These areas have adequate soil depth to sustain plantation and area manageable from silvicultural point of view.
4. Certified that the Government land are found suitable for plantation
5. Certified that these lands are free from encroachment and encumbrances.
6. Certified that the above land are not covered under Section 4 (1) notification and do not come under any forest block.
7. Certified that the above land are not coming under DLC land and forest land classification.
8. Certified that the above land are not allotted to any agency previously.
9. These lands can be given to Orissa Mining Corporation Limited for using the same towards Compensatory Afforestation.

25/12/12
Revenue Inspector
Revenue Inspector
Jubarajpur

25.12.12
Forester
Forester
Beat Section

25/12/12
Forest Range Officer
Forest Range Officer
Jayapatana

25.12.12
TAHASILDAR
TAHASILDAR
Thuamulrampur

25/12/12
Divisional Forest Officer
Divisional Forest Officer
Kalahandi (South)