# Chandi Prasad Sharma

MINES OWNER

*Head Office :*
At - AMLATOLA
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*Barbil Office :*
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Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937098707 & 9471579161

*Branch Office :*
BARAJAMDA
DIST. SINGHBHUM WEST
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*Ref. No.* .....

*Date* 24-01-2025

To

The Divisional Forest Officer,
Bonai Forest Division.

Sub: - Proposal for seeking prior approval of Central Government under Section-2 (ii) of the Forest (Conservation) Act,1980 in favour of Anil Kumar Sharma Power of Attorney of Late Chandi Prasad Sharma for non-forestry use of 67.352 ha. forest land for Iron & Manganese Ore Mining in village Raikela, Bahamba and Tensa under Bonai Sub-Division in Sundargarh District of Odisha (Online Proposal No.FP/OR/MIN/39199/2019).

**X-Sub: - Submission of Stage-I compliance**

Ref: - 1. Stage-I approval granted Letter No.8-25/2022-FC dt.4.12.2023 of the MoEF & CC, GoI.
2. Your Letter No.79 dt.3.1.2024.

Sir,

With reference to the above-mentioned subject matter, I would like to inform you that I have submitted the point-wise compliance of the Stage-I condition imposed vide Letter No.8-25/2022-FC dt.4.12.2023 of the MoEF & CC, GoI is **enclosed herewith** vide **Annexure-A.**

I, therefore, request your good-self to kindly take necessary action for further processing of the compliance of Stage-I approval conditions to the higher authority for grant of final approval.

Thanking you,

Yours faithfully

Anil Kumar Sharma

Power of Attorney Holder

C.P. Sharma

Encl: **Annexure - A along with all enclosures**

**Compliance to the Conditions stipulated in Stage-I approval letter of Ministry of Environment, Forest & Climate Change, (Forest Conservation Division), Government of India, New Delhi vide F. No 8-25/2022-FC dated 04.12.2023 for diversion of 67.352 Ha Forest land for Iron & Manganese Ore Mining in village - Raikela, Bahamba & Tensa under Bonai Sub-Division of Sundargarh District, Odisha.**

| Sl. No. | Conditions | Compliance |
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| 1. | Legal status of the diverted forest land shall remain unchanged | Legal status of the diverted forest land shall remain unchanged.<br><br>An undertaking to this effect is enclosed as **Annexure-1.** |
| 2. | **Compensatory Afforestation:** | |
| a. | The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation as per the approved CA Scheme at the current wage rate in consultation with State Forest Department in the account of CAMPA of the concerned State through online portal; | Non-forest land for Compensatory afforestation has been identified in village San Rengalbeda (68.052 ha.) under Lahunipara Tahasil of Rourkela Forest Division of Sundergarh district.<br><br>As per the demand raised by the DFO, Bonai vide letter No. 5341/6F-(Mg) dated 21.06.2024, the User Agency has deposited an amount of Rs.6,17,24,200/- towards cost of compensatory afforestation through RTGS (UTR No-INDBR32024071500224550) dated 15.07.2024 in State CAMPA fund. Copy of the RTGS slips is enclosed as **Annexure-2.** |
| b. | The Govt. non-forest land identified for raising Compensatory Afforestation shall be notified by the State Government as RF under Section-4 or PF under Section-29 of the Indian Forest Act. 1927 or under the relevant Section (s) of the local Forest Act, as the case may be, before the Stage-II approval; | The Govt. Non- Forest land over 68.0352 Ha identified for compensatory afforestation in village San Rengalbeda under Lahunipara Tahasil of Sundergarh District has already been mutated and transferred in favour of the Forest Dept. Copy of RoR is enclosed as **Annexure-3.** Further, the said non-forest Govt. land has been notified as Protected Forest vide Notification No.FE-DIV-FLD-0068-2022(10F-(Cons)-34/2022)-114/ FE&CC |

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| | | dt.01.01.2025 (copy enclosed as **Annexure-4).** |
| c. | The cost of survey, demarcation and erection of permanent pillars, if required on the identified CA land, shall be deposited in advance with the Forest Department by the user agency. The CA will be maintained for 10 years. The scheme may include afforestation of indigenous species with appropriate provision for anticipated cost increase for works scheduled for subsequent years; | The Govt. Non- Forest land for Compensatory afforestation has been identified in village San Rengalbeda (68.0352 ha.) under Lahunipara Tahasil of Rourkela Forest Division of Sundergarh district. The said land has been demarcated and RCC pillars have been posted.<br><br>As per the demand raised by the DFO, Bonai vide letter No. 5341/6F-(Mg) dated 21.06.2024, the User Agency has deposited an amount of Rs.6,17,24,200/- towards cost of compensatory afforestation through RTGS (UTR No-INDBR32024071500224550) dated 15.07.2024 in State CAMPA fund.<br><br>The CA scheme has been approved for 10 years and includes afforestation of indigenous species |
| d. | The compensatory afforestation over Govt. non-forest land (67.352 ha) equal in extent to the forest land being diverted i.e. 67.352 ha shall be raised by the State Forest Department at the project cost within three years from the date of grant of Stage - II approval; | An extent of 68.052 ha. of non-forest land for Compensatory afforestation has been identified in village San-Rengalbeda of Lahunipara Tehsil under Banki Range of Rourkela Forest Division. The said C.A. Scheme has been approved by the PCCF (FD & NO FC Act), Bhubaneswar vide his Memo No.11860 dt.12.6.2024 for ₹6,17,24,200/- with maintenance of 10 years. |
| e. | User agency either himself or through the State Forest Department shall undertake gap planting and soil and moisture conservation activities to restock and rejuvenate the degraded open forest (having crown density less than 0.40), if any, located in the area within 100 metre from outer perimeter of the mining lease. | A scheme for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.4), located in the area within 100 metres from outer perimeter of the mining lease has been technically approved by the RCCF, Rourkela with financial outlay |

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| | The plan for plantation and SMC activities will be prepared and submitted to MoEF&CC before Stage-II Clearance; | of Rs.1,90,94,600/-. The scheme will be implemented by the User Agency at the project cost in a phased manner. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Copy of the approved scheme is enclosed as **Annexure-5** |
| 3. | **NPV:** | |
| a. | The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal from the User Agency as per the orders of the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No. 5-3/2007-FC dated 06.01.2022 read with 22.03.2022 through online portal of CAMPA account of the State Concerned; | We had deposited Rs.4,94,32,680/- on 25.06.2010 through Demand Draft vide DD No.094965 dt.25.06.2010 towards NPV over 67.716 ha. forest area @ % 7.30 Lakh per ha. (**Annexure-6**).<br><br>Further, the DFO, Bonai has demanded to deposit 4,73,29,918/- towards differential cost of NPV over 67.352 ha. @14,36,670/- per ha. vide his office Letter No.84 dt.3.1.2024. Besides, we have deposited Rs. 4,73,29,918/- towards differential NPV over 67.352 ha. of entire forest land @ Rs.14,36,670/- per ha. through e-portal of MoEF & CC (http://parivesh.nic.in) on 12.03.2024 vide UTR No. INDBR32024031200116369. (**Annexure-7**).<br><br>Thus, in total, we have deposited Rs.9,67,62,598/- (Rs.4,94,32,680/ + Rs. 4,73,29,918/) towards NPV of entire forest area in the lease. |
| b. | At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 4. | The State Government shall ensure that following measures as suggested by the Superintending Engineer, Rourkela Irrigation Division for protection of the | As per the Letter No.723/WE dated 17.02.2024 from the Office of the Superintending Engineer, Rourkela Irrigation Division Rourkela, scheme for |

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| | adjoining nala shall be implemented at the project cost: | protection of adjoining Nala within the ML area has been prepared and approved by the Regional Chief Conservator of Forests, Rourkela Circle vide Letter No. 1393/3F-31/2024 dated 27.03.2024 for Rs.61,47,000/-. The scheme will be implemented by the User Agency at the project cost in a phased manner. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Scheme for protection of adjoining Nala within the ML area is annexed herewith as **Annexure-8** |
| a. | Embankment on both side of the Nalla to be ensured for preventing Pollution of streams; | |
| b. | Vegetation improvement on both side of the stream needs to be ensured (50 m. on both side; | |
| c. | Artificial trenches (Canals) surrounding overburden dumping to be ensured for avoiding erosion of overburden to the streams; | |
| d. | Water quality need to be checked regularly by the concerned authority; | |
| 5. | The State Govt. shall ensure that the temple in the area proposed for diversion shall be kept untouched as the temple area is not included in the mining plan; | The User Agency shall abide the condition.<br><br>An undertaking in this respect is annexed as **Annexure-1** |
| 6. | As reported by the State Govt 6.884 ha forest area within the mining lease was broken up without prior approval of the Central Government under FCA, 1980. Also, the DFO has reported that an area 0.05 ha of PRF land was also broken up for which an offence case was booked. Therefore, for utilization of forest land (i.e. 6.884 ha) for which NPV was paid without prior approval under FCA, 1980 will be treated as a case of violation and shall be dealt as per para 1.21(ii)a of the Handbook of guidelines for the payment of due penal NPV. Further, for the additional area broken up by the UA for mining activities as reported by the State Govt. the NPV and penal NPV shall be charged accordingly; | As per the demand raised by the DFO, Bonai vide letter no.579 /6F-(Mg) dated 16.1.2025, the User Agency has deposited an amount of Rs.5,03,07,442/- towards cost of Penal NPV through e-portal of MoEF & CC (http://parivesh.nic.in) vide UTR No. ICICR52025012100453426 on dated 21.1.2025 **(Annexure-9).** |
| 7. | The CA area has been provided over 67.052 ha NFL; therefore, the State Govt. shall ensure that the equivalent non-forest | The Govt. Non- Forest land for Compensatory afforestation has been identified in village San Rengalbeda (68.0352 ha.) under Lahunipara Tahasil of |

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| | land to the extent of the forest land being diverted will be provided; | Rourkela Forest Division of Sundergarh district. |
| 8. | Compensatory levies to be realized from the User Agency under the project shall be transferred/ deposited, through e-challan, in to the account of CAMPA pertaining to the State concerned through e-portal (https://parivesh.nic.in/); | We had deposited Rs. 4,94,32,680/- on 25.06.2010 through Demand Draft towards NPV over 67.716 ha. forest area @ % 7.30 Lakh per ha.,<br><br>Further, we have deposited Rs.4,73,29,918/- towards differential NPV over 67.352 ha. of entire forest land @ Rs.14,36,670/- per ha. through e-portal of MoEF & CC (http://parivesh.nic.in) on 12.03.2024 vide UTR No. INDBR32024031200116369.<br><br>Besides, we have deposited an amount of Rs.6,17,24,200/- towards cost of **Compensatory Afforestation** through RTGS (UTR No- INDBR32024071500224550) dated 15.07.2024 in State CAMPA fund.<br><br>Furthermore, we have deposited an amount of Rs.5,98,19,560/- towards cost of Site-Specific Wildlife Conservation Plan through RTGS UTR No. INDBR32024042500312283 dated 25.04.2024 in State CAMPA fund.<br><br>We have deposited an amount of Rs.5,03,07,442/- towards cost of Penal NPV through RTGS UTR No. ICICR52025012100453426 on dated 21.1.2025. |
| 9. | The KML files of diverted area, the CA areas, the proposed SMC treatment area and the WLMP area shall be uploaded on the e- green watch portal along with GPS Ids and all other requisite details prior to Stage II approval; | The KML files of the area to be diverted, the CA areas, the proposed SMC treatment area and the WLMP area has been uploaded on the e-Green watch portal with all requisite details by Forest Department. |
| 10. | Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the | |

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| | supervision of the State Forest Department. Approved scheme/plan shall be submitted to the Ministry along with compliance of Stage-I approval: | |
| a. | Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department; | A scheme containing appropriate mitigative measures to minimize soil erosion and choking of streams has been technically approved by the RCCF, Rourkela with financial outlay of Rs.73,74,900/-. The scheme will be implemented by the User Agency at the project cost within a period of 03 years. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Copy of the approved scheme is enclosed as **Annexure-10.** |
| b. | Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme; | A scheme, regarding planting drought hardy plant species and sowing of seeds in the appropriate area within the mining lease has been technically approved by the RCCF, Rourkela with financial outlay of Rs.23,38,200/-. The scheme will be implemented by the User Agency at the project cost in phased manner. An undertaking to this effect is enclosed as **Annexure-1.** Copy of the approved scheme is enclosed as **Annexure-11.** |
| c. | Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme; | A scheme for Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour has been technically approved by the RCCF, Rourkela with no budgetary provision as it remains included in the schemes prepared in compliance with condition No-10 (a) above. The scheme will be implemented by the User Agency at the project cost in a phased manner. An undertaking to this effect is enclosed as **Annexure-1.** |

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| | | Copy of the approved scheme is enclosed as **Annexure-12.** |
| d. | Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28°; | A scheme to Stabilize the overburden dumps by appropriate grading/benching so as to ensure that the angles of repose at any given place is less than 28° has been technically approved by the RCCF, Rourkela with no budgetary provision as it remains included in the schemes prepared in compliance with condition No-10 (a) above. The scheme will be implemented by the User Agency at the project cost in a phased manner. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Copy of the approved scheme is enclosed as **Annexure-13.** |
| 11. | **Safety Zone Management:**<br><br>Following activities, at project cost, shall be undertaken by the user agency for the management of safety zone as per relevant guidelines issued by the Ministry's guidelines: | |
| a. | User agency shall ensure demarcation of safety zone (7.5-meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers under the supervision of the. State Forest Department; | We have demarcated the safety zone (7.5-meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers has been included in the Safety Zone Scheme. The said scheme will be implement by the User Agency.<br><br>An undertaking to this effect is enclosed as **Annexure-1.** |

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| b. | Boundary of the safety zone of the mining lease, adjacent to habitation/roads, should be properly fenced by the user agency; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| c. | Safety zone shall be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area by the user agency at project cost under the supervision of the State Forest Department; | A scheme for fencing, protection and regeneration of safety zone over 2.836 ha. has been technically approved by RCCF, Rourkela with financial outlay of Rs.1,32,54,300/-. The scheme will be implemented by the user Agency at the project cost in a phased manner. An undertaking to this effect is enclosed as **Annexure-1** Copy of the approved scheme is enclosed as **Annexure-14.** |
| d. | The State Government and the user agency shall ensure that safety zone is maintained as per the prescribed norms; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 12. | No damage shall be caused to the top-soil and the user agency will follow the top soil management plan; | A scheme for top soil management has been technically approved by the RCCF, Rourkela with financial outlay of Rs.45,11,900/-. The scheme will be implemented by the User Agency at the project cost in a phased manner. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Copy of the approved scheme is enclosed as **Annexure-15.** |
| 13. | The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake de-silting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for de-silting of identified ponds and water bodies to be prepared in consultation with forest | A scheme for de-silting of village tanks & other water bodies located within 5km from the mine lease boundary so as to mitigate the impact of siltation of such tanks/water bodies, whenever required has been prepared by DFO, Bonai and technically approved by the RCCF, Rourkela with financial outlay of Rs.1,49,35,600/-.<br><br>The scheme will be implemented by the user Agency at the project cost in a |

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| | department and shall be submitted to MoEF & CC before Stage-II approval; | phased manner. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Copy of the approved scheme is enclosed as **Annexure-16.** |
| 14.<br><br>. | The cost of felling of trees shall be deposited by the User Agency with the State Forest Department; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 15. | Trees should be felled in phased manner as per the requirement in the approved Mining Plan with prior permission of concerned DFO; | Trees shall be felled in phased manner as per the requirement in the approved Mining Plan with prior permission of concerned DFO.<br><br>An undertaking to this effect is enclosed as **Annexure-1.** |
| 16. | The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department. | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 17. | A site-specific Wildlife Management Plan shall be prepared by the State Government in consultation with the PCCF (Wildlife) for the protection and conservation of wildlife of the area. A copy of approved Plan shall be submitted to the Ministry along with the compliance of Stage-I approval. Entire cost of implementation of the provisions of the Wildlife Management Plan shall be deposited into the account of CAMPA of the State; | The Site-Specific Wildlife Conservation Plan for Raikela, Bahamba & Tensa Iron & Manganese Ore Mining has been approved by the P.C.C.F (Wildlife) and Chief Wildlife Warden, Odisha vide letter No: 4152 dated 6.4.2024 with financial outlay of Rs. 598.1956 lakhs (Rs.530.6200 Lakh for Bonai Division & Rs. 67.5756 Lakh for Keonjhar Division) for implementation of activities in the ZOI (Buffer zone).<br><br>Further, we have deposited ₹5,98,19,560/- towards cost of Site Specific Wildlife Conservation Plan through e-portal of MoEF & CC (http://parivesh.nic.in) on 25.4.2024 as per Challan dated 24.04.2024 vide UTR No. INDBR32024042500312283 **Annexure-17.** |

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| . | | Further, regarding implementation of activities in the core zone, the User agency will implement the same in a phase wise manner under the guidance of the DFO Bonai division. An undertaking to this effect is enclosed as **Annexure-1.**<br><br>Copy of the approved plan is enclosed as **Annexure-18.** |
| 18. | State Government shall complete settlement of rights, in term of the Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, if any, on the forest land to be diverted and submit the documentary evidence, along with compliance of Stage-I approval, as prescribed by this Ministry's letter No. 11-9/1998-FC (Pt.) dated 03.08.2009 read with 05.07.2013, in support thereof; | The Collector, Sundargarh has issued certificate under Forest Right Act,2006 in the entire forest land over 67.352 ha. of forest land vide his Letter No.2059 dt.25.6.2010 over 50.372 ha. **(Annexure-19)** and Letter No.1216 dt.25.4.2023 over 16.98 ha. **(Annexure-20).** |
| 19. | The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act, 1980, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concern Addl. Principle Chief Conservator of Forests (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed; | The user agency will abide by the condition and take due care for reclamation of the mined out area in a phased manner as per the approved mining plan. Further, the User Agency will submit an annual report on status of reclamation to the concerned Dept. An undertaking to this effect is enclosed as **Annexure-1.** |

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| 20. | The User Agency shall comply with the Hon'ble Supreme Court order on regrassing, and re-grass the mining area and any other areas which may have been disturbed due to mining to restore them to a condition which is fit for growth of fodder, flora, fauna, etc. in a timely manner; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 21. | Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended time to time and the Rules framed there-under; | The period of diversion of forest land under this proposal will be co- terminus with the period of the mining lease as amended vide the Mines & Minerals (Development & Regulation) Amendment Act, 2015 and the Rules framed thereunder i.e 50 years from the date of execution of mining lease. |
| 22. | The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required; | The Environmental clearance has been granted by the MoEF, Govt. of India vide Letter No.J-11015/481/2007-IA.II (M) dt.16.6.2008 Copy enclosed as **Annexure-21.** |
| 23. | No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 24. | The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates; | The boundary of the diverted forest land, mining lease and safety zone has already been demarcated on the ground at the project cost by erecting 4 feet high RCC pillars. Each pillar is inscribed with serial number, DGPS co-ordinates, and distance from pillar to pillar. |
| 25. | The layout plan of the mining plan/ proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |

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| 26. | The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department, or person without prior approval of the Central Government; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 27. | No damage to the flora and fauna of the adjoining area shall be caused; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 28. | The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly; | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 29. | Any other condition that the concerned Regional Office of this Ministry may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife; and | The user agency will abide by the condition that the Regional office of the Ministry may stipulate in the interest of conservation, protection and development of forest & wild life. An undertaking to this effect is enclosed as **Annexure-1.** |
| 30. | The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project. | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure-1.** |
| 31. | Violation of any of these conditions will amount to violation of Forest (Conservation) Act, 1980 and action would be taken as prescribed in para 1.21 of Chapter 1 of the Handbook of comprehensive guidelines of Forest (Conservation) Act, 1980 as issued by this Ministry's letter No. 5-2/2017-FC dated 28.03.2019. | Agreed. An undertaking to this effect is enclosed as **Annexure-1.** |
| 32. | The compliance report shall be uploaded on e-portal (https://parivesh.nic.in/). After receipt of compliance report on fulfilment of the conditions mentioned above, the proposal shall be considered for final | The user agency will abide by the condition. An undertaking to this effect is enclosed as **Annexure**-1. |

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P.A. Holder

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| | approval under Section-2 of the Forest (Conservation) Act, 1980. Transfer of forest land shall not be affected till final approval is granted by the Central Government in this regard. | |

The statement of funds deposited by the User Agency in CAMPA Account pertaining to the above proposal is **enclosed as (Annexure-22).**

**For C.P. Sharma**

**Power of Attorney Holder**

M/s. Chandi Prasad Sharma

P A. Holder

# Chandi Prasad Sharma

MINES OWNER

Head Office :
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DIST. KEONJHAR (ODISHA)
Mob. 9937098707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob. [illegible]


ANNEXURE-1

Ref. No. .....

Date 24.01.2025

**ANNEXURE-1**

## UNDERTAKING

**Condition No.1**

We do hereby undertake that the legal status of the diverted forest land shall remain unchanged.

**Condition No.2.(e):**

We do hereby undertake to take up gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease, as per the approved scheme, in a phased manner at the project cost.

**Condition No. 3.(b):**

We do hereby undertake to pay the additional amount of the NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India.

**Condition No.4**

We do hereby undertake to implement the activities to protect the adjoining Nala in the ML area as per the approved Scheme.

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
[illegible] DIVISION

For C.P.Sharma
Power of Attorney Holder

# Chandi Prasad Sharma

MINES OWNER

Head Office :
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 256540

Sarbil Office :
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937098707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob.. [redacted]


Ref. No. .....

Date .....

**ANNEXURE-1**

## UNDERTAKING

**Condition No.11(c):**

We do hereby undertake that safety zone shall be maintained as green belt to ensure dense canopy cover in the area and regeneration shall be taken in this area as per the approved scheme, in a phased manner at the project cost.

**Condition No.11(d):**

We do hereby undertake to maintain the safety zone as per the prescribed Norm, under the supervision of State Forest Department.

**Condition No.12:**

We do hereby undertake to implement the Scheme for Top soil management as per the approved scheme in a phased manner at the project cost.

**Condition No.13:**

We do hereby undertake to implement the scheme for de-silting of the village tanks and other water bodies located within five km from the mining lease boundary so as to mitigate the impact of siltation of such tanks/water as per the approved scheme, in a phased manner at the project cost.

**Condition No.14:**

We do hereby undertake to deposit the cost of felling of trees to the forest department before felling.

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
(S) RONAL DIVISION

For C.P.Sharma
Power of Attorney Holder

# Chandi Prasad Sharma

MINES OWNER

Head Office :
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 256540

Barbil Office :
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937098707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob.. [redacted]


Ref. No. .....  Date .....

**ANNEXURE-1**

## UNDERTAKING

**Condition No.5**

We do hereby undertake that the temple in the area proposed for diversion shall be kept untouched as the temple area is not included in the mining plan.

**Condition No.8**

We do hereby undertake to deposit all the compensatory levies as per the demand raised by DFO, Bonai Division in State CAMPA Fund only through e-portal, if required in future.

**Condition No.10(a):**

We do hereby undertake to implement mitigative measures to minimize soil erosion and choking of stream within a period of three years with effect from the date of grant of Stage-II forest clearance as per the approved plan/scheme in consultation with the State Forest Department, in a phased manner, at the project cost.

**Condition No.10(b):**

We do hereby undertake to implement the scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate areas within the mining lease as per the approved scheme, in a phased manner at the project cost.

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
BONAI DIVISION

For C.P.Sharma
Power of Attorney Holder

# Chandi Prasad Sharma

MINES OWNER

Head Office :
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 256540

Barbil Office :
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937098707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob.. [redacted]


Ref. No. .....

Date .....

**ANNEXURE-1**

## UNDERTAKING

**Condition No.10(c ):**

We do hereby undertake to construct check dams, retention/toe walls to arrest sliding down of the excavated materials along the contour as per the approved scheme, in a phased manner at the project cost.

**Condition No.10(d):**

We do hereby undertake to stabilize the overburden dumps in a phased manner at the project cost by appropriate grading/benching to ensure that the angles of repose at any given place is less than 28 degree and will be as per the approved scheme.

**Condition No.11(a):**

We do hereby undertake to demarcate boundary of safety zone (7.5 meter strip all along inner boundary of the mining lease) and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed fencing and deploying adequate number of watchers under the supervision of State Forest Department as per approved scheme.

**Condition No.11(b):**

We do hereby undertake that the boundary of the safety zone of the lease adjacent to the habitation/road will be properly fenced at the project cost to protect the vegetation/regeneration activities in the safety zone.

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
BONAI DIVISION

For C.P.Sharma
Power of Attorney Holder

# Chandi Prasad Sharma

MINES OWNER

*Head Office :*
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 258540

*Barbil Office :*
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937086707 & 9471579161

*Branch Office :*
BARAJAMDA
DIST. SINGHBHUM WEST
Mob. [redacted]


*Ref. No.* .....  *Date* .....

**ANNEXURE-I**

## UNDERTAKING

**Condition No. 15:**

We do hereby undertake to fell minimum no. of trees in phased manner as per the requirement in the approved Mining Plan with prior permission of concerned DFO.

**Condition No.16:**

We do hereby undertake to explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department.

**Condition No.17:**

We do hereby undertake to implement the interventions as mentioned in the approved Site Specific wildlife Conservation plan for the core zone under the guidance of DFO, Bonai Division.

**Condition No. 19:**

We do hereby undertake to carry out mining in a phased manner, and will take due care for reclamation of the mined-out area as per the approved Mining Plan.

We also undertake to submit an annual report on reclamation status of the mine to the concerned Govt. Departments/Authorities.

**Condition No. 20:**

We do hereby undertake to comply with the Hon'ble Supreme Court order on re-grassing, and re-grass the mining area and any other area which may have been disturbed due to mining to restore them to a condition which is fit for growth of fodder, flora, fauna, etc. in a timely manner.

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
BONAI DIVISION

For C.P.Sharma
Power of Attorney Holder

# Chandi Prasad Sharma

MINES OWNER

Head Office :
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 256540

Barbil Office :
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937098707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob.. 8271038503


Ref. No. .....  Date .....

**ANNEXURE-1**

## UNDERTAKING

**Condition No. 23:**

We do hereby undertake that, no labour camp will be established in the forest area and we will provide alternate fuels to the labourers and the staff working at the site to avoid any damage and pressure on the nearby forest areas.

**Condition No. 25:**

We do hereby undertake that, the layout plan of the mining plan/proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal.

**Condition No. 26:**

We do hereby undertake that, the forest land will not be transferred to any other agency, department or person without prior approval of the Central Government.

**Condition No. 27:**

We do hereby undertake that, no damage to the flora and fauna of the adjoining area shall be caused by us and that we will take all protective measures as would be required in consultation with the concerned Divisional Forest office.

For C.P.Sharma
Power of Attorney Holder

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
BONAI DIVISION

# Chandi Prasad Sharma

MINES OWNER

Head Office :
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 256540

Barbil Office :
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937096707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob.. [redacted]


Ref. No. .....

Date .....

**ANNEXURE-1**

## UNDERTAKING

**Condition No. 28:**

We do hereby undertake to submit annual self-monitoring report on compliance of stipulated conditions to the State Government ,concerned Regional Office and to the Ministry by the end of March every year.

**Condition No. 29:**

We do hereby undertake that any other conditions that the concerned Regional Office of this Ministry may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife; shall be complied by the User Agency.

**Condition No. 30:**

We do hereby undertake to comply all the provisions of all the Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT order (s) pertaining to this Project, if any, for the time being in force, as would be applicable to the project.

For C.P.Sharma
Power of Attorney Holder

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
RONAI DIVISION

# Chandi Prasad Sharma

MINES OWNER

Head Office :
At - AMLATOLA
CHAIBASA - 833 201
DIST. SINGHBHUM WEST
STD. - 06582 PHONE - 256540

Barbil Office :
Near Indane Gas Agency
Daily Market
P.O. - BARBIL - 758 035
DIST. KEONJHAR (ODISHA)
Mob.. 9937098707 & 9471579161

Branch Office :
BARAJAMDA
DIST. SINGHBHUM WEST
Mob.. 8271983563


Ref. No. .....  Date .....

**ANNEXURE-1**

## UNDERTAKING

**Condition No. 31:**

We do hereby undertake that, we shall ensure compliance to provisions of all Acts, Rules and Regulations as prescribed in Para 1.21 of Chapter-1 of the Handbook of comprehensive guidelines of Forest (Conservation) Act, 1980 as issued by the Ministry's letter No. 5-2/2017-FC dated 28.03.2019.

**Condition No.32:**

We do hereby undertake that the stage-I compliance report will be uploaded on e-portal (https://parivesh.nic.in) of MoEF & CC, Govt. of India.

COUNTERSIGNED

DIVISIONAL FOREST OFFICER
BONAI DIVISION

For C.P.Sharma
Power of Attorney Holder

ANNEXURE – 2

# ବନଖଣ୍ଡ ଅଧିକାରୀଙ୍କ କାର୍ଯ୍ୟାଳୟ : ବଣାଇ ବନଖଣ୍ଡ

**OFFICE OF THE DIVISIONAL FOREST OFFICER : BONAI FOREST DIVISION**

At/PO-Bonaigarh, Dist. Sundargarh- 770038
Email- dfo.bonai@odisha.gov.in

Memo No. 965 /BF(Mg.) Dated:- 28.1.2025

To

The Addl. Principal Chief Conservator of Forests,
Forest Diversion & Nodal Officer, F.C. Act
O/O the P.C.C.F., Odisha, Bhubaneswar.

Sub:- Regarding deposit of ₹ 11,20,31,642/- into "ORRISA CAMPA in favour of UBIN0996335, Union Bank of India towards cost of Compensatory Afforestation and Penal NPV by Sri Anil Kumar Sharma, PoA C.P. Sharma (Raikela, Bahramba and Tensa Iron & Mn. Mines)

Ref:- Letter dated 24.1.2025 of Anil Kumar Sharma, PoA C.P. Sharma.

With reference to above, the User Agency has intimated this office vide Letters under reference that they have deposited ₹11,20,31,642/- (Rupees Eleven Crore Twenty Lakhs Thirty One Thousand Six Hundred Forty Two) only to favour of the ORRISA CAMPA Account, Union Bank of India through e-portal of MoEF & CC (http://parivesh.nic.in) towards cost of Comp. Affn. and Penal NPV and submitted payment details to this office, which are sent herewith for favour of your kind information and necessary action. The detailed statement in the prescribed proforma is enclosed herewith.

Encl :- As above

Divisional Forest Officer,
Bonai Division.

Memo No. 966 /BF-Dt: 28.1.2025

Copy along with Xerox copy of the enclosures forwarded to the Regional Chief Conservator of Forests, Rourkela Circle, Rourkela for favour of kind information and necessary action.

Divisional Forest Officer,
Bonai Division.

Copy to " CAMPA " file

**DETAILS OF FUNDS RECEIVED FROM USER AGENCIES UNDER FOREST (CONSERVATION) ACT TRANSFERRED TO CAMPA FUND THROUGH RTGS / ONLINE**

| Sl. No | Name of the Project with GOI approval order No. & date | Bank Draft No. & date (Photo copy of Bank Draft also to be attached)/ Payment made through RTGS by the User Agency | Compensatory Afforestation | Penal NPV | Site Specific Wl. Conservation Plan | Comp. Affn. | Total | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Proposal for seeking prior approval of Central Government under Section-2 (ii) of the Forest (Conservation) Act,1980 in favour of Anil Kumar Sharma Power of Attorney of Late Chandi Prasad Sharma for non-forestry use of 67.352 ha. forest land for Iron & Manganese Ore Mining in village Raikela, Bahamba and Tensa under Bonai Sub-Division in Sundargarh District of Odisha.<br><br>**(Stage-I approval granted Letter No.8-26/2022-FC dt.4.12.2023 of the MoEF & CC, GoI).** | Through e-portal in A/c No.150825839199260 on challan dated 11.7.2024 & payment dated 15.07.2024 in favour of UBIN0996335, Union Bank of India from UTR No.INDBR32024071500224550 | 6,17,24,200/- | - | - | - | 6,17,24,200/- | - |
| | | Through e-portal in A/c No.150825839199441 on Challan dated 18.1.2025 and payment dated 21.1.2025 in favour of UBIN0996335, Union Bank of India from UTR No. ICICR52025012100463426 | - | 5,03,07,442/- | - | - | 5,03,07,442/- | - |
| | | **Total :-** | **6,17,24,200/-** | **5,03,07,442/-** | - | | **11,20,31,642/-** | |

Divisional Forest Officer,
Bonai Division.

ANNEXURE – 2

AGENCY COPY

यूनियन बैंक Union Bank

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 11-07-2024

| | |
|---|---|
| Agency Name. | ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CP SHARMA |
| Application No. | 5839199260 |
| MoEF/SG File No. | 8-26/2022-FC |
| Location. | ORRISA |
| Address. | At Amlatola PO Chaibasa Dist West SinghbhumWest Singhbhum |
| Amount(in Rs) | 61724200/- |

Amount in Words :Six Crore Seventeen Lakh Twenty Four Thousand Two Hundred Rupees Only

**NEFT/RTGS to be made as per following details;**

| | |
|---|---|
| Beneficiary Name: | ORRISA CAMPA |
| IFSC Code: | UBIN0996335 |
| Pay to Account No. | 150825839199260 Valid only for this challan amount. |
| Bank Name & Address. | Union Bank Of India FCS Centre,21r1, III Floor, Jeljlife Towers, Mission Road, Bengaluru-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

BANK COPY

यूनियन बैंक Union Bank

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 11-07-2024

| | |
|---|---|
| Agency Name. | ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CP SHARMA |
| Application No. | 5839199260 |
| MoEF/SG File No. | 8-26/2022-FC |
| Location. | ORRISA |
| Address. | At Amlatola PO Chaibasa Dist West Singhbhum West Singhbhum |
| Amount(in Rs) | 61724200/- |

Amount in Words :Six Crore Seventeen Lakh Twenty-Four Thousand Two Hundred Rupees Only

**NEFT/RTGS to be made as per following details;**

| | |
|---|---|
| Beneficiary Name: | ORRISA CAMPA |
| IFSC Code: | UBIN0996335 |
| Pay to Account No. | 150825839199260 Valid only for this challan amount. |
| Bank Name & Address. | Union Bank Of India FCS Centre, 21r1, III Floor, Jeljlife Towers, Mission Road, Bengaluru-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Note: **After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: fcsbln@unionbankofindia.bank , epurse@unionbankofindia.bank, ubin0993710@unionbankofindia.bank**

Customer Acknowledgement Form

Payment Type (Please tick appropriate type): ☑ RTGS ☐ NEFT ☐ DD ☐ UPI ☐ Indo Nepal Remittance

☐ Cash ☑ Cheque No: 034542 Date: 15/07/2024 Time:

Amount(in words): 6,17,24,200/-

Commission for cash/DD (in figures):

Total Amount(in figures): 6,17,24,200/-

UTR No: INB80384024091500384525 0.

SCN No. Signature & Bran...

INDUSIND BANK LIMITED BARBIL BRANCH

AGENCY COPY

यूनियन बैंक Union Bank

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 19-01-2023

| | |
|---|---|
| Agency Name | ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CP SHARMA |
| Application No. | 5839199441 |
| MoEF&CC File No | 8-24/2022 FC |
| Location | ORISSA |
| Address | At Amlabira PO Chelsea Dist West Singhbhum West Singhbhum |
| Amount(In Rs) | 80397442/- |

Amount in Words : Five Crore Three Lakh Seven Thousand Four Hundred and Forty Two Rupees Only

NEFT/RTGS to be made as per following details:

| | |
|---|---|
| Beneficiary Name: | ORISSA CAMPA |
| IFSC Code: | UBIN0903710 |
| Pay to Account No | 150903010199441 Valid only for this challan amount |
| Bank Name & Address: | Union Bank Of India FCS Centre,2nd, II Floor, Jeeva Towers, Mission Road, Bangalore-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

BANK COPY

यूनियन बैंक Union Bank

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 19-01-2023

| | |
|---|---|
| Agency Name | ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CP SHARMA |
| Application No. | 5839199441 |
| MoEF&CC File No. | 8-24/2022 FC |
| Location | ORISSA |
| Address | At Amlabira PO Chelsea Dist West Singhbhum West Singhbhum |
| Amount(In Rs) | 80397442/- |

Amount in Words : Five Crore Three Lakh Seven Thousand Four Hundred and Forty Two Rupees Only

NEFT/RTGS to be made as per following details:

| | |
|---|---|
| Beneficiary Name: | ORISSA CAMPA |
| IFSC Code: | UBIN0903710 |
| Pay to Account No | 150903010199441 Valid only for this challan amount |
| Bank Name & Address: | Union Bank Of India FCS Centre, 2nd, II Floor, Jeeva Towers, Mission Road, Bangalore-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Note:-After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: fcsbl@unionbankofindia.bank , cpmso@unionbankofindia.bank, ubin0903710@unionbankofindia.bank

# ICICI Bank Advice Receipt
## 1/21/25 4:44 PM

**Transaction Details**

| | |
|---|---|
| Account Number: | **788005000403** |
| Transaction Date: | **21-01-2025 00:00:00** |
| Transaction Amount: | **INR 5,03,07,442.00** |
| Debit/Credit: | **Debit** |
| Cheque Number : | **34** |
| Transaction Description : | **RTGS:ICICR52025012100 453426/UNION BANK OF I/ORISSA CAMPA** |
| Transaction ID: | **993538517** |
| Transaction Remarks : | **-** |
| Transaction Balance : | **INR[illegible]** |

**Note: This is an electronically generated receipt and does not need any signature.**

Customer name / ग्राहक का नाम /ગ્રાહક નામ: CHANDI PRASAD SHARMA

Beneficiary name / लाभार्थी का नाम /
ફાયદાકારક નામ: ORRISA CHAPA

Beneficiary bank name / लाभार्थी का बैंक का नाम /
ફાયદાકારક બેંક નામ: UNION BAK

Transaction reference number / लेनदेन संदर्भ /
ટ્રાન્ઝેક્શન સંદર્ભ નંબર :

Name and signature of Bank official / बैंक अधिकारी का नाम और हस्ताक्षर /
બેંક અધિકારીનું નામ અને સહી: _____

Date/तारीख/તારીખ: 21 01 2015

Mode of payment / भुगतान का प्रकार /
ચુકવણી પ્રકાર : RTGS

Beneficiary account number/लाभार्थी का खाता नंबर /
ફાયદાકારક ખાતા નંબર : 15682583919941

Amount/रकम/જથ્થો: 50 28 745 /-

Bank Seal
बैंक की मुहर
બેંક સીલ

000 156293127

Printed on certified recycled paper for a sustainable future

ANNEXURE – 3

Schedule I Form No.39-A

# ଖତିୟାନ

ମୌଜା : ଛତ୍ର ଗୋପାଳବେଡ଼ା | ତହସିଲ : ଲକ୍ଷ୍ମୀପଡ଼ା

ଥାନା : ଲକ୍ଷ୍ମୀପଡ଼ା | ତହସିଲ ନମ୍ବର : 472

ଥାନା ନମ୍ବର : 65 | ଜିଲ୍ଲା : ଯାଜପୁର

| | |
|---|---|
| ଜମିଦାରଙ୍କ ନାମ ଓ ଠିକଣା ବା ଖତିୟାନର ଚୁମ୍ବକ ନମ୍ବର | ଓଡିଶା ସରକାର ଖୋଲିତ ଜମ୍ମର । |
| ୨ ) ଖତିୟାନର ଚୁମ୍ବକ ନଂ | 171 |
| ୩ ) ପ୍ରଜାଙ୍କ ନାମ, ପିତାଙ୍କ ନାମ , ଜାତି ଓ ବାସସ୍ଥାନ | ଜଙ୍ଗଲ, ପରିବେଶ ଓ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ ବିଭାଗ, ଓଡିଶା ସରକାର |

୪ ) ଜମି

ମାଗଣା

ବିକ୍ରୟୀୟ

| ଜମିକର | ଖଜଣା | ସେସ | ଜିଲ୍ଲାର ସେସ ଓ ଅନ୍ୟାନ୍ୟ ସେସ୍ ଯଦି ଥିଲେ ଥାଏ | ମୋଟ | ୫ ) କୁମାବର୍ତ୍ତନକାଳ ଖଜଣାର ବିବରଣୀ |
|---|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 0.00 | |

୬ ) ବିଶେଷ ଅନୁସନ୍ଧାନ ଯଦି କିଛି ଥାଏ

ଏନ୍ଦାରଟେଡ୍ଡା ରେଜ ନଂ 36/2024 ଦ୍ୱାରା ମୂଲ୍ୟାଙ୍କନ ରହିଛି ଏ 168.1600 ଡି ଖାତା ନଂ 1 ରୁ ଥାପିଲା ।

Addl Tahasildar
Lahunipara

OFFICE OF THE TAHASILDAR * LAHUNIPARA

BLANK SPACE FOR STAMPING

ଅନ୍ତିମ ପ୍ରକାଶନ ତାରିଖ :

ଖଜଣା ଆଦାୟ ତାରିଖ :

ଖତୁାର ସ୍ୱାକ୍ଷର ଓ ସିଲ୍ ମୋହର ,ଥାନା

27/10/2024

| ଅତିରିକ୍ତ ତହସିଲ: ପି - 1/1 | ଥାନା: ସାଲ ବାହାଘରପଡ଼ା | | | ଜିଲ୍ଲା : ମୟୂରଭଞ୍ଜ |
|---|---|---|---|---|
| ପ୍ରାପ୍ତ ନମ୍ବର ଓ ପ୍ରାପ୍ତର ତାରିଖ | ଜିମ୍ମା ଓ ମୂଲ୍ୟର ବିବରଣୀ | ଜିମ୍ମାରେ ବିକ୍ରିତ ଜିନିଷର ପରିମାଣ ଓ ପରିମାଣ | ଜମାକର | ମନ୍ତବ୍ୟ |
| | | | ଟଙ୍କା : ପି | ଟଙ୍କାରେ |
| ଚ | ଛ | ଜ | ଝ ଞ | ଟ ଠ |
| 1/8 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 2471 | 1.0000 |
| 1/9 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 5045 | 2.0416 |
| 1/10 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 4867 | 1.9696 |
| 2/11 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 30709 | 12.4275 |
| 3/12 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 10810 | 4.3747 |
| 3/13 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 13148 | 5.3206 |
| 4/14 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 14534 | 5.8817 |
| 4/15 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 9409 | 3.8077 |
| 4/16 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 0010 | 0.0040 |
| 5/17 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 23324 | 9.4389 |
| 5/18 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 5158 | 2.0874 |
| 6/19 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 20687 | 8.3717 |
| 7/20 | ସାଲାଡ | ସାଲୁଡି ମୁଡି | 27988 | 11.3264 |
| ମୋଟ | | | 168460 | 68.0529 |

Court Amin
Lahunipara

Record Keeper
Lahunipara Tehsil

Addl. Tehsildar
Lahunipara

ଉତ୍ପନ୍ନ କରାଯାଇଛି: ତହସିଲ ଦପ୍ତର, ଓଡିଶା

17/10/2024

ANNEXURE-4

GOVERNMENT OF ODISHA
FOREST, ENVIRONMENT AND CLIMATE CHANGE DEPARTMENT

**NOTIFICATION**

Bhubaneswar, Dated the 01.01.25

No.FE-DIV-FLD-0068-2022 (10F-(Cons)-34/2022)- 114 /FE&CC, In exercise of the powers conferred under Section-33 of the Odisha Forest Act, 1972 (Odisha Act 14 of 1972), the State Government do hereby declare that the following land situated in Village- San Rengalbeda under Lahunipara Tahasil of Sundargarh District mutated and transferred in favour of Forest, Environment & Climate Change Department for raising Compensatory Afforestation thereon against the proposed diversion of 67.352 ha of forest land for Iron & Manganese Ore Mining in village Raikela, Bahamba & Tensa under Bonai Sub-Division in Sundargarh District, Odisha in favour of Anil Kumar Sharma Power of Attorney of Late Chandi Prasad Sharma vide in-principle approval of Government of India, MoEF&CC, FC Division, New Delhi communicated in letter No. F No.8-25/2022-FC dated 04.12.2023 under Section-2 (ii) of the Forest (Conservation) Act, 1980, the limits of which are specified below and the area of which is 68.052 ha (168.160 Ac) shall be a Protected Forest with effect from the date of issue of the Notification and shall be known as "**San Rengalbeda Protected Forest**".

**Forest Block:**

| | | |
|---|---|---|
| Name of the Protected Forest | : | **San Rengalbeda** |
| Area of Protected Forest in Ha | : | 68.052 |
| Area in Acres | : | 168.160 |
| Name of the Village | : | San-Rengalbeda |
| Name of the Police Station | : | Lahunipara |
| Name of the Tahasil | : | Lahunipara |
| Name of the Sub-Division | : | Bonai |
| Name of the District | : | Sundargarh |

**Land Schedule:**

| Village | Khata No. | Plot No. | Kissam | Area in Ac. | Boundary description | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | North | South | East | West |
| San-Rengalbeda | 1/1 | 1/8 | Pahada | 2.473 | Rengalbeda Plot No. 624 | Plot No. 1/9 | Plot No. 2(P) | Plot No. 1 |
| | | 1/9 | | 6.045 | Plot No. 1/8 | Plot No. 1 | Plot No. 2/11 | Plot No. 1 |
| | | 1/10 | | 4.867 | Plot No. 1 | Plot No. 3/13 | Plot No. 1 | Rengalbeda Plot No. 573 |
| | | 2/11 | | 30.709 | Plot No. 2(P) & Arjunchuan Plot No. 888 | Plot No. 3/12 | Arjunchuan Plot No. 819 | Plot No. 1/9 |
| | | 3/12 | | 10.810 | Plot No. 2/11 | Plot No. 4/15 | Arjunchuan Plot No. 577 | Plot No. 3 |
| | | 3/13 | | 13.148 | Plot No. 1/10 | Plot No. 4/14 | Plot No. 3 | Rengalbeda Plot No. 573 |
| | | 4/14 | | 14.534 | Plot No. 3/13 | Plot No. 5/17 | Plot No. 4 | Rengalbeda Plot No. 576 |
| | | 4/15 | | 9.109 | Plot No. 3 | Plot No. 6/19 | Arjunchuan Plot No. 570 | Plot No. 4 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 4/18 | | 0.010 | Plot No. 4 | Plot No. 6/19 | Plot No. 4 | Plot No. 4 |
| | | 5/17 | | 23.324 | Plot No. 4/14 | Dhamanadar Plot No. 391 | Plot No. 6, 6/18 & 7/20 | San-Kenduditi Plot No. 1 |
| | | 6/18 | | 5.158 | Plot No. 6 | Plot No. 7/20 | Plot No. 6 | Plot No. 5/1 |
| | | 6/19 | | 20.687 | Plot No. 4/15 | Plot No. 7/20 | Arjunchuan Plot No. 560 | Plot No. 6 |
| | | 7/20 | | 27.988 | Plot No. 7, 6/18 & 6/19 | Dhamanadar Plot No. 407 | San-basubahal Plot No. 2 | Plot No. 5/1 |
| Total 13 plots in One Patch 168.160 Ac or 68.052 Ha. | | | | | | | | |

By order of the Governor

1/1/25

(Satyabrata Sahu)
Additional Chief Secretary to Government

By e-Mail: deputydirectorpp@rediffmail.com

Memo No. 115 /FE&CC, Date 01.01.25

Copy with soft copy forwarded to the Director of Printing, Stationery and Publication, Odisha Cuttack for publication in an extra-ordinary issue of the Odisha Gazette and supply 10 copies of printed notification each to Forest, Environment & Climate Change Department/ Director of Land Records and Surveys, Odisha, Cuttack/ Collector, Sundargarh/ Divisional Forest Officer, Rourkela Forest Division/ Tahasildar, Lahunipara Tahasil, Dist.-Sundargarh.

2. The Notification is statutory and may be assigned SRO number. 1/1/2025

OSD-cum-Special Secretary to Government

Memo No. 116 /FE&CC, Date 01.01.25

Copy forwarded to the Assistant Inspector General of Forests, Govt. of India, Ministry of Environment, Forest and Climate Change, (F.C. Division), Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003/ Deputy Director General of Forests (Central), Govt. of India, MoEF&CC, Regional Office, A/3, Chandrasekharpur, Bhubaneswar-23 for information and necessary action.

1/1/2025

OSD-cum-Special Secretary to Government

Memo No. 117 /FE&CC, Date 01.01.25

Copy forwarded to the Revenue & Disaster Management Department/ Steel & Mines Department/ Director, Environment-cum-Special Secretary to Government, FE&CC Department/ Member Secretary, SPCB, Odisha/ Director of Land Records and Surveys, Odisha, Cuttack/ RDC (ND) Sambalpur/ Collector, Sundargarh/ Tahasildar, Lahunipara Tahasil, Dist.-Sundargarh for information and necessary action.

1/1/2025

OSD-cum-Special Secretary to Government

Memo No. 118 /FE&CC, Date 01.01.25

Copy forwarded to the Principal Chief Conservator of Forests & HoFF, Odisha/ Principal Chief Conservator of Forests (WL) & CWLW, Odisha/ Principal Chief Conservator of Forests (FD&NO., FC Act), O/o the PCCF & HoFF, Odisha w.r.t. his letter No.22082, dt.05.11.2024/ Regional Chief Conservator of Forests, Rourkela Circle/ Divisional Forest Officer, Rourkela Forest Division/ Divisional Forest Officer, Bonai Forest Division for information and necessary action.

OSD-cum-Special Secretary to Government

Memo No. 119 /FE&CC, Date 01.01.25

Copy forwarded to the Head State Portal, IT Centre, Odisha Secretariat, Bhubaneswar/ DE (IT) Section, FE&CC Department w.r.t. this Department letter No.21646/F&E dtd.22.11.2016/ 5 spare copies for G.F. for information and necessary action.

OSD-cum-Special Secretary to Government

Memo No. 120 /FE&CC, Date 01.01.25

Copy forwarded to the M/s Chandi Prasad Sharma, At-Amlatola, Po-Chaibasa, Dist-West Singhabhum, Jharkhand, Pin-833201/ Shri Anil Kumar Sharma, Power of Attorney of Chandi Prasad Sharma (Mines Owner), near Indane Gas Agency, Daily market, PO-Barbil, Dist-Keonjhar-758035 for information and necessary action.

OSD-cum-Special Secretary to Government

6F

**ANNEXURE -5**

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**OFFICE OF THE REGIONAL CHIEF CONSERVATOR OF FORESTS, ROURKELA CIRCLE, AT/P.O. PANPOSH, ROURKELA-769 004.**

Memo No. 1387 /3F-31/2023 Date: 27.03.2024

DIVISIONAL FOREST OFFICER
BONAI DIVISION
Receipt No. 2293
Date 30.03.2024

To

The Divisional Forest Officer,
Bonai Forest Division.

Sub:- Proposal for seeking prior approval of the Central Government under section 2(ii) of the Forest (Conservation) Act, 1980 in favour of Anil Kumar Sharma power of Attorney of Late Chandi Prasad Sharma for non-forestry use of 67.352 ha. of forest land for Iron & Manganese Ore Mining in village-Raikela, Bahamba & Tensa under Bonai Sub-Division in Sundargarh District of Odisha.

X-Sub:- Submission of 7 Nos. of Scheme.

Ref: 1. F.No. 8-25/2022-FC dt.04.12.2023 of MoEF & CC, Govt. of India.
2. Your Memo No. 3187 dt.21.03.2024

The following schemes prepared by you at the current wage rate of Rs.450.00 per man day and submitted vide your Memo under reference in compliance with Conditions of the Stage-I approval accorded vide Letter F.No. 8-25/2022-FC dt.04.12.2023 of MoEF & CC, Govt. of India, in respect of the above diversion proposal are hereby technically approved.

| Sl No. | Details of the Scheme | Condition No. of the Scheme | Technical approval accorded by the RCCF, Rourkela |
|---|---|---|---|
| 1 | Scheme for Gap plantation, and Soil & Moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100m. from outer perimeter of the mining lease to be undertaken by the User Agency. | No.2 (e) | Rs.1,90,94,600/- |
| 2 | Scheme for mitigative measures to minimize soil erosion and choking of streams. | No.10 (a) | Rs.73,74,900/- |
| 3 | Scheme for Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within the mining lease to arrest soil erosion; | No.10 (b) | Rs. 23,38,200/- |
| 4 | Scheme for Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour. | No.10 (c) | With no budgetary provision as it remains included in the schemes prepared in compliance with Condition No. 10 (a) above. |
| 5 | Scheme for Stabilization of overburden dumps by appropriate grading/ benching so as to ensure that the angles of repose at any given place is less than $28^0$ and; | No.10 (d) | With no budgetary provision as it remains included in the schemes prepared in compliance with Condition No. 10 (a) above. |
| 6 | Scheme for Top Soil Management. | No.12 | Rs.45,11,900/- |

| | | | |
|---|---|---|---|
| 7 | Scheme for de-siltation of the village tanks and other water bodies located within five km from the mine lease boundary so as to mitigate the impact of siltation of such tanks / water bodies. | No.13 | Rs.1,49,35,600/- |

The technically approved schemes are returned herewith each in triplicate for taking necessary action at your end.

**Encl.:- As above.**

Regional Chief Conservator of Forests,
Rourkela Circle.

Received 30-3-24

Memo No. Date:

Copy forwarded to the Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer, FC Act), O/o the Principal Chief Conservator of Forests, Odisha for favour of kind information and necessary action with reference to Memo No.3188 Dtd.21.03.2024 of DFO, Bonai Division.

Regional Chief Conservator of Forests,
Rourkela Circle.

Memo No. / Date:

Copy forwarded to Anil Sharma, Power of Attorney Holder of Sri C.P. Sharma, Mines Owner, At/PO-Chaibasa, Dist-Singhbhum (West), Jharkhand-833201 for information and necessary action with reference to Memo No. 3189 dtd.21.03.2024 of DFO, Bonai Division.

Regional Chief Conservator of Forests
Rourkela Circle

ANNEXURE – 6

*Scheme*

*For*

**GAP PLANTING, SOIL & MOISTURE CONSERVATIONACTIVITIES TO RESTOCK AND REJUVINATE DEGRADEDOPEN FORESTS (HAVING CROWN DENSITY < 0.4) WITHIN 100M OUTER PERIMETER OF MINING LEASE**

in compliance

with

Condition No.2 (e) of

Stage-I approval granted vide

Letter No.8-25/2022-FC dt.4.12.2023 of

Government of India, Ministry of Environment,

Forest& Climage Change

for

Diversion of 67.352 Hects of Forest Land

for U/s-2 (ii) of F.C. Act'1980

within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines

of


ANIL KUMAR SHARMA,

PoA OF LATE CHANDI PRASAD SHARMA

In village Raikela, Bahamba and Tensa in Kolra Tahsil,

Bonai Forest Division

Dist.Sundargarh Odisha.

# SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION TO RESTOCK AND REJUVENATE DEGRADED OPEN FORESTS WITHIN 100M FROM OUTER PERIMETER OF RBT IRON & MN. ORE MINING LEASE OF SRI ANIL KUMAR SHARMA, PoA OF LATE C.P. SHARMA IN SUNDARGARH DISTRICT OF ODISHA.

## 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6 2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C. Act'1980 has been granted by MoEF&CC, Govt. of India vide their Letter No.8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.2 (e) for preparation and implementation of a Scheme containing for gap plantation and soil & moisture conservation activities to restock and rejuvenate the degraded open forest (having crown density less than 0.4) if any, located in the area within 100m from outer perimeter of the mining lease.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 43.867" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature belngs to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest, i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## 7. OBJECTIVES OF THE SCHEME

The main objective of the present scheme is to fulfil the condition No.2 ***(e) which envisages to undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.4) if any, located in the area within 100m from outer perimeter of the mining lease.***

1) To afforest the degraded forest land and to restore the degraded forest lands by RDF plantation within 100m from the outer perimeter of the lease area.

2) Clearly demarcating and fencing the area in ground to dispense with the biotic interferences.
3) To improve the micro edaphic conditions by undertaking suitable soil and moisture conservation measures
4) To create awareness among the local villagers for protection and maintenance of this plantation in particular and the adjoining forest for ensuring enrichment of the ecosystem.

**8. PROPOSED TECHNIQUE**

To achieve the above objectives, it has been proposed to take up ANR plantation @ 500 plants/ha. at a spacing of 2.5 mt X 2.5 mt. in identified permanent gaps. The following items of works prescribed in the scheme will be taken up, the detailed expenditure statement of which is enclosed in **Annexure-I**.

To achieve the above objectives, the following items of work are mainly prescribed to be taken up:

**9. SURVEY AND DEMARCATION OF BOUNDARY**

The identified degraded forest lands will be surveyed clearly with reference to the village maps and reserve forest boundary and demarcated by posting R.C.C. pillars at every corner/turning point of boundary line and the Scheme proposes financial implication for the same.

**10. REGENERATION CLEANING AND TENDING OPERATION**

The operation aims at tending (climber cutting, cleaning, double shoot cutting, pruning etc.) of the existing crop for the growth of promising principal species of the locality (Sal with associates) for ensuring better growth of the plants. It includes removal of inferior, diseased, malformed, dead, dying and defective tree growth and disposal of them by distributing it among the local VSS members. Apart from it, weed eradication is also an integral part as they interfere with the growth of both planted species and natural regeneration.

The detailed operation to be carried out is as follows-

i) Cutting of herbs and shrubs interfering with the growth of the promising species.
ii) Cutting back of top broken pole crops interfering with growth of well-formed pole crops.
iii) Cutting back of malformed and diseased species.
iv) Cutting of climbers up to hand's reach.
v) Sharp cutting of high stumps at a height of 0.5 mtr above the ground level to get a smooth stool with least damage to the cortex layer. This will promote growth of new stool shoots as well as root collar shoots of species having coppicing vigor.
vi) Singling out the coppice shoots coming out from stools and retaining two to three most promising ones.
vii) Pruning of the branches of the pole crops up to hand's reach..

During the 1st year, climber cutting, and cutting of high stumps, weeds and malformed and diseased species will be done. In the next two years, cutting back of malformed individuals and singling of coppice shoots in case of desired species will be done in the subsidiary silvicultural activities.

## 11. PLANTING& POST-PLANTING

The area will be re-stocked by raising plantation@ 500 plants per hectare in ANR (Assisted Natural regeneration) model. Taking into consideration, the site specific soil condition, existing indigenous species growing there and the bonafied requirement of the local people, the species have been proposed to be planted in the area as mentioned below.

The main objective of the present scheme is to raise gap plantation in degraded forest as well as to apply soil & moisture conservation measures, restock & rejuvenate degrade forest within 100 m in the outer perimeter of Mining lease of Chandi Prasad Sharma. Such Plantations will act as a Transition Crop to support the main crop of the lease area.

Hence, the main objective of the present scheme is as follows:-

i) To afforest the degraded forest land and to restore the degraded forest lands by ANR model.
ii) Clearly demarcating and fencing with brush wood the area to dispense with the biotic interferences.
iii) To improve the micro edaphic conditions by undertaking suitable soil and moisture conservation measures.
iv) To protect the area against encroachment, illicit felling, fire incidences, grazing and all other forms of biotic interference.
v) To create awareness among the local villagers for protection and maintenance of plantation for ensuring enrichment of the ecosystem and replacement of the degraded areas with natural green cover.

## 12. LAND SCHEDULE

**LAND SCHEDULE OF DEGRADED FOREST LAND OF 100 METER OUTER PERIFERI OF MINING LEASE OF RAIKELA, BAHAMBA AND TENSA IRON ORE MINES**

| SL NO | VILL NAME | PLOT NO | KHATA NO | KISSAM | APLIED AREA IN Ha. | CATEGORY OF LAND | REMARKS |
|---|---|---|---|---|---|---|---|
| 1 | Tensa | 192 | 2 | Jungle | 1.191 | Govt. Forest | DLC |
| 2 | Bahamba | 123 | 23 | Jungle | 2.718 | Govt. Forest | PRF |
| 3 | Bahamba | Sarkunda PRF | | Jungle | 2.342 | Govt. Forest | PRF |
| 4 | Bahamba | 122 | 25 | Pahada | 1.574 | Govt. | PRF |
| 5 | Bahamba | 122 | 25 | Pahada | 0.658 | Govt. | DLC |
| 6 | Bahamba | 121 | 25 | Pahada | 0.420 | Govt. | DLC |
| 7 | Bahamba | 120 | 25 | Pahada | 2.285 | Govt. | DLC |
| 8 | Bahamba | 119 | 25 | Pahada | 0.187 | Govt. | DLC |
| 9 | Bahamba | 115 | 25 | Pahada | 0.011 | Govt. | DLC |
| 10 | Bahamba | 114 | 25 | Pahada | 2.421 | Govt. | DLC |
| 11 | Bahamba | 86 | 25 | Pahada | 0.002 | Govt. | DLC |
| 12 | Bahamba | 85 | 25 | Pahada | 4.056 | Govt | DLC |
| 13 | Bahamba | 84 | 25 | Pahada | 3.494 | Govt. | DLC |
| 14 | Raikela | 602 | 66 | Pahada | 1.684 | Govt. | PRF |
| 15 | Raikela | 601 | 66 | Pahada | 4.224 | Govt. | PRF |
| 16 | Raikela | 600 | 66 | Pahada | 0.649 | Govt. | DLC |
| | | | | | 0.355 | Govt. | RF |
| TOTAL AREA | | | | | 28.271 | | |

Forest plots of village Tensa, Bahamba and Raikela of Sundargarh District have been selected for gap plantation (canopy density is < 0.4). Location of the plots is shown in the map annexed to this scheme.

## 13. SELECTION OF SITE FOR GAP PLANTING

The above degraded land is situated in the outer perimeter of the mining lease of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma in Sundargarh District of Orissa under Bonai Forest division. The proposed sites measure 28.271 ha. in Tensa, Bahamba and Raikela villages. The topography of the site is sloppy in nature. The soil is mostly sandy loam at patches and depth of the soil is of limited extent. Location of the plots is shown in the map annexed to this scheme.

## 14. DESCRIPTION OF THE EXISTING VEGETATION

The proposed site for gap plantation has dense growth of weeds like Eupatorium & Lantana etc. The available growth is degraded due to biotic pressure like loping, grazing and fire wood collection.

**Choice of species:**

As far as possible, care shall be taken to select indigenous species for plantation which are associates of local species.

The list of species to be adopted for the plantation is as follows:

| | | |
|---|---|---|
| 1 | Amla | *Emblica officinalis* |
| 2 | Bamboo | *Dendrocalamus strictus* |
| 3 | Karanja | *Pongamia pinnata* |
| 4 | Asan | *Terminalia tomentosa* |
| 5 | Sisoo | *Dalbergia sisoo* |
| 6 | Gambhar | *Gmelina arborea* |
| 7 | Neem | *Azadirachta indica* |
| 8 | Harida | *Terminalia chebula* |
| 9 | Bahada | *Terminalia bellerica* |
| 10 | Kasi | *Bridelia retusa* |

## 15. RAISING OF NURSERY

Seedlings required for the plantation shall be raised in the nursery of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma. The Nursery should have a capacity of raising adequate seedlings. Nursery works will be undertaken in consultation with D.F.O., Bonai Division. All the infrastructures shall be provided by M/s Rungta Mines ltd. Work will be started one year before the year of plantation so that two year old seedlings will be available for plantation. 20% extra seedlings shall be raised to compensate and mitigate the eventuality of seedling casualty in the nursery. Standard nursery practices shall be followed for raising of seedlings in polythene bags.

## 16. ALIGNMENT AND STACKING

Alignment, stacking and pitting will be taken up in the month of March-April, Pits of size 45cmX 45cm X 45cm will be dug maintaining a spacing of 2.5 mt x 2.5 mt @ 500 plants per hectare.

## 17. PLANTING

The seedlings will be planted in dug out pits of 30 $cm^3$ maintaining a spacing of 2.5 mt between the pits @ 500 seedlings per hectare. Plantation should be taken up after first regular shower of monsoon and should be completed by end of August. NPK/DAP fertilizer @ 50 gms per plant should be given as basal dose. Anti- termite and insecticide like @ 5 gms. per plant should be applied per pit. Foreign earth shall be provided in each pit to enrich the growth of seedlings within a marked period. Casually replacement when required during the planting year and in the second year should be undertaken for which the seedlings shall be raised.

## 18. WEEDING, SOIL WORKING AND MANURING

For establishment and better growth of the planted seedlings. weeding, soil working and manuring are necessary. It is proposed to carry out two weeding, soil working and manuring added with vermin compost @ 200 gm/plant during the first year and second year of plantation. Weeding and manuring for the first and second year shall be carried out during September – October Urea 70 gm & NPK 50 gm and the second one during September-October along with soil working during which 70gms of vermi compost shall be added to the soil per plant. First weeding shall be for entire area weeding and the second weeding should be strip weeding. The weeding and of third year will be for entire area weeding which shall be carried out during August.

## 19. APPLICATION OF INSECTICIDES

The plantation site after planting with good seedlings may in course of time get infested with diseases owing to influx of insects and pests into the area which usually cause heavy damage to the soft, tender and avidly growing parts of the plant that affects the rate of growth and sometimes causes wide spread casualty of the seedlings. To avoid such incidences, foliar spray and ground application of insecticides at regular intervals usually on a sunny day in the fore noon shall be done.

## 20. FIRE LINE TRACING AND MAINTENANCE

Fire causes irreparable damage to the plantation and the forest growth during fire season and to prevent such fire out-breaks in the area, the plantation area shall be divided into suitable blocks by tracing fire lines. Boundaries of the plantation patches and these block lines will be scrapped of forest growth to a width of 3.0 mt. during Feb-March and the cut back materials and the dry leaves stacked along these fire lines shall be burnt under direct supervision. This operation is highly essential and the scheme proposes to carry this operation for the first three years.

The detailed cost estimate of various operations to be taken up in ANR plantation has been furnished in **Annexure-I.**

## 21. POINTS OF IMPORTANCE

While taking up plantation, the following vital points shall be taken up for consideration:

- All care will be taken to raise healthy seedlings of minimum 2' height and 20% extra of the required stock shall be raised. 1 year old seedlings shall be used in case of Asan, Arjun, Phasi, Neem, Harida, Bahada, Kasi etc. However, in case of Sisoo, Gambhar, Chakundaetc18 months old seedlings can be used. Pitting shall be invariably done during February – April. i.e before onset of monsoon. In hilly areas, pits shall be dug along the contours. Planting shall be done on the onset of monsoon and should not be delayed. The gradient of the site is 1:10 which is considered as level ground with slight undulating at places.
- Basal dose of 30 grams of NPK and 5 grams of Aldrin be applied at the time of planting. Casually replacement, weeding and soil working, application of fertilizer and insecticides shall be taken up as per the provisions in the cost- norm at the proper time. Watchers shall be engaged who shall also take up tracing of inspection path and fire line and maintenance of fence in addition watch and ward duty.
- All out efforts shall be taken to keep the plantation free from grazing, fire and other biotic interference.

## 22. SOIL CONSERVATION MEASURES

The sites selected for restocking and rejuvenation by afforestation are degraded forest lands and the slope of the identified area varies from steep to moderate with undulating topography and gullies are formed due to heavy erosion. Therefore, soil conservation measure is indispensable and is to be appropriately designed. Taking into consideration the degradation of the area due to soil erosion, it has been proposed to take up Soil Conservation Measures by construction of **Loose Boulder Check dam (LBCD)** such as contour bunds, check dams over the area 10 nos. 2mt span 10 nos. 3mt span.

The details of estimate of different size of Loose Boulder Structure are given in **Annexure-II& III.**

## 23. SPECIAL SOIL CONSERVATION MEASURES

To check soil erosion and the rain water draining out of the area, it has been proposed to take up special conservation measures by digging staggered trenches along the contour over the area @ 250 nos per hectare. The size of the trenches will be 2 Mtr x 0.5 Mtr x 0.5mtr. Digging of staggered trenches will be done during September of 1$^{st}$year. Agave planting will also be taken up on the dugout soil of the trench for its stabilisation and to restrict the dugout soil from re-filling into the trench.

The detail of estimate of staggered trench is given in **Annexure-IV.**

## 24. WATCH AND WARD

To protect the area against grazing, fire accident and other biotic interference it is proposed in the cost estimate for ANR Plantation to engage watchers for ten years from the year of plantation.

## 25. FENCING :

To protect the ANR plantation from biotic interference, Angle Iron & Chain link wire mesh fencing is proposed over the identified area of 28.271 ha. within 100 mt outer boundary of the Mining Lease area in Barsuan Range. The total perimeter of the said identified area is 3562 RMT (Or. 3.562 Km) length of boundary.

The cost norm for Angle Iron & Chain link wire mesh fencing is enclosed as **Annexure-V.**

## 26. MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Division are to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 15% of the plantation cost has been earmarked for expenditure on this score.

## 27. EXECUTING AGENCY

All the works under this scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

## SPECIALISED CELL

| Sl. No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining operation projects |

## 28. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the present Scheme, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for the executing agency and technical experts shall be provided by the user agency for proper execution of this programme.

## 29. REQUIREMENT OF FUNDS

The total cost of the implementation of proposed scheme will be **Rs.1,90,94,600/- (Rupees One Crore Ninety Lakh Ninety Four Thousand Six Hundred) Only, details are as under-**

### TOTAL COST OF GAP PLANTING, SOIL & MOISTURE CONSERVATION WITHIN 100MTR.FROM OUTER PERIMETER OF MINING LEASE TO RESTOCK AND REJUVENATE DEGRADED FOREST

**Wage Rate Rs.450.00**

| | | |
|---|---|---|
| 1. | ANR Plantation with 500 seadling per Ha. over 28.271 ha. @Rs.1,50,051/- per ha. | 42,42,092.00 |
| 2. | Angle Iron & Chain link wire mesh fencing over 3.562 KM (Or, 3562 RMT) @₹1,849.26/- per RMT. | 65,87,064.00 |
| 3. | Soil Conservation measures<br>a) Loose boulder structure 2 mt. size 10 nos. @ Rs.16015/-<br>b) Loose boulder structure 3mt. size 10 nos. @ Rs.33589/- | <br>1,60,150.00<br>3,35,890.00 |
| 4. | Excavation of staggered trench over 28.271 ha. @ Rs.88,835/- per Ha. | 25,11,454.00 |
| | **Total :-** | **1,38,36,650.00** |
| 5. | 15% of the total cost for motivation of VSS / People Involved. | 20,75,498.00 |
| | **Total :-** | **1,59,12,148.00** |
| 6. | Add 20% escalation | 31,82,430.00 |
| | **Grand Total :-** | **1,90,94,577.00**<br>Or,<br>1,90,94,600.00 |

**(Rupees One Crore Ninety Lakh Ninety Four Thousand Six Hundred) only**

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.*** **CHANDI PRASAD SHARMA**

***Anil Kumar Sharma, Power Holder of Attorney of Late C.P. Sharma.***

***Countersigned***

**Divisional Forest Officer**
**Bonai Division**

Technically Approved

Regional Chief Conservator of Forests
Rourkela Circle

ANNEXURE-7

Basic Cost Norms for Compensatory Afforestation through Aided Natural Regeneration (ANR) @ 600 Seedlings/Ha.

WAGE RATE Rs. 311/- PER MANDAY

| Sl. No | Items of work | Permissible Period of Execution | No of Man days | Labour Cost (In Rs.) | Material Cost (In Rs.) | Total cost (In Rs.) |
|---|---|---|---|---|---|---|
| | **Ath Year (Advance work) Pre-Planting Operation** | | | | | |
| 1 | Survey, demarcation and fixing pegging | May/Dec | 2 | 622 | 0 | 622 |
| 2 | Preparation of Inventory & Planting Design | Dec/Feb | 1 | 333 | 100 | 433 |
| 3 | Site preparation | Apr/Dec | 2 | 622 | 0 | 622 |
| 4 | Construction of trench cum bund on contour, Construction of bund, making of trench, Refilling of trench, making of slope of bund & removal of weed and stumps from the field to bund [approx] | Jan/Feb | 15 | 4665 | 0 | 4665 |
| 5 | Approach road and footpath for Vigilance etc. | Feb/Mar | 1 | 311 | 0 | 311 |
| 6 | Digging of pits (45 cm x 45 cm x 45 cm) in bund and preparation of pit | Feb/Mar | 20 | 6220 | 0 | 6220 |
| | Total | | 41 | 12753 | 100 | 12853 |
| | **1st Year (Planting Year)** | | | | | |
| 1 | Refilling of pits by earth excavated out of the pits, application of organic manure/ FYM and soil mix for same pit etc | June/Jul | 4 | 1244 | 1500 | 2744 |
| 2 | Transportation of 10 numbers of polythene bags each containing plant from nursery to plantation (nursery three kilometer away from plantation site including Loading & unloading) (Average load of 10 Kgs in a bullock cart, Loading & unloading 500 bags) | Jul/Aug | 0 | 0 | 2200 | 2200 |
| 3 | Watering of each pit with bucket, Removal of weeds from pits | Jul/Aug | 1 | 311 | 0 | 311 |
| 4 | Carrying of polythene bags containing plant from the dumping site to individual dug pits, within the planting area, applying insecticide, fertilizer by dusting after keeping shovel with other implements required for planting the saplings around the dug pits | Jul/Aug | 11 | 3421 | 0 | 3421 |
| 5 | Cost of Plantation & Protection (GMPF) Plantation @ 50 gm/plant = 30 kg @ Rs 8/- per kg = Rs. 240/- (b) Urea/Ammonium sulphate @ 20 gm/plant = 12 kg @ Rs 225.00 (c) Insecticide/dusting powder @ 5 gm/plant = 3 kg @ Rs. [illegible] | Jul/Aug | 8 | 2488 | 1000 | 3488 |
| 6 | Casualty Replacement @ 10% (60 nos.) | Jul/Aug | 2.5 | 466.5 | 0.0 | 466.5 |
| 7 | 1st weeding & Hoeing | Aug/Sept | 5 | 1555 | 0 | 1555 |

| Sl. No | Name of work | Preferable Period of Execution | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 11 | Soil Working, Soil working [illegible] | [illegible] | 4 | 2000 | 0 | 2000 |
| 9 | Fire line cutting & [illegible] | Feb/Mar | 3 | 933 | 0 | 933 |
| 10 | [illegible] | Aug/Oct | 9 | 2400 | 0 | 2400 |
| | Total | | 16.5 | [illegible] | [illegible] | [illegible] |
| | 2nd Year Maintenance | | | | | |
| 1 | [illegible] | [illegible] | 8.0 | 0.0 | [illegible] | [illegible] |
| 2 | Casualty replacement | [illegible] | 1.0 | 400.0 | 0.0 | 400.0 |
| 3 | Control of insects & termites<br>a) Cost of [illegible]<br>b) [illegible] | Feb/Aug | 0 | 0 | [illegible] | [illegible] |
| 4 | Weeding (Complete weeding, Mechanical / Manual weeding, Hoeing, Digging) | Sep/Oct | 8 | 2400 | 0 | 2400 |
| 5 | Fire line cutting [illegible] | Feb/Mar | 3 | 933 | 0 | 933 |
| 6 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 36.0 | [illegible] | [illegible] | [illegible] |
| | 3rd Year Maintenance | | | | | |
| 3 | Casualty replacement<br>[illegible] | Feb/Mar | 5 | 0 | [illegible] | [illegible] |
| 4 | Weeding (Complete weeding, Mechanical & Soil working, Cost, diameter wise) | Sep/Oct | 0 | [illegible] | 0 | [illegible] |
| 5 | Fire line cutting [illegible] | Feb/Mar | 3 | 933 | 0 | 933 |
| 6 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | | [illegible] |
| | Total | | 23.0 | [illegible] | [illegible] | [illegible] |
| | 4th Year Maintenance | | | | | |
| 1 | Fire line cutting [illegible] | Feb/Mar | 3 | 933 | 0 | 933 |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 16 | [illegible] | 0 | [illegible] |
| | 5th Year Maintenance | | | | | |
| 1 | Fire line cutting [illegible] | Feb/Mar | 3 | [illegible] | 0 | [illegible] |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 15.0 | [illegible] | 0.0 | [illegible] |
| | 6th Year Maintenance | | | | | |
| 1 | [illegible] | Feb/Mar | 3 | [illegible] | 0 | [illegible] |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 15.0 | [illegible] | 0.0 | [illegible] |
| | 7th Year Maintenance | | | | | |
| 1 | Fire line cutting [illegible] | Feb/Mar | 3 | [illegible] | 0 | [illegible] |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 15.0 | [illegible] | 0.0 | [illegible] |
| | 8th Year Maintenance | | | | | |
| 1 | Fire line cutting [illegible] | Feb/Mar | 3 | [illegible] | 0 | [illegible] |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 15.0 | [illegible] | 0.0 | [illegible] |
| | 9th Year Maintenance | | | | | |
| 1 | Fire line cutting [illegible] | Feb/Mar | 3 | [illegible] | 0 | [illegible] |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 15.0 | [illegible] | 0.0 | [illegible] |
| | 10th Year Maintenance | | | | | |
| 1 | Fire line cutting [illegible] | Feb/Mar | 3 | [illegible] | 0 | [illegible] |
| 2 | Watch & Ward including [illegible] | Apr/Mar | 12 | [illegible] | 0 | [illegible] |
| | Total | | 15.0 | [illegible] | 0.0 | [illegible] |
| | Year wise Abstract of Cost Norms (Add/Plus specific cost components) | | | | | |

| Sl. No | Name of Work | Preferable Period of Execution | No of Man days | Labour Cost (In Rs.) | Material Cost (In Rs.) | Total cost (In Rs.) | |
|---|---|---|---|---|---|---|---|
| P No | Item | No. of months | Labour cost @ Rs. 283/- per day (Rs.) | Material Cost | As per Existing Delivery Locations, Loading, Transportation and other Contingency Charges (Col. 4 of 4+5) | Cost of Poles @ Rs. 820/- per pole | TOTAL COST |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | [illegible] | 1 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 2 | [illegible] | 4.5 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 3 | [illegible] | 2.5 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 4 | [illegible] | 2.0 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 5 | [illegible] | 1.5 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 6 | [illegible] | 1.5 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 7 | [illegible] | 1.5 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 8 | [illegible] | 1 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 9 | [illegible] | 1.5 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 10 | [illegible] | 1 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| 11 | [illegible] | 1.5 | [illegible] | [illegible] | [illegible] | 0.00 | [illegible] |
| | Total | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

Note:

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]

[illegible] (Format 0.1 - Version 8.140, PC Act)

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## Matrix for Model-II.A (TANK-500 Plants/ Ha)

In Rupees

| Sl No. | Commissionment Year | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | XVII | XVIII | XIX | XX | XXI | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basic Norms | | 13400 | 48811 | 33716 | 9300 | 4800 | 4805 | 4806 | 4806 | 4801 | 4900 | 4900 | | | | | | | | | | | |
| 1 | 2021-22 | 13400 | 51811 | 13572 | 10363 | 5636 | 6126 | 6152 | 6754 | 7092 | 7446 | 7811 | | | | | | | | | | | 136083 |
| 2 | 2022-23 | | 14070 | 52881 | 14736 | 10318 | 6126 | 6122 | 6754 | 7302 | 7447 | 7814 | 8210 | | | | | | | | | | 142904 |
| 3 | 2023-24 | | | 14774 | 54631 | 10838 | 13360 | 6419 | 6754 | 7302 | 7447 | 7813 | 8603 | 8421 | | | | | | | | | 150051 |
| 4 | 2024-25 | | | | 15513 | 11380 | 13717 | 11033 | 6754 | 7302 | 7447 | 7813 | 8213 | 8615 | 4267 | | | | | | | | 157564 |
| 5 | 2025-26 | | | | | 16739 | 14347 | 11583 | 12163 | 7302 | 7447 | 7813 | 8213 | 8613 | 9050 | 3565 | | | | | | | 165403 |
| 6 | 2026-27 | | | | | | 17102 | 15703 | 13014 | 11049 | 7447 | 7813 | 8213 | 8613 | 9052 | 9503 | 4410 | | | | | | 175306 |
| 7 | 2027-28 | | | | | | | 17955 | 13174 | 11574 | 11958 | 7813 | 8213 | 8613 | 9052 | 9503 | 9913 | 13479 | | | | | 182999 |
| 8 | 2028-29 | | | | | | | | 13956 | 12126 | 11914 | 11915 | 8213 | 8613 | 9052 | 9503 | 9913 | 13479 | 11823 | | | | 190150 |
| 9 | 2029-30 | | | | | | | | | 12758 | 12518 | 12039 | 11913 | 8613 | 9052 | 9503 | 9913 | 13479 | 11823 | 11453 | | | 200156 |
| 10 | 2030-31 | | | | | | | | | | 13168 | 12607 | 12062 | 11913 | 9513 | 9503 | 9913 | 13479 | 11823 | 11453 | 12141 | | 211141 |

ARCCF (Forest Diversion & NCI, FC Act)

**Annexure –II**

## Detail Estimate of Loose Boulder Structure (S.M.C.)

**Wage rate@ Rs.460.00** **Span – 2 mtr.**
**Ht. = 0.6 mtr**
**Slope- U/S :- 1:1.5**
**D/S slope :- 1:2**

| | | | | |
|---|---|---|---|---|
| | Leveling the un-shape surface of the selected site & layout the structure foundation L.S. 1 MD. | | | 450.00 |
| | 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 3.70 x 3.00 x 0.30 = | 3.33 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.30 = | 0.30 | 3.63cum | |
| | @ Rs.20129.36 per 100 cum. | | | 730.69 |
| | **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 | | |
| ii. | 2 x $\frac{0.5 + 1.10}{2}$ x 1.2 x 0.5 = | 0.96 | | |
| iii. | 2 x 0.6 x 0.6 x 0.5 = | 0.36 | | |
| iv. | 2 x 1.0 x 0.5 x 0.5 = | 0.50 | | |
| | | | 8.65 cum | |
| | @ Rs.1714.90 per cum | | | 14833.88 |
| | | | | |
| | | | G. Total:- | **16014.57 Or 16016.00** |

**(Rupees Sixteen Thousand Fifteen) only**

CHANDI PRASAD SHARMA

P.A. HOLDER

**Annexure –III**

## Detail Estimate of Loose Boulder Structure (S.M.C)

**Wage rate@** Rs.**460.00** **Span – 3 mtr.**
**Ht. = 1.0 mtr**
**Slope- U/S :- 1:1.5**
**D/S slope :- 1:2.0**

| | | | | |
|---|---|---|---|---|
| | Leveling the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD. | | | 460.00 |
| | 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 5.10 x 4.00 x 0.30 = | 6.12 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.30 = | 0.30 | 6.42 cum | |
| | @ **Rs.20160.40 per 100 cum.** | | | 1294.29 |
| | **Rough stone dry packing** | | | |
| | up to GL | | | |
| | Base with apron- 1 x 5.10 x 4.00 x 0.30 = | 6.12 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.30 = | 0.30 | | |
| | Above GL | | | |
| | Super structure – 1 x $\frac{4.10 + 0.60}{2}$ x 1.00 x 3.0 = | 7.05 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.50 = | 0.50 | | |
| | Side wall- | | | |
| i. | 2 x $\frac{0.50 + 1.50}{2}$ x 1.5 x 0.5 = | 1.50 | | |
| ii. | 2 x $\frac{0.5 + 1.50}{2}$ x 2.0 x 0.5 = | 2.0 | | |
| iii. | 2 x 0.6 x 1.0 x 0.5 = | 0.60 | | |
| iv. | 2 x 1.0 x 0.5 x 0.5 = | 0.50 | | |
| | | | 18.57 cum | |
| | @ **Rs.1714.87 per cum** | | | 31845.13 |
| | | | | |
| | | | **G.Total:-** | **33589.42 or, 33589.00** |

**(Rupees Thirty Three Thousand Five hundrad Eighty Nine) only**

CHANDI PRASAD SHARMA
Anchaura
JE A. HOLDER

**Annexure-IV**

**Estimate for digging of one no. of staggered trench of size 2 mt x 0.5 mt x 0.5 mt along with Agave plantation on the dug out soil.**

**Wage rate Rs.450.00**

| | | | |
|---|---|---|---|
| i) | Earth work in excavation of staggered trench in hard soil including rough dressing and leveling the beds and heaping the dug out soil at the down hill side of the trench and leveling the same too. | | |
| | Size of a trench = 2.0 mt x 0.5 mt x 0.5 mt = 0.5 cum | | |
| | @ 888.72 per 2.83 cum | Rs. | 157.01 |
| | | | |
| ii) | Cost for Agave planting on the dugout soil and its maintenance including weeding, soil working, manuring, cost of fertilizer etc. for three years | | |
| | 3 nos. of Agave plants per trench @ Rs.66.11/- per plants on LS | Rs. | 198.33 |
| | Total :- | **Rs.** | **355.34** |

**Cost of 250 nos. of staggered trenches covering one Ha. = 250 x 355.34 = Rs.88,835.00**

CHANDI PRASAD SHARMA

P.A. HOLDER

**ANNEXURE-V**

Fencing Model-III

Fencing for Compensatory Plantation raised outside the Forest Areas using Angle Iron & Chain Link wire mesh

(250 Runs / Ha.)

| Sl. No | Items of work | Probable Period of Executing | Monthly | Wages | Material cost (Rs) | Total Cost (Rs. per Ha.) |
|---|---|---|---|---|---|---|
| | 0th Year (PPP) | | | | | |
| 1 | [illegible] Dabba (0.40m x 0.40m x 0.40m) = 0.064 cu.m = 0.576 cu.ft. Rs. 7.00 | | 24 | 31.4m2 | 0.0 | 2516 |
| 2 | [illegible] 10 X Bella 2 Qty/Pit. X 2.10m = 5.244 @ 1055.00/Qty | | 0 | 0 | 5,010.0 | 5,647.6 |
| 3 | Angle Iron pillar of size 35 mm x 35mm x 6 mm of height 2.40 mtr. 10 x 2.40 = 24.00 Rgmt. @ 50/Kg/ Rgmt. = 950.00 kg @ 66.50 per kg | | | | 63,175.0 | 63,950.0 |
| 4 | [illegible] 2" Pipe with [illegible] 3mm weight per mtr 3.56 kg Total 10NG Legs @ 84.5.40m X 0.40m X 0.30m = 1.008 cum @ 2199.77/cum | | | | 22,173.0 | 22,173.0 |
| 5 | Chain Link Wire mesh with 4 mm dia Gi wire and gap size 50 mm x 50 mm (MP) 250 Rgmt. x 5.10 gm. = 1275 kgs. @ 183/kgs = Rs. 1,23,775 | | | | 1,23,775.0 | 1,23,775.0 |
| 6 | [illegible] Angle Iron Pillar & Chain Link wire mesh with [illegible] over locally available poly | | | | 3,450.0 | 3,038.0 |
| 7 | [illegible] 250 x 2.10 = 525 / 30 = 105 Rgmt. @ Rs. 104.80 Rgmt. | | | | 11,424.0 | 11,424.0 |
| 8 | [illegible] Labour Charges [illegible] @ 2% of the total cost | | | | 5,000.0 | 5,000.0 |
| | TOTAL | | 24 | 31.4m2 | 2,86,827.4 | 2,86,830.0 |
| | Avg per running mtr. 3,015.00 / 2.50m Rs. 1142/Rmt | | | | | |
| | 1st Year Maintenance | | | | | |
| 1 | No Maintenance in 1st year. | Sept./Oct | 0 | 0 | 0 | 0 |
| | 2nd Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 1% per running mtr. cost of installation in 1st yr. 1142 x 10 = 11.42 say Rs. 12 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 3rd Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 2% per running mtr. cost of installation in 1st yr. 1142 x 10 = 22.84 say Rs. 23 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 4th Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 4% per running mtr. cost of installation in 1st yr. 1142 x 10 = 45.68 say Rs. 46 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 5th Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 8% per running mtr. cost of installation in 1st yr. 1142 x 10 = 91.36 say Rs. 92 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 6th Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 16% per running mtr. cost of installation in 1st yr. 1142 x 10 = 182.72 say Rs. 183 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 7th Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 32% per running mtr. cost of installation in 1st yr. 1142 x 10 = 365.44 say Rs. 366 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 8th Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 64 per running mtr. cost of installation in 1st yr. 1142 x 10 = 730.88 say Rs. 731 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 9th Year Maintenance | | | | | |
| 1 | Maintenance of wire mesh fence @ 1% per running mtr. cost of installation in 1st yr. 1142 x 10 = 11.42 say Rs. 12 | Sept./Oct | 0 | 0 | 11000 | 11000 |
| | 10th Year Maintenance | | | | | |

| Sl. No | Item of Work | Permissible Period of Execution | Man days | Wages | Material cost (Rs) | Total Cost (Rs. per Ha.) |
|---|---|---|---|---|---|---|
| 1 | Maintenance of area mentioned @ 3% per annum on total expenditure in 10th Five Year Plan (Para 11) | Start/Yr1 | 0 | 0 | 14858 | 14858 |

Abstract

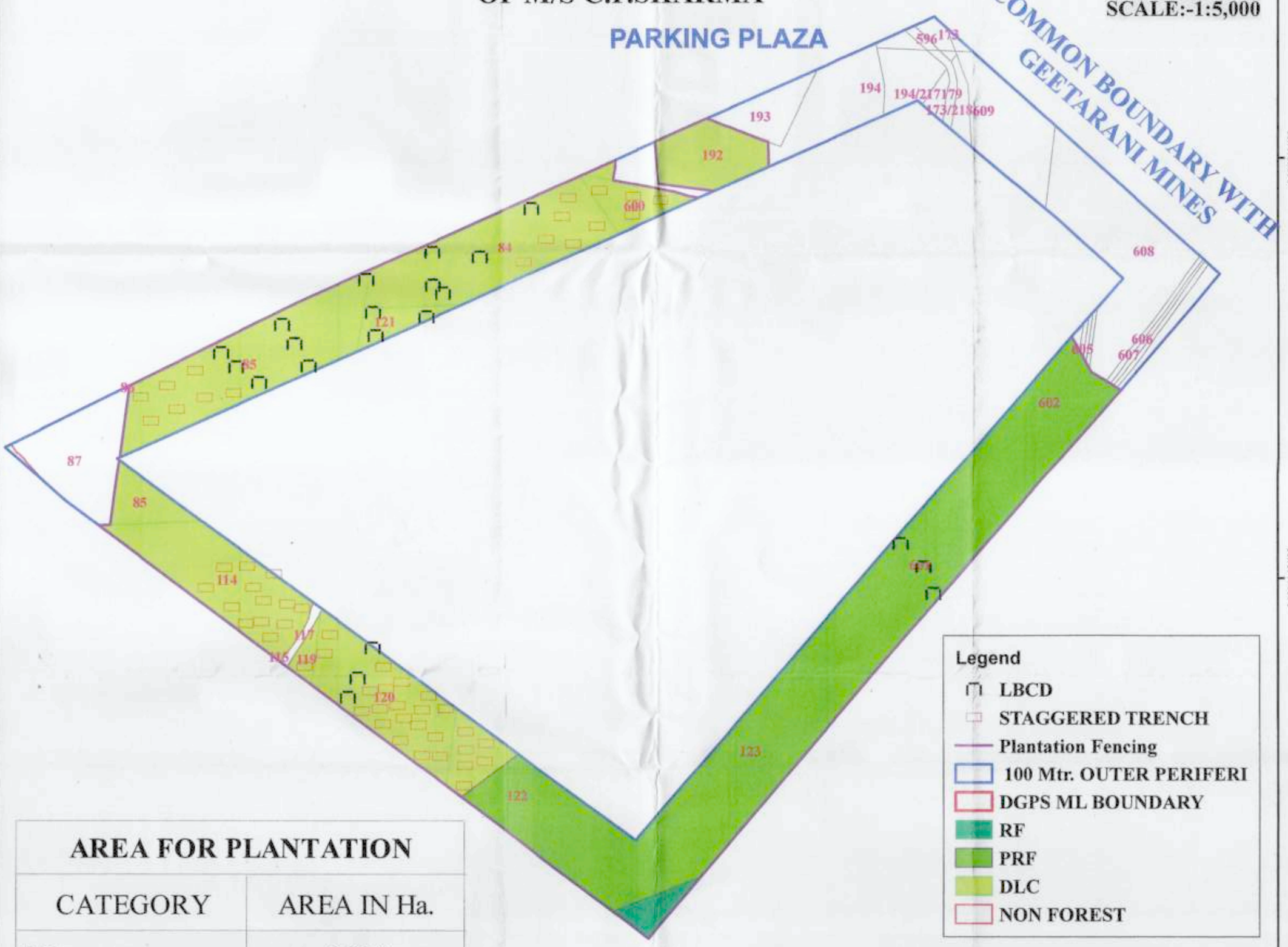
| Sl No | Year | No. person days | Unskilled cost @ Rs. 333/- per day | Material Cost | Total Cost (Rs.) |
|---|---|---|---|---|---|
| 1 | 1st year | 2.43 | 2546 | 2548.57 | 2554.00 |
| 2 | 2nd year | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 3rd year | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 4th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 5th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 6th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 7th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 8th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 9th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 10 | 10th year | 0.0 | 0.0 | 0.0 | 0.0 |
| | Total: | 2.43 | 2546 | 2548.57 | 2554.00 |

APCCF (Forest Conservation & NO, FC Act)

Material for Practice Model-5 - II (Iron angle with Chipping work model)

# PLAN SHOWING GAP PLANTATION, SOIL AND MOISTURE CONSERVATION ACTIVITIES TO RESTOCK AND REJUNENATE THE DEGRADED OPEN FOREST (HAVING CROWN DENSITY LESS THAN 0.4) WITHIN 100 MTRS. FROM OUTER PERIMETER OF THE MINING LEASE OF M/S C.P.SHARMA

SCALE:-1:5,000




Legend
- LBCD
- STAGGERED TRENCH
- Plantation Fencing
- 100 Mtr. OUTER PERIFERI
- DGPS ML BOUNDARY
- RF
- PRF
- DLC
- NON FOREST

| AREA FOR PLANTATION | |
|---|---|
| CATEGORY | AREA IN Ha. |
| RF | 0.355 |
| PRF | 12.542 |
| DLC | 15.374 |
| **TOTAL FOREST** | **28.271** |

PLANTATION LAND SCHEDULE OF 100 Mtr. OUTER PERIFERI OF MINING LEASE AREA

| SL NO | VILL NAME | PLOT NO | KHATA NO | KISSAM | APPLIED AREA IN Ha | APPLIED AREA IN Acr. | CATEGORY OF LAND | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1 | Tensa | 192 | 2 | Janggal | 1.191 | 2.942 | Govt. Forest | DLC |
| 2 | Bahamba | 123 | 23 | Janggal | 2.718 | 6.715 | Govt. Forest | PRF |
| 3 | Bahamba | Sarkunda PRF | | Janggal | 2.342 | 5.787 | Govt. Forest | PRF |
| 4 | Bahamba | 122 | 25 | Pahad | 1.574 | 3.889 | Govt. | PRF |
| 5 | Bahamba | 122 | 25 | Pahad | 0.658 | 1.626 | Govt. | DLC |
| 6 | Bahamba | 121 | 25 | Pahad | 0.420 | 1.037 | Govt. | DLC |
| 7 | Bahamba | 120 | 25 | Pahad | 2.285 | 5.647 | Govt. | DLC |
| 8 | Bahamba | 119 | 25 | Pahad | 0.187 | 0.462 | Govt. | DLC |
| 9 | Bahamba | 115 | 25 | Pahad | 0.011 | 0.027 | Govt. | DLC |
| 10 | Bahamba | 114 | 25 | Pahad | 2.421 | 5.983 | Govt. | DLC |
| 11 | Bahamba | 86 | 25 | Pahad | 0.002 | 0.004 | Govt. | DLC |
| 12 | Bahamba | 85 | 25 | Pahad | 4.056 | 10.022 | Govt. | DLC |
| 13 | Bahamba | 84 | 25 | Pahad | 3.494 | 8.635 | Govt. | DLC |
| 14 | Raikala | 602 | 66 | Pahad | 1.684 | 4.161 | Govt. | PRF |
| 15 | Raikala | 601 | 66 | Pahad | 4.224 | 10.437 | Govt. | PRF |
| 16 | Raikala | 600 | 66 | Pahad | 0.649 | 1.604 | Govt. | DLC |
| 17 | | | | | 0.355 | 0.877 | | RF |
| TOTAL AREA | | | | | 28.270 | 69.855 | | |

0 75 150 300 450 600 Meters

LAND SCHEDULE OF 100 Mtr. OUTER PERIFERI OF MINING LEASE AREA

| SL NO | VILL NAME | PLOT NO | KHATA NO | KISSAM | APPLIED AREA IN Ha | APPLIED AREA IN Acr. | CATEGORY OF LAND | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1 | Tensa | 194/217 | 2 | Janggal | 0.138 | 0.340 | Govt. Forest | Road |
| 2 | Tensa | 173 | 2 | Janggal | 0.163 | 0.403 | Govt. Forest | Road |
| 3 | Tensa | 173/218 | 2 | Janggal | 0.211 | 0.522 | Govt. Forest | Road |
| 4 | Tensa | 194 | 2 | Janggal | 2.064 | 5.099 | Govt. Forest | Already diverted for Parking Plaza |
| 5 | Tensa | 192 | 2 | Janggal | 1.191 | 2.942 | Govt. Forest | DLC |
| 6 | Tensa | 179 | 2 | Sadak | 0.200 | 0.494 | Govt. | Road |
| 7 | Tensa | 193 | 2 | Patit | 0.668 | 1.652 | Govt. | Already diverted for Parking Plaza |
| 8 | Bahamba | 123 | 23 | Janggal | 2.718 | 6.715 | Govt. Forest | PRF |
| 9 | Bahamba | | | Janggal | 2.342 | 5.787 | Govt. Forest | PRF |
| 10 | Bahamba | 122 | 25 | Pahad | 1.574 | 3.889 | Govt. | PRF |
| 11 | Bahamba | 122 | 25 | Pahad | 0.658 | 1.626 | Govt. | DLC |
| 12 | Bahamba | 121 | 25 | Pahad | 0.420 | 1.037 | Govt. | DLC |
| 13 | Bahamba | 120 | 25 | Pahad | 2.285 | 5.647 | Govt. | DLC |
| 14 | Bahamba | 119 | 25 | Pahad | 0.187 | 0.462 | Govt. | DLC |
| 15 | Bahamba | 117 | 25 | Nal | 0.111 | 0.274 | Govt. | **Non Forest** |
| 16 | Bahamba | 115 | 25 | Pahad | 0.011 | 0.027 | Govt. | DLC |
| 17 | Bahamba | 114 | 25 | Pahad | 2.421 | 5.983 | Govt. | DLC |
| 18 | Bahamba | 87 | 23 | Sarbsadharan Jogya | 1.700 | 4.201 | Govt. | **Non Forest** |
| 19 | Bahamba | 86 | 25 | Pahad | 0.002 | 0.004 | Govt. | DLC |
| 20 | Bahamba | 85 | 25 | Pahad | 4.056 | 10.022 | Govt. | DLC |
| 21 | Bahamba | 84 | 25 | Pahad | 3.494 | 8.635 | Govt. | DLC |
| 22 | Raikala | 609 | 66 | Pahad | 2.675 | 6.609 | Govt. | **Geeta Rani Mines** |
| 23 | Raikala | 608 | 66 | Pahad | 3.158 | 7.803 | Govt. | **Geeta Rani Mines** |
| 24 | Raikala | 607 | 63 | Nayan Jori | 0.224 | 0.553 | Govt. | Road |
| 25 | Raikala | 606 | 63 | Rasta | 0.194 | 0.480 | Govt. | Road |
| 26 | Raikala | 605 | 63 | Nayan Jori | 0.253 | 0.624 | Govt. | Road |
| 27 | Raikala | 602 | 66 | Pahad | 1.684 | 4.161 | Govt. | PRF |
| 28 | Raikala | 601 | 66 | Pahad | 4.224 | 10.437 | Govt. | PRF |
| 29 | Raikala | 600 | 66 | Pahad | 0.649 | 1.604 | Govt. | DLC |
| 30 | Raikala | 596 | 66 | Pahad | 0.356 | 0.879 | Govt. | Road |
| 31 | | | | | 0.355 | 0.877 | | RF |
| TOTAL AREA | | | | | 40.385 | 99.790 | | |

CHANDI PRASAD SHARMA
P.A. HOLDER

COUNTERSIGNED
Divisional Forest Officer
Bonai Division

85°10'0"E 85°10'20"E 85°10'40"E
21°52'0"N 21°51'40"N 21°51'20"N 21°51'0"N

ANNEXURE – 7

ANNEXURE-2

By Regd. Post A/D

OFFICE OF THE DIVISIONAL FOREST OFFICER: BONAI DIVISION
Ph/Fax – 06626-244434: E-mail: dfobonai@rediffmail.com
Memo No. 3852 /6F-Dt: 8-9-10

To

The Chief Conservator of Forests,
Forest Diversion & Nodal Officer, F.C. Act'
O/O the P.C.C.F.,Orissa, Bhubaneswar.

Sub:- Regarding deposit of Rs. 4,94,32,680/- Into "Compensatory Afforestation Fund (CAF)-Orissa, A/c No. CA-1585, Corporation Bank, Lodhi Road, New Delhi" towards Net Present Value (NPV) by Sri C.P. Sharma (Raikela, Bahamba & Tensa)

Ref:- 1. Your Memo No.18072/9F(CAF)-29/06 dt.17.7.2006. & No. 8225 dt.1
2. This Office Memo No. 2887 dt. 5. 6. 10.

With reference to above, the Demand Draft No.094965 dt.25.6.2010 for Rs.4,94,32,680/- deposited by Sri C.P. Sharma in favour of "Compensatory Afforestation Fund (CAF)-Orissa, A/c No. CA-1585, Corporation Bank, Lodhi Road, New Delhi" towards Net Present Value (NPV) is sent herewith for favour of your information and necessary action. The detailed statement in the prescribed proforma is enclosed herewith.

Encl: No.094965 dt.25.6.2010
In Original.

Divisional Forest Officer,
Bonai Division.

Memo No. 3858 /6F-Dt: 8-9-10

Copy with Xerox copy of the Demand Draft forwarded to the Conservator of Forests, Rourkela Circle, Rourkela for kind information and necessary action.

Divisional Forest Officer,
Bonai Division.

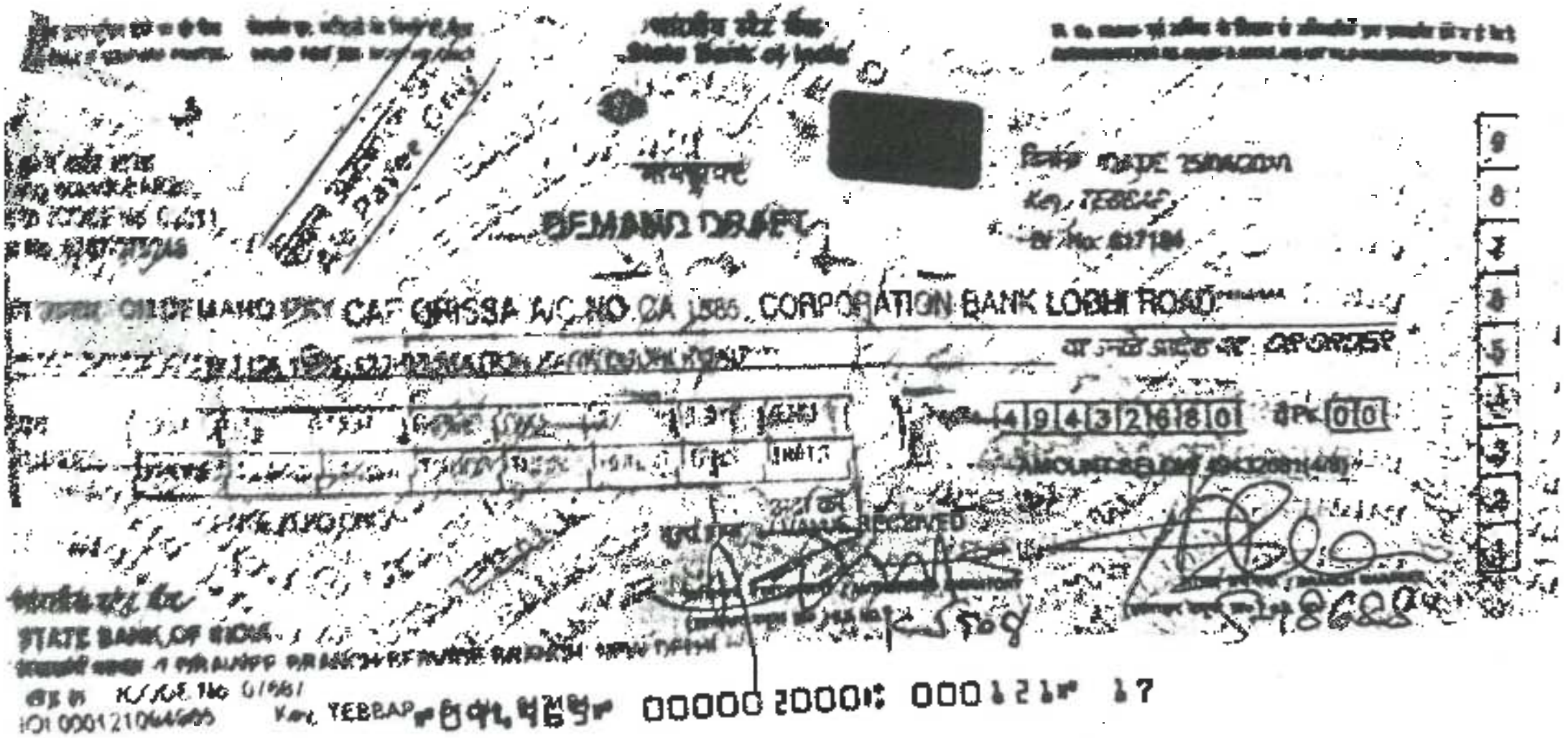
Copy to " CAMPA " file

Divisional Forest Officer,
Bonai Division.

## DETAILS OF FUNDS RECEIVED FROM USER AGENCIES UNDER FOREST (CONSERVATION) ACT TO BE TRANSFERRED TO CAMPA FUND

| Sl. No | Name of the Project with GOI approval order No. & date | Bank Draft No. & date (Photo copy of Bank Draft also to be attached) | N.P.V. | C.A. | P.C.A. | S.Z. | 1.5 times of S.Z. | CATP | Wildlife Manag ement | Others (Indicating Specific Purpose) | Total | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1. | Raikela, Bahamba & Tensa Iron & Mn Mines of Sri C.P. Sharma | No.094965 dt.25.6.2010 | 4,94,32,680/- | - | - | - | - | - | - | - | Rs.4,94,32,680/- | NPV realised as per Memo No 2235/F (Misc.SE/TL dt.29.5.2010 of PCCF Cuttack |

31/7/10
Divisional Forest Officer,
Bonai Division.


DEMAND DRAFT
CORPORATION BANK LODHI ROAD
STATE BANK OF INDIA
Key TEBBAP
00000 20001: 000121 17

ANNEXURE - 3

ANNEXURE - 8 By E-mail

# ବନଖଣ୍ଡ ଅଧିକାରୀଙ୍କ କାର୍ଯ୍ୟାଳୟ : ବଣାଇଁ ବନଖଣ୍ଡ

## OFFICE OF THE DIVISIONAL FOREST OFFICER: BONAI FOREST DIVISION

Phone 06626-244454: E-mail- dfo.bonai@odisha.gov.in

Memo No.5258 /6F-(Mg.) Dt: 18.06 .2024

To

The Principal Chief Conservator of Forests,
Forest Diversion & Nodal Officer, F.C. Act'
O/O the P.C.C.F., Odisha, Bhubaneswar.

Sub:- Regarding deposit of ₹ **10,71,49,478/-** into "ORRISA CAMPA in favour of UBIN0996335, Union Bank of India towards cost of differential NPV and Site Specific Wildlife Conservation Plan fund by Sri Anil Kumar Sharma, PoA C.P. Sharma **(Raikela, Bahamba and Tensa Iron & Mn. Mines)**

Ref:- Letter dated 15.05.2024 & dated 20.3.2024 of Anil Kumar Sharma, PoA C.P. Sharma.

With reference to above, the User Agency has intimated this office vide Letters under reference that they have deposited **₹10,71,49,478/-** (Rupees Ten Crore Seventy One Lakhs Forty Nine Thousand Four Hundred Seventy Eight) only in favour of the ORRISA CAMPA Account, Union Bank of India through e-portal of MoEF & CC (http://parivesh.nic.in) towards cost of differential NPV and Site Specific Wildlife Conservation Plan fund and submitted payment details to this office, which are sent herewith for favour of your kind information and necessary action. The detailed statement in the prescribed proforma is **enclosed herewith**.

**Encl :- As above**

Divisional Forest Officer,
Bonai Division.

Memo No.5259 /6F-Dt: 18.06.2024

Copy along with Xerox copy of the enclosures forwarded to the Regional Chief Conservator of Forests, Rourkela Circle, Rourkela for favour of kind information and necessary action.

Divisional Forest Officer,
Bonai Division.

Copy to " CAMPA " file

## DETAILS OF FUNDS RECEIVED FROM USER AGENCIES UNDER FOREST (CONSERVATION) ACT TRANSFERRED TO CAMPA FUND THROUGH RTGS / ONLINE

| Sl. No | Name of the Project with GOI approval order No. & date | Bank Draft No. & date (Photo copy of Bank Draft also to be attached)/ Payment made through RTGS by the User Agency | NPV | Regional Wildlife Management Plan fund | Site Specific WL Conservation Plan | Comp. Affn. | Total | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Proposal for seeking prior approval of Central Government under Section-2 (ii) of the Forest (Conservation) Act,1980 in favour of Anil Kumar Sharma Power of Attorney of Late Chandi Prasad Sharma for non-forestry use of 67.352 ha. forest land for Iron & Manganese Ore Mining in village Raikela, Behamba and Tensa under Bonai Sub-Division in Sundargarh District of Odisha.<br><br>**(Stage-I approval granted Letter No.8-25/2022-FC dt.4.12.2023 of the MoEF & CC, GoI).** | Through e-portal in A/c No.150825839199734 on 12.3.2024 in favour of UBIN0986335, Union Bank of India from UTR No.INDBR32024031200116369 | 4,73,29,918/- | - | - | - | 4,73,29,918/- | - |
| | | Through e-portal in A/c No.150825839199037 on Challan dated 24.4.2024 and payment dated 25.4.2024 in favour of UBIN0986335, Union Bank of India from UTR No.INDBR32024042500312283 | - | - | 5,98,19,560/- | - | 5,98,19,560/- | - |
| | | **Total :-** | **4,73,29,918/-** | | **5,98,19,560/-** | | **10,71,49,478/-** | |

Divisional Forest Officer,
Bonai Division.

Union Bank

| | |
|---|---|
| | [redacted] |
| | [redacted] |
| | [redacted] |
| | [redacted] |
| | [redacted] |
| | [redacted] |

**NEFT/RTGS to be made as per following details:**

| | |
|---|---|
| Beneficiary Name | [redacted] |
| IFSC Code | [redacted] |
| Pay to Account No | [redacted] Valid only for this challan amount |
| Bank Name & Address | Union Bank Of India ECS Centre,2nd, Floor, Jeevan Seva, Mission Road, Bangalore-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Union Bank

| | |
|---|---|
| | [redacted] |
| | [redacted] |
| | [redacted] |
| | [redacted] |
| | [redacted] |
| | [redacted] |

**NEFT/RTGS to be made as per following details:**

| | |
|---|---|
| Beneficiary Name: | [redacted] |
| IFSC Code | [redacted] |
| Pay to Account No | [redacted] Valid only for this challan amount |
| Bank Name & Address: | Union Bank Of India FCS Centre, 2nd, Floor, Jeeva Seva, Mission Road, Bangalore-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

**Note After making the required payment through challan, if the payment status has not been updated even after 2 working days, then kindly mail a copy of your challan with transaction date and reference id to Email. fcsblr@unionbankofindia.bank , cpuro@unionbankofindia.bank, ubin0903710@unionbankofindia.bank**

Customer Acknowledgement Form

[redacted] INDBR32044031200116369

Authorised Signatory

AGENCY COPY

Union Bank

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 24-04-2024

| | |
|---|---|
| Agency Name. | ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CP SHARMA |
| Application No. | 5839199037 |
| MoEF/SG File No. | 8-25/2022-FC |
| Location. | ORRISA |
| Address. | At Amlatola PO Chaibasa Dist West SinghbhumWest Singhbhum |
| Amount(in Rs) | 59819560/- |

Amount in Words :Five Crore Ninety-Eight Lakh Nineteen Thousand Five Hundred and Sixty Rupees Only

**NEFT/RTGS to be made as per following details;**

| | |
|---|---|
| Beneficiary Name: | ORRISA CAMPA |
| IFSC Code: | UBIN0996335 |
| Pay to Account No. | 150825839199037 Valid only for this challan amount. |
| Bank Name & Address: | Union Bank Of India FCS Centre,21/1, III Floor, Jolitta Towers, Miselon Road, Bengaluru-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

BANK COPY

Union Bank

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 24-04-2024

| | |
|---|---|
| Agency Name. | ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CP SHARMA |
| Application No. | 5839199037 |
| MoEF/SG File No. | 8-25/2022-FC |
| Location. | ORRISA |
| Address: | At Amlatola PO Chaibasa Dist West Singhbhum West Singhbhum |
| Amount(in Rs) | 59819560/- |

Amount in Words :Five Crore Ninety-Eight Lakh Nineteen Thousand Five Hundred and Sixty Rupees Only

**NEFT/RTGS to be made as per following details;**

| | |
|---|---|
| Beneficiary Name: | ORRISA CAMPA |
| IFSC Code: | UBIN0996335 |
| Pay to Account No. | 150825839199037 Valid only for this challan amount. |
| Bank Name & Address: | Union Bank Of India FCS Centre, 21/1, III Floor, Jolitta Towers, Miselon Road, Bengaluru-560027 |

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Note:After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: fcsbir@unionbankofindia.bank , epurse@unionbankofindia.bank, ubin0903710@unionbankofindia.bank

Customer Acknowledgement Form

INDUSIND BANK LTD.
BARGIL BRANCH

Payment Type (Please tick appropriate type): RTGS ☐ NEFT ☐ DD ☐ IMPS ☐ Indo Nepal Remittance

☐ Cash ☐ Cheque No.: 034513151 Date: 25.04.2024 Time: 01:20 PM

Amount(in figures): 5,98,19,560/-

25 APR 2024

UTRNO - INOBR32024042500312283

Commission for Cash (OGR) (in figures):

Total Amount(in figures): Five crore ninty eight Lakh nineteen thousand five hundred sixty only

RECEIVED

Received Signature & Bank Seal

ANNEXURE - 9

# SCHEME FOR

# PROTECTION OF ADJOINING NALA

# WITHIN THE MINING LEASE AREA

# OF

# RAIKELA, BAHAMBA, TENSA IRON & MANGANESE ORE MINES OF

# SRI ANIL KUMAR SHARMA PoA

# OF LATE C.P. SHARMA

# IN

# BARSUAN RANGE

# OF

# BONAI FOREST DIVISION

# OF

# SUNDARGARH DISTRICT

# SCHEME FOR PROTECTION OF ADJOINING NALA WITHIN THE MINING LEASE AREA OF RAIKELA, BAHAMBA, TENSA IRON & MANGANESE ORE MINES OF SRI ANIL KUMAR SHARMA PoA OF LATE C.P. SHARMA IN BARSUAN RANGE OF BONAI FOREST DIVISION OF SUNDARGARH DISTRICT

## 1. INTRODUCTION

M/s Chandi Prasad Sharmawas granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Srl C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha. and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C. Act'1980 has been granted by MoEF & CC, Govt. of India vide their Letter No.8-25/2023-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.4 for preparation and implementation of a Scheme for protection of adjoining nala within the ML area at the project cost.**

Forest and wildlife are inextricably linked to each other as forest meets almost all requirement of wild fauna in the form of food, water, cover, space etc. Therefore, to save nala from erosion will fulfill the requirement of water for wildlife. Tree cover will provide shade, escape cover to them while visiting streams to quench their thirst. Special afforestation by planting/retaining species of fruit trees like Harida, Bahada, Amla, Zyzyphus, Kendu, Mahul, ficus species like Bar, Aswastha, Jarl, Dimiri, will be preferred. Grass lands are also to be raised with palatable grasses for wildlife.

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharmais located in SundargarhDistrict of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 43.867" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest, i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly50% of the year.

## 6. NALA /DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area. The perennial stream flowing within the Mining Lease area have been mentioned in the Map enclosed vide **Annexure-4.**

## 7. EXISTING VEGETATION

The vegetation of the applied area is composed of Sal (*Shorea robusta*), Sidha (*Lagerstroemia parviflora*), Sishu (*Dalbergia latifolia*), Char (*Buchanania lanjan*), Dhaura (*Anogeissus latifolia*), Kurum (*Adina cordifolia*), Asan (*Terminalia tomentosa*), Mango (*Mangifera indica*), Kendu (*Diospyros melanoxylon*), Bahada (*Terminalia belerica*) Jamu (*Syzygiumcouminii*), Kusum (*Schleichera oleosa*), Mahul (*Madhuca indica*), Bel (*Aegle marmelos*), Antidesma acidum, Ardisia solanaceae, Blumeopsis flava, Kasi (*Bridelia retusa*) etc. are major species among flora available in the applied area. ***Sal (Shorea robusta)*** is the pre-dominant species.

## 8. OBJECTIVE OF THE SCHEME

The objectives are as follows:-

I) **To fulfil Condition No.4 of the Stage-I approval granted vide No.8-25/2022-FC dt.4.12.2023 of MoEF & CC is as follows.**

**"The State Government shall ensure that following measures as suggested by the Superintending Engineer, Rourkela Irrigation Division for protection of adjoining nala shall be implemented at the project cost.**

**(a) Embankment on both side the Nalla to be ensured for preventing Pollution of streams;**

**(b) Vegetation improvement on both side of stream needs to be ensured (50m on both side)**

**(c) Artificial trenches (Canals) surrounding overburden dumping to be ensured for avoiding erosion of overburden to the streams**

**(d) Water quality need to be checked regularly by the concerned authority.**

2. To protect the embankment of the streams in such a way that, soil erosion is restricted.

4. To increase the ground water table through Soil & Moisture Conservation.

5. To provide a green cover on both side of streams to reduce soil erosion.

6. The plantation so raised should include fruit and fodder species; grass etc. for the sustenance of the wildlife existing nearby.

## 9. JOINT VERIFICATION OF THE PROPOSED AREA.

A Joint verification has been conducted between representative of Superintending Engineer, Irrigation Division, Rourkela, Range Officer, Barsuan Range, User Agency and the following suggestion has been proposed.

- The Length of the existing Nala comes to 1002 mt. for conservation of Nala retaining wall has been proposed on both side of Nala.
- An area of 5.408 ha. comes within the 50 mt. width on both side of the Nala. For vegetative improvement AR Plantation @1000 plants per hectare has been proposed.
- Artificial trenches (Canal) have been proposed over 5.408 ha. within the 50 mt. width on both side of the Nala for which Soil Conservation Measures have been proposed.
- The User Agency will ensure that the water quality will be checked regularly by the concerned authority.

**10. PLANTATION.**

For vegetation improvement on the embankment on both side the Nalla 50 mt. width area, the following species mentioned below over 5.408 ha. by AR Plantation @ 1000 seedlings per ha. at a spacing of 2.5 mtr X 2.5 mtr. has been proposed. So, 5408 nos. of seedlings will be required for AR plantation @1000 plants per hectare. As far as possible, species suitable for the site shall be planted as detailed below; The cost estimate of AR Plantation @1000 plant per hectare is enclosed as Annexure-1.

1. *Pongamia pinnata* (Karanja).
2. Ficus religiosa (Jari)
3. *Psidium guajava* (Guava).
4. *Azadirachta indica* (Neem).
5. *Syzizium cumuni* (Jamun).
6. *Mangifera indica* (Mango).
7. *Artocarpus heterophyllus* (Panas).
8. *Ficus bengalensis* (Bara).
9. *Aegle marmelos* (Bela).

and other indigenous species.

The following items of work will be taken up for planting the area.

**(I) Raising of Nursery :-**

Seedlings required for plantation shall be raised in a temporary nursery nearer to the planting site and water sources. Nursery work will be started 18 months prior to the year of plantation so that quality seedling stock will be available for plantation. The seedlings shall be raised 10% extra besides the actual requirement to compensate the casualties. Seedlings will be raised in polythene bags of 9" x 5" size following standard nursery practice.

**(ii) Site Clearance:**

The miscellaneous unwanted growth in the Safety Zone area will be cleared before taking up pitting work.

**iii) Alignment and pitting.**

Alignment and pitting will be taken up in March-April. Pits of size 45 cm x 45 cm x 45 cm will be dug, maintaining a spacing of 2.5 mtr. X 2.5 mtr. in the safety zone area.

**iv) Actual planting.**

The seedlings will be planted @ 1000 seedlings per ha. in the dug out pits of size 45cm x 45cm x 45cm with a spacing of 2.5mtr x 2.5mtr. Plantation shall be taken up after first regular shower of monsoon and completed by the end of July. Species will be planted as per suitability of the soil condition. NPK/ Bio fertilizer @50gms per plant shall be applied as basal dosage. Anti-termite insecticide shall also be applied to each pit while planting. Casualties if any noticed shall be replaced with the excess seedlings raised for the purpose. During second year also, casualty replacement will be done for which seedlings shall be raised.

**v) Weeding, Soil working and Manuring.**

For establishment and better growth of the planted seedlings, timely weeding, soil working and manuring are necessary. It is proposed to carry out two weedings, soil working and manuring during the first year and second year of plantation and one weeding and soil working during third year. During first year and second year, first weeding and manuring shall be carried out during August-September and the second one during October-November along with soil working. First weeding shall be around the plants and the second will be of strip weeding. The weeding of third year will be around the plants, which will be carried out during August.

After each weeding, soil working will be done around each plant at a radius of 0.5mtr, and manuring of each plant will be done @50gms of NPK/ Bio fertilizer per plant in ring form.

**(vi) Application of Insecticides.**

After planting of good healthy seedlings, the plantation site may cause influx of insects, which usually eat and damage the tender leaves and shoots of the plants. To get rid of such insect attack, application of insecticides will be taken up in required doses at desired intervals. Spraying of insecticides shall be done preferably in a sunny day in the forenoon as per requirement.

## 11. Soil & Conservation of Moisture Measures.

The site selected for Soil Moisture Conservation is undulating, and gullies have been formed due to erosion. So,Soil Conservation Measures like Staggered Trench, Percolation Pit, Contour Trench, Graded earthen bund, LBCD, Wire mesh LBCD, Sub surface Dyke and WHS as per site requirement have been proposed. An area of **5.408 ha. land** has been selected for SMC work within 50 m of both side of Nalla. The cost norm of SMC is enclosed as **Annexure-2**.

## 12. Construction of retaining wall.

The length of existing Nala comes to 1002 mt. Hence, to protect the nala of soil erosion, retaining wall over 1002 mt. has been proposed both side of the Nala. The cost norm of Retaining Wall has been provided in **Annexure –3.**

## 13. Plan for Construction of Check Dams

After studying the drainage pattern it has been found total number of check dam required is 3 and accordingly 3 nos. of Check Dam will be constructed in the proposed area. Details of proposed Check Dams are shown in the map. The cost norm of Check Dam has been provided in **Annexure –4.**

## 14. Executing Agency:

The User Agency shall execute the work under the supervision of the State Forest Department.

## 15. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the present Scheme, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for the executing agency and technical experts shall be provided by the user agency for proper execution of this programme.

## 16. REQUIREMENT OF FUNDS

The total cost of the implementation of proposed scheme will be **₹61,47,000/- (Rupees Sixty One Lakhs Forty Seven Thousand) only** details are as under.

| | Works to be executed by the User Agency. | | |
|---|---|---|---|
| 1. | AR Plantation @1000 plants per hectare over 5.408 ha. @₹2,58,777/- | ₹ | 13,99,466.00 |
| 2. | Soil conservation measures structures like staggered trench, percolation pit, contour trench, graded earthen bund, LBCD, wire mesh, LBCD, Sub surface Dyke and Water Harvesting structures = 5.408 ha X ₹39,284/-. | ₹ | 2,12,448.00 |
| 3. | Construction of retaining wall over 1002 RMT @ Rs.2491/- per RMT | ₹ | 24,95,982.00 |
| | Construction of 3 nos. of check dam@ Rs.4,93,407.00/- per each | ₹ | 14,80,221.00 |
| | **Total :-** | ₹ | **55,88,117.00** |
| 4. | Entry Point Activities 10% of the cost | ₹ | 5,58,812.00 |
| | **Total :-** | ₹ | **61,46,929.00** Or ₹ **61,47,000.00** |

**(Rupees Sixty One Lakhs Forty Seven Thousand) only**

Divisional Forest Officer,
Bonai Division.

Technically Approved

Regional Chief Conservator of Forests
Rourkela Circle

# ANNEXURE-1

ANNEXURE-4

BASIC COST ANALYSIS FOR COMPLIANCE/IMPLEMENTATION (MAIZE PLANTATION)
@ 1000 PLANTS PER HECTARE (10 numbers of seedlings)

WAGE RATE [illegible] Per Man Day

| Sl. No | Item of work | Periods of Operation | Nos of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **Pre Year (Preliminary Pre-Planting Operations** | | | | | |
| 1 | Survey, demarcation and Pitting [illegible] | Nov/Dec | 2 | 600 | 0 | 600 |
| 2 | Preparation of Treatment Map (Optional Map) | Nov/Dec | 1 | 300 | 100 | 400 |
| 3 | Site preparation (Clearance, removal of [illegible] | Nov/Dec | 24 | 7200 | 0 | 7200 |
| 4 | Creation of 4.5ft [illegible] | Feb/Mar | 1 | 300 | 0 | 300 |
| 5 | Alignment and marking of pits | Feb/Mar | 1 | 300 | 0 | 300 |
| 6 | Digging of pits 1.5ft x 1.5ft x 1.5ft (cubical) and [illegible] | Feb/Mar | 60 | 18000 | 0 | 18000 |
| 7 | Construction of Temporary Labour Shed, Drinking water facility and First Aid etc. | Jan/Mar | 4 | 0 | 3500 | 3500 |
| | Total | | 97 | 29100 | 3600 | 32700 |
| | **1st Year/Planting Year** | | | | | |
| 1 | Refilling of pits by selecting [illegible] of the pits dug [illegible] compost prepared/ CDM/ FYM & mixing the [illegible] properly | Jun/Jul | 75 | 22500 | 5850 | 28350 |
| 2 | Transportation of [illegible] saplings from Nursery to [illegible] Transportation charges per [illegible] Rs. 1000/- per trip) Loading, Unloading & [illegible] (Average load of 10 Nos.) including charges for [illegible] | Jul/Aug | 4 | 0 | 4000 | 4000 |
| 3 | Watering of [illegible] saplings at planting site | Jul/Aug | 1 | 300 | 0 | 300 |
| 4 | Close supervision of [illegible] and soil [illegible] including also [illegible] the planting site, applying insecticide/pesticide by [illegible] after [illegible] the soil properly around the [illegible] saplings. | Jul/Aug | 225 | 67500 | 0 | 67500 |
| 5 | Manual Earthing up [illegible] (a) NPK/Urea fertilizer 150 gms/plant in two splits = 500g @ Rs 50/- per bag = Rs. 1500/- (b) Urea/Vermicompost/Neem Cake/[illegible] and Rs 750/- subsequent doses @ Rs. 750/- (c) Insecticide/ Bio-pesticide @ 5 gms/plant for 1 kg @ Rs 150/- per kg = Rs. 750/- | Jul/Aug | 10 | 3000 | 3000 | 6000 |
| 6 | Casualty Replacement @ 10% (100 nos) | Jul/Aug | 25 | 7725 | 0 | 7725 |
| 7 | Soil Working in Nursery | Aug/Sept | 11 | 3552 | 0 | 3552 |
| 8 | Hand Weeding, Soil Working (2 nos. diameter around the plant) Loosening & Mulching | Oct/Nov | 17 | 4665 | 0 | 4665 |
| 9 | Pruning, Staking (2 nos. stakes of [illegible] per plant) and [illegible] Application of organic manure | Feb/Mar | 3 | 933 | 0 | 933 |
| 10 | Watch & Ward including [illegible] | Aug-Mar | 12 | 3954 | 0 | 3954 |
| | Total | | 70.50 | 23791.50 | 3600.00 | 27391.50 |
| | **2nd Year Maintenance** | | | | | |
| 1 | Transportation of Fill Soil/Vegetative Manure/Fly ash, plantation machine/Digging, Refilling & [illegible] | Jul | 0 | 0 | 600 | 600 |
| 2 | Casualty replacement @ 10 % | Jul | 25 | 7725 | 0 | 7725 |
| 3 | Cost of Chemicals/Fertilizers: A) Cost of insecticide/ Neem cake/Bio 5 gms/plant = 0.5 kg @ Rs 150/- per kg = Rs.75/- B) Urea/NPK/Standard Soil/Vermicompost/Ve [illegible] | Jul/Aug | 0 | 0 | 2625 | 2625 |
| 4 | Weeding (Complete weeding), Watering & Soil working (2nos. diameter around the plant) | Sep/Oct | 35 | 10605 | 0 | 10605 |
| 5 | Pruning (2 to 4 Side Branches over 400 mtrs) including removal/Weed of trees from each | Oct/Nov | 3 | 933 | 0 | 933 |
| 6 | Watch & Ward including [illegible] | Aug-Mar | 18 | 5958 | 0 | 5958 |
| 7 | Maintenance of Temporary Labour Shed, Drinking water facility and First Aid etc. | Apr-Mar | | 0 | 1000 | 1000 |
| | Total | | 81.5 | 25221.5 | 4225 | 29446.5 |

| Sl. No. | Name of work | Preferable Period of Execution | Total Manhours | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **3rd Year Maintenance** | | | | | |
| 1 | Cost of Fire fighting (2 nos. 9KG, 1No. Sand Bucket/Water pumps/Air Horn/any other facilities | Feb/Mar | 8 | 9 | 2000 | 2009 |
| 2 | Monthly Inspection meeting & Planning & Skill [illegible] | Sep/Mar | 12 | 4665 | 0 | 4665 |
| 3 | Fire line testing (2 nos. wide fire line over 400 m length) including [illegible] | Feb/May | 4 | 951 | 0 | 951 |
| 4 | [illegible] | Apr/Mar | 18 | 3249 | 0 | 3249 |
| 5 | Maintenance of Temporary Labour Shed, Drinking water facility and Misc. [illegible] | Aug/May | 6 | 7 | 1000 | 1007 |
| | Total | | 360 | 111140 | 3000 | 14086 |
| | **4th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) [illegible] | Feb/Mar | 3 | 951 | 0 | 951 |
| 2 | Watch & Ward including maintenance of temporary labour barracks | Apr/Mar | 18 | 3249 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |
| | **5th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) | Feb/Mar | 3 | 951.00 | 0 | 951 |
| 2 | Watch & Ward | Apr/Mar | 18 | 3249.00 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |
| | **6th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) | Feb/Mar | 3 | 951.00 | 0 | 951 |
| 2 | Watch & Ward | Apr/Mar | 18 | 3249.00 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |
| | **7th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) | Feb/Mar | 3 | 951.00 | 0 | 951 |
| 2 | Watch & Ward | Apr/Mar | 18 | 3249.00 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |
| | **8th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) | Feb/Mar | 3 | 951.00 | 0 | 951 |
| 2 | Watch & Ward | Apr/Mar | 18 | 3249.00 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |
| | **9th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) | Feb/Mar | 3 | 951 | 0 | 951 |
| 2 | Watch & Ward | Apr/Mar | 18 | 3249.00 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |
| | **10th Year Maintenance** | | | | | |
| 1 | Fire line testing (2 nos. wide fire line over 400 m length) | Feb/Mar | 3 | 951 | 0 | 951 |
| 2 | Watch & Ward | Apr/Mar | 18 | 3249.00 | 0 | 3249 |
| | Total | | 21 | 4551 | 0 | 4551 |

Year wise Abstract of Cost Norms (showing sundries cost separately)

| Sl. No | Name of work | Preferable Period of Execution | Total Man days | Cultivation Cost (in Rs.) | Protection cost (in Rs.) | Total cost (in Rs.) | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Sl. No | Year | No. of Man days | Total cost (in Rs) | Material Cost (in Rs.) | Blocking, Protection, Leasing, 10% Material loss and Other Contingency (5%) of (4+5) | Cost of seedlings @Rs.3.50 per seedlings | TOTAL COST (in Rs) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 0th year | [illegible] | 33727.5 | 36812.5 | 4525.00 | 0.00 | 77065.00 |
| 2 | 1st year | [illegible] | 31941.5 | 148312.5 | 13102.50 | 55241.00 | 248597.50 |
| 3 | 2nd year | 365 | 21972.5 | 41312.5 | 3171.50 | 39871.00 | 105357.50 |
| 4 | 3rd year | 365 | 21194.0 | 15312.5 | 1825.00 | 0.00 | 38331.50 |
| 5 | 4th year | 214 | 8551.0 | 0.0 | 427.55 | 0.00 | 8978.55 |
| 6 | 5th year | 214 | 10571.5 | 0.0 | 528.58 | 0.00 | 11100.08 |
| 7 | 6th year | 214 | 7740.0 | 0.0 | 387.00 | 0.00 | 8127.00 |
| 8 | 7th year | 214 | 9693.5 | 0.0 | 484.68 | 0.00 | 10178.18 |
| 9 | 8th year | 214 | 6621.0 | 0.0 | 331.05 | 0.00 | 6952.05 |
| 10 | 9th year | 214 | 6951.5 | 0.0 | 347.58 | 0.00 | 7299.08 |
| 11 | 10th year | 214 | 6621.0 | 0.0 | 331.05 | 0.00 | 6952.05 |
| | Total= | 2525.0 | 133330.0 | 164375.0 | 27101.0 | 94871.0 | 301276.0 |

Note:

1. [illegible]
2. 10% [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]

APCCF (Forest Officer) Bus & NO, FC Hqrs

Matrix for Model-I A Conventional CA Plantation (AR) 1000 plants per Ha

| Sl. No. | Financial Year | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | XVII | XVIII | XIX | XX | XXI | Total Cost (in Years) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Plot Name | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | |

APCCF (Forest Diversion & NC, HQ Act)

**Annexure-2**

Annexure-II

Cost Norms for erection of Dry Compensatory Afforestation with Earthworks of Soil & Conservation and Moisture (2020

WAGE Rate Rs-311/- PER DAY

| Sl.No | Item of Works | Applicable Period of Operation | Total Cost |
|---|---|---|---|
| | 0th Year (Pre-Planting Operation) | | |
| 1 | Nil | | 0 |
| | 1st Year | | |
| 2 | Soil Conservation Protective structures (Gully Stopping Trench, Pemi) pan pit, Checker basin, Gradicel earthen bund, LDPE, Wire mesh, Earth Soil bunding, Dykes in WH) as per the apply & site requirements (S | Apr/1st | 20,235 |
| | 2nd Year | | |
| 3 | Maintenance of SWC structures @ 15 % of total year cost | Apr/1st | 3,035 |
| | 3rd Year | | |
| 4 | Maintenance of SWC structures @ 15 % of total year cost | Apr/1st | 3,035 |
| | 4th Year | | |
| 5 | Maintenance of SWC structures @ 15 % of total year cost | Apr/1st | 3,035 |
| | 5th Year | | |
| 6 | Maintenance of SWC structures @ 15 % of total year cost | Apr/1st | 3,035 |
| | Total | | 32,340 |

Abstract

| Sl. No | Year | No. persons days | Salary per unit @ Rs. 311/- per day | Material Cost | Total cost (Rs.) |
|---|---|---|---|---|---|
| 1 | 0th year | 0.0 | 00 | 00 | 00 |
| 2 | 1st year | 65 | 65 | 20,235.0 | 20,235.00 |
| 3 | 2nd year | 10 | 10 | 3,035.00 | 3,035.00 |
| 4 | 3rd year | 10 | 10 | 3,035.00 | 3,035.00 |
| 5 | 4th year | 10 | 10 | 3,035.00 | 3,035.00 |
| 6 | 5th year | 10 | 10 | 3,035.00 | 3,035.00 |
| | Total | 105.00 | 105 | 32,740.0 | 32,340.0 |

Wherever (space) is shown in above table, it is to be filled up as per Site Layout & requirements at the plantation site on the basis of the nature & type/degree of difficulties encountered during the execution.

ACF/F (Forest Division & HQ, Mirzapur)

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## Matrix for (SMS)

In Rupees

| Sl. NO. | Commencement Year | I | II | IIa | V | V | VI | VII | VIII | IX | X | Xa | XII | XII | XIV | XV | XVI | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Norm | | 0 | 30215 | 3032 | 3039 | 3032 | 3037 | | | | | | | | | | | |
| 1 | 2021-22 | 0 | 31226 | 3343 | 3513 | 3582 | 4570 | | | | | | | | | | | 35833 |
| 2 | 2022-23 | | 0 | 30227 | 3539 | 3695 | 4869 | 4264 | | | | | | | | | | 87815 |
| 3 | 2023-24 | | | 0 | 31401 | 3634 | 3879 | 4553 | 4267 | | | | | | | | | 39184 |
| 4 | 2024-25 | | | | 0 | 31971 | 3818 | 4151 | 4205 | 4480 | | | | | | | | 41747 |
| 5 | 2025-26 | | | | | 0 | 31870 | 4013 | 4267 | 4478 | 4764 | | | | | | | 43410 |
| 6 | 2026-27 | | | | | | 0 | 31762 | 4264 | 4491 | 4802 | 4939 | | | | | | 45475 |
| 7 | 2027-28 | | | | | | | 0 | 28443 | 4273 | 4764 | 4937 | 5186 | | | | | 47749 |
| 8 | 2028-29 | | | | | | | | 0 | 25467 | 4273 | 4939 | 5187 | 5446 | | | | 96138 |
| 9 | 2029-30 | | | | | | | | | 0 | 31950 | 4765 | 5185 | 5443 | 5717 | | | 52642 |
| 10 | 2030-31 | | | | | | | | | | 0 | 31939 | 5183 | 5445 | 5715 | 6001 | | 55274 |

APCCF (Forest Diversion & WD, FC Act)

**Annexure-3**

**Wage Rate- Rs.450.00**

**Detail Estimate of Retaining wall of loose local Boulder with cement-Sand Patching over the surface of Boulder wall.**

| Sl. No. | Description of Items | No | Length | Width | Height | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| For one K.M.Length | | | | | | | | | |
| 1 | Rough Stone Dry Packing with local boulder only labour charges (Local boulder will be Supplied by our Company) | 1 | 1000.00 | (1.00+1.50)/2 | 1.20 | 1500.00 | Cum | | |
| | | 1 | 1000.00 | 1.50 | 0.30 | 450.00 | Cum | | |
| | | | | | | 1950.00 | Cum | 885.14 | 1726023.0 |
| 2 | Irregular cement sand patches on the both side of the wall with 2" thick cement sand mortar(1:6) on top | 1 | 1000.00 | 1.00 | | 1000.00 | Sqm | | |
| | | 2 | 1000.00 | 1.20 | | 2400.00 | Sqm | | |
| | | | | | | 3400.00 | Sqm | 225.00 | 765000.00 |
| | | Rate per one K.M. Length | | | | Total | | | 2491023.00 Or 2491023.00 |
| | | | | | | | | | **Cost for Running Meter length** 2491.00 |

CHANDI PRASAD SHARMA

P. A. HOLDER

Divisional Forest Officer
Bonai Division

**Annexure- 4**

**Wage Rate- Rs.450.00**

## Detail Estimate of Concrete Structure of Check Dam

| Sl No | Description of Items | No | Length | Width | Height | Qty | Rate | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Earthworkin hard soilin embankment roads with in 50 mtr initial lead &1.50 mtr initial lift including rough dressing &breaking clods to Maximum 5.00c.m. to 7.00 c.m.&laying layers not exceeding 0.30 mtr depth as per specification approved by department along with proper compaction with H.R.R Excavation | | | | | | | |
| | Base | 1 | 5.00 | 5.50 | 0.50 | 13.75 | | |
| | Wing Wall | 4 | 2.00 | 0.50 | 0.50 | 2.00 | | |
| | Appron | 2 | 3.00 | 5.00 | 0.20 | 6.00 | | |
| | Cut of wall | 2 | 5.00 | 0.45 | 0.50 | 2.25 | | |
| | | | | | | 24.00 | 338.83 | 8131.90 |
| 2 | Plain cement concrete (1:4:8) | | | | | | | |
| | Base | 1 | 4.00 | 5.50 | 0.075 | 1.65 | | |
| | Wing Wall | 4 | 2.00 | 0.50 | 0.08 | 0.30 | | |
| | Appron | 2 | 3.00 | 5.00 | 0.08 | 2.25 | | |
| | Cut of wall | 2 | 4.00 | 0.45 | 0.08 | 0.27 | | |
| | | | | | | 4.47 | 9842.83 | 43997.44 |
| 3 | Cement concrete (1:2:4) | | | | | | | |
| | Below Ground Level | | | | | | | |
| | Base | 1 | 4.00 | 5.50 | 0.40 | 8.80 | | |
| | Wing Wall | 4 | 2.00 | 0.50 | 0.40 | 1.60 | | |
| | Appron | 2 | 3.00 | 5.00 | 0.10 | 3.00 | | |
| | Cut of wall | 2 | 4.00 | 0.45 | 0.50 | 1.80 | | |
| | | | | | | 15.20 | | |
| | Above Ground Level | | | | | | | |
| | Base | 1 | 4.00 | (2.00+5.00)/2 | 1.00 | 14.00 | | |
| | Wing Wall | 4 | 2.00 | 0.40 | 1.00 | 3.20 | | |
| | | | | | Total | 17.20 | | |
| | | | | Grand Total | | 32.40 | 13619.67 | 441277.36 |
| | Rate per one No Check Dam. Length=4.00 mtrHt=1.30 mtr Slope U/S=1:1.5 D/S=1:2 | | | | | Total | | **493406.70 Or, 493407.00** |

CHANDI PRASAD SHARMA

P. A. HOLDER

Divisional Forest Officer
Bonai Division

85°10'0"E 85°10'30"E

# MAP SHOWING THE NALA AND ITS 50 METERS IMPACT AREA FOR PROTECTION AND CONSERVATION OF THE NALA IN RESPECT OF RAIKELA, BAHAMBA AND TENSA IRON & MN. ORE MINES OF SRI ANIL KUMAR SHARMA, POA OF LATE C.P. SHARMA.

N W E S

SCALE:-1:5,000

21°52'0"N

## Legend

- ML BOUNDARY
- SAFTEY ZONE
- 50 METER RADIUS(5.408 Ha.)
- DRAINAGE PATTERN
- RETAINING WALL(1002 Meter)
- PLANTATION AREA(5.408 Ha.)
- CHECK DAM
- STAGGERED TRENCH
- LBCD

Open S

0 75 150 300 450 600 Meter

Divisional Forest Officer Bonai Division

CHANDI PRASAD SHARMA

P.A. HOLDER

Forest Range Officer Barsuan Range

Assistant Engineer Flood Sub-Division Rourkela

Register Dangua Section

21°51'30"N

85°10'0"E 85°10'30"E

ANNEXURE- 10

# Scheme

# For

## MITIGATIVE MEASURES TO MINIMIZE SOIL EROSION AND CHOKING OF STREAMS

in compliance

with

Condition No.10 (a) of

Stage-I approval granted vide

Letter No.8-25/2022-FC dt.4.12.2023 of

Government of India, Ministry of Environment,

Forest& Climage Change

for

Diversion of 67.352 Hects of Forest Land

for U/s-2 (ii) of F.C. Act'1980

within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines

of


ANIL KUMAR SHARMA,

PoA OF LATE CHANDI PRASAD SHARMA

in village Raikela, Bahamba and Tensa inKoira Tahsil,

Bonai Forest Division

Dist.Sundargarh Odisha.

# MITIGATIVE MEASURES TO MINIMIZE SOIL EROSION ANDCHOKING OF STREAMS

## 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha. and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C. Act'1980 has been granted by MoEF&CC, Govt. of India vide their Letter No.8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.10(a) for preparation and implementation of a plan containing appropriate mitigative measures to minimise soil erosion and choking of streams.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 13.867" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest, i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## 7. EXISTING VEGETATION

The vegetation of the applied area is composed of Sal (*Shorea robusta*), Sidha (*Lagerstroemia parviflora*), Sishu (*Dalbergia latifolia*), Char (*Buchanania lanjan*), Dhaura (*Anogeissus latifolia*), Kurum (*Adina cordifolia*), Asan (*Terminalia tomentosa*), Mango *(Mangifera indica*), Kendu (*Diospyros melanoxylon*), Bahada (*Terminalia belerica*) Jamu (*Syzygium cumini*), Kusum (*Schleichera oleosa*), Mahul (*Madhuca indica*), Bel (*Aegle marmelos*), Antidesmaacidum, Ardisia solanaceae, Blumeopsis flava, Kasi (*Bridelia retusa*) etc. are major species among flore available in the applied area. ***Saf (Shorea robusta)*** is the pre-dominant species.

## 8. LAND USE PATTERN

During the life of the mine, about 69.606 hectares will be utilized for mining and its allied activities, Road, and green belt plantation in Safety Zone area etc. The details of land use pattern will be as follows:

| Sl. No | Purpose | Proposed land use pattern (Ha.) | | | | | |
|---|---|---|---|---|---|---|---|
| | | PRF | DLC | Revenue Forest | Total Forest | Non-Forest | Total |
| 1 | Mining & its allied activities. | 0.050 | 6.834 | - | 6.884 | - | 6.884 |
| 2 | Public Road & Nala | - | 0.510 | - | 0.510 | 2.254 | 2.764 |
| | **Sub-Total :-** | **0.050** | **7.344** | - | **7.394** | **2.254** | **9.648** |
| | **Safety Zone / Green belt area** | | | | | | |
| 3 | 7.5 mt wide along the ML boundary | 0.542 | 2.053 | 0.241 | 2.836 | - | 2.836 |
| 4 | 50 mt wide along the nala | - | 5.408 | - | 5.408 | - | 5.408 |
| 5. | 10 mt wide along the public road . . | - | 2.409 | 0.031 | 2.440 | - | 2.440 |
| | **Sub-Total :-** | **0.542** | **9.870** | **0.272** | **10.684** | **-** | **10.684** |
| 6. | Area for mining after exploration | 8.359 | 35.708 | 5.207 | 49.274 | - | 49.274 |
| | **Grand Total :-** | **8.951** | **52.922** | **5.479** | **67.352** | **2.254** | **69.606** |

## 9. FACTORS RESPONSIBLE FOR SOIL EROSION & CHOKING OF STREAMS

The mining activities and overburden dumps are the major source of drainage of soil and other substances for choking of any drainage system existing down below. The forms of erosion observed in this region include mainly rill and gully. The storm water runoffs from the uplands, mine faces and OB dump slope areas carry substantial quantity of solids in the lower order streamlets and choke the higher order streams. These lower order streamlets and gullies have high erosion capacity due to steep gradient and transportation of rock fragments with high velocity of the stream and deposition of same in the connecting high order streams due to velocity drop. Streams can also erode by undercutting their banks resulting in mass-wasting processes like slumps or slides. When the undercut material falls into the stream, the fragments are transported and deposited down below in the stream bed. The other mode of sediment transportation is very negligible.

## 10. OBJECTIVES OF THE SCHEME

The objectives are as follows:-

i) To fulfil Condition No.10(a) of the Stage-I approval granted vide No.8-25/2022-FC dt 4.12.2023of MoEF& CC to undertake **"Mitigative measure to minimize soil erosion & choking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance in accordance with the approved plan in consultation with State Forest Department".**

ii) To prevent erosion of top soil.

iii) To prevent obstruction of existing natural water course.

iv) Proper Management of overburden deposited so as to prevent siltation in the down below streams.

v) To prevent overflow of eroded soils from the mining areas to the natural streams.

## 11. PROPOSED METHODOLOGY

To achieve the above objectives, it has been proposed to take up both biological and structural works for soil and water conservation. The vegetative measures are to be adopted mostly in the upper reaches & around O.B dumping sites whereas the structural works are suggested in the lower reaches such as in the garland drain & critical points around O.B. dumps.2 check dams and 1 catch drain have been proposed across the contour to arrest the sediment load arising from up-slopes of seasonal streams, and to prevent choking of streams followed by de-silting before unset of monsoon. The following activities are proposed to be taken up to miligate soil erosion and choking of streams:

a There exists one seasonal stream inside the lease area. The slope of the North-western part and central part of the lease hold area is steep in nature.one Rain water harvesting pond has been proposed to collect the rain water flown from mining. pits, haul roads as well as areas devoid of vegetation. During monsoon heavy runoff carrying silt and sediments will reduce the velocity of water flown from overburden dump. So, four numbers of Catch drains, 2 nos. of check dam have been proposed, demarcated at suitable location and shown in the attached plan.

b. Periodic Sediment/silt removal/De-silting etc. will also be undertaken in those proposed check dams as well as from garland drains and subsequently biological reclamation will be made.

c. Along with the above sedimentation control measures, erosion from OB dump slopes areas will be controlled by additional garland drain, loose boulder structures, settling tanks etc. The main purpose is to control soil erosion from OB dump and mineral stock piles.

## 12. MEASURES ALREADY ADOPTED

There aresome structural measures exist within the said Mining Lease area of Chandi Prasad Sharma.

## 13. MEASURES PROPOSED

The details of proposed mitigative measures to minimize soil erosion and choking of streams in Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma are given below:

a. **Biological Measures**

i) **Plantation**

Soil erosion is moderate since the forest canopy is having density of more than 0.4, and hence it needs protection from soil getting further eroded by drips and the natural binding of the soil due to the root system. Hence, it is proposed to undertake plantation over 1.420 ha. on the surface of the dump. It is also proposed to plant Agave Plants in degraded and poor soils along the slope & toe of plantations over a length of 840 running meter for controlling soil erosion. Details of proposed plantation &Agave plantation is provided in the map.

The cost norm of Block Plantation and Agave Plantation has been provided in **Annexure –I and II.**

The list of species proposed for plantation is as follows

| Sl. No. | Local Name | Botanical Name | Family |
|---|---|---|---|
| 1 | Gambar | *Gmelina arborea* | *Verbenaceae* |
| 2 | Teak | *Tectona grandis* | *Lamiaceae* |
| 3 | Mahua | *Madhuca indica* | *Sapotaceae* |
| 4 | Jamun | *Syzygium cumini* | *Myrtaceae* |
| 5 | Babul | *Acacia nilotica* | *Leguminoceae* |
| 6 | Neem | *Azadirachtia indica* | *Meliacea* |
| 7 | Chhatian | *Alstonia scholaris* | *Apocynaceae* |
| 8 | Siris | *Albizia lebbock* | *Leguminoceae* |
| 9 | Sissoo | *Dalbergia latifolia* | *Fabaceae* |
| 10 | Sal | *Shorea robusta* | *Dipterocarpaceae* |
| 11 | Karanja | *Pongamia pinnata* | *Papilionaceae* |
| 12 | Asan | *Terminalia tomentosa* | *Combretaceae* |

Planting shall be done during July in pre-dug pits of size 45 cm X 45 cm X 45 cm. A basal dose of N.P K fertiliser shall be applied at the time of planting, besides mixing with insecticides to prevent termites & insects. Fruit bearing trees and bamboo rhizomes shall not be planted in close proximity. A minimum distance of 2.5 mt X 2.5 mt shall be maintained on every fourth plants in planting either of the species. Care should be taken to complete the planting during July while rains are still on during first or second week of July.

II) **Weeding**

For establishment and better growth of the planted seedlings, timely weeding, soil working and manuring are necessary. It is proposed to carry out two weedings, soil working and manuring during the first year and second year of plantation and one weeding and soil working during third year. During first year and second year, first weeding and manuring shall be carried out during August-September and the second one during October-November along with soil working. First weeding shall be around the plants and the second will be of strip weeding. The weeding of third year will be around the plants, which will be carried out during August.

After each weeding, soil working will be done around each plant at a radius of 0.5mtr, and manuring of each plant will be done @50grms of NPK/ Bio fertilizer per plant in ring form.

iii) **Application of Insecticides**

After planting of good healthy seedlings, the plantation site may cause influx of insects, which usually eat and damage the tender leaves and shoots of the plants. To get rid of such insect attack, application of insecticides will be taken up in required doses at desired intervals. Spraying of insecticides shall be done preferably in a sunny day in the forenoon as per requirement.

b. **Structural Measures**

Vegetative means of erosion control are the most feasible and economic measures. However, as the preseure on land is increasing, it is necessary to bring even highly eroded land underutilization. In these lands, vegetative measures are not adequate to keep down the erosion. Some structural measures are required to be taken before vegetative measures are adopted. Structural measures, therefore, serve as supplementary to vegetative measures. The objective behind building mechanical structures is to reduce the degree and length of the slope, reducing run-off and consequently, reducing soil erosion.

i) **Plan for Construction of Loose Boulder Structure**

After studying the topography and the drainage pattern it has been found that there are 1 spot where the LBCD required and accordingly it has proposed to construct 1no. of loose boulder structure of 4m span across the proposed garland drain along the dumps&inphase-2, settling pit will help in stabilization of silt & sediment as well as prevention of soil erosion & enrichment of vegetation & greenery development. The cost norm of LBCD has been provided in **Annexure –III.**



*Loose Boulder Structures*

ii) **Plan for Construction of Garland drain**

A shallow trench (1.0 m wide x 1.50m deep) will be dug for storage of runoff accumulated for draining surface water before it is released to the agriculture land or natural water course. Details of proposed Garland drain 290 m shall be constructed during the ensuing seven years period with location is shown in the map. The cost norm of Garland Drain has been provided in **Annexure –IV.**



*Garland Drain around Waste Dump*

### iii) Construction of Retaining wall

A retaining wall is a structure designed and constructed to resist the lateral pressure of soil when there is a change in ground elevation that exceeds the angle of repose of the soil. The Retaining walls are proposed for construction over **278m**. Also, there is a provision for maintenance of the retaining wall for the next 4 years. The cost norm of Retaining wall has been provided in **Annexure- V.**



*Details of Retaining walls*

### iv) Terracing of OB Dump Slope

It is proposed to construct berm & terraces over a length of **840m**. on the proposed dumps considering the volume of OB materials &the area earmarked for dumping. The slope of individual terrace should be within the permissible range considering the angle of repose of the soil and space available, thereby maintaining the angle of repose at less than28$^{0}$. The terracing will be done through the internal resources by deploying the operating mining equipment. All these operations will be carried out after sufficient deposition of OB. When OB dump will partially maturate, the work will be executed. The cost norm of Terrace Development has been provided in **Annexure-VI**



*Terracing of OB Dumps*

**v) Plan for Construction of Check Dams**

After studying the drainage pattern it has been found total number of check dam required is 2and accordingly, 2 nos. of Check Dam will be constructed near the rain water harvesting pit. During monsoon there is heavy on-rush of water as a runoff arising from up slope/higher elevation to lower elevation. Hence, attention is to be paid to reduce the flow velocity of runoff & settle the silts/sediments flown from overburden dumps, haul roads inside the mine and areas cleared of vegetation. The check dam will be constructed near proposed dump area. Details of proposed Check Dams are shown in the map. The cost norm of Check Dam has been provided in **Annexure –VII**



*Check Dam to restrict Soil erosion & silt flow*

**vi) Plan for Construction of Settling Tanks**

It is a process that involves separation of solid material from slurry. Sometimes, this process is called sedimentation. When waste water is treated, a large quantum of materials is filtered out of the liquid by physical barriers. Even then, the water will contain some solids which need to be removed. A settling tank is proposed to be used to protect the surface water. It has been proposed to construct 1 no. of settling tanks. Details ofproposed2 nos. of settling Tanks are shown in the map. The cost norm of Settling Tank has been provided in **Annexure –VIII.**

**vii) Plan for Construction of catch drain**

A pyramid structure catch drain has been proposed to stream-line the flow of surface runoff from the dump to the foot of the dump, and stair of the catch drain will be placed inward to restrict flow of water. Catch drain is preferably made up of half concrete with number of stairs to reduce gully formation due to rain water wash off, so that runoff water will flow through each terrace of the dump & connect to the catch drain, the water of which goes through catch drain via settling pit to the garland drain. The catch drain will be constructed after the proposed dump height exceeds 26m. 1 no. of catch drain have been proposed. The cost norm of Catch Drain has been provided in Annexure –IX.



*Catch Drains*

**viii) De-siltation**

The de-silting works of the settling tank will be taken up at regular intervals to prevent sedimentation and choking of streams. This de-silting of settling tank will provide space and base to hold the sediment laden runoff thereby allowing settling and clear water to flow down. This de-silting work will be preferably undertaken once in a year before & after monsoon. The implementation of the plans will be site specific in nature depending upon the severity of the sedimentation and choking of stream.

## 14. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the above Mitigative measures, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for technical experts shall be provided by the user agency for proper execution of these programmes.

## 15. MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Division are to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 15% of the plantation cost has been earmarked for expenditure on this score.

## 16. EXECUTING AGENCY

The works in the present Scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish its own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

**SPECIALISED CELL**

| Sl. No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining operation projects |

## 17. REQUIREMENT OF FUNDS

The total cost of implementation of mitigative measures will be **Rs.73,74,900.00 (Rupees Seventy Three Lakh Seventy Four Thousand Nine Hundred) Only.** The expenditure will be made during the next seven years period. This budget will be subject to increase in amount considering the increase in cost of materials and labour charges. The tentative annual expenditure planned for next seven years for the implementation of the mitigative measures is given in the following tables:

**FINANCIAL FORECAST OF THE PROJECT(69.606 HA.)**

**Wage Rate Rs.450.00**

| Sl. No. | Description of the Work | Fund Required (inRs.) |
|---|---|---|
| 1. | **Biological Measures** | |
| A. | Block Plantation (1600 no./ha.) on the dumps and pit to be reclaimed in future over 1.420 ha.@ Rs.3,41,903/- per ha. | 4,85,502.00 |
| B. | Agave Plantation at the toe of dump over a length of 840m. @ Rs.7,81,126/-for 1000 RMT | 6,39,346.00 |
| | **Total** | **11,24,848.00** |
| 2. | **Structural Measures** | |
| A. | 01 no. of Loose Boulder Structure of 4mt span @ Rs.56,638/- per each | 56,638.00 |
| B. | Construction of Garland drain over a length of 290m @ Rs.636/- per RMT | 1,84,440.00 |
| C. | Construction of retaining wall over 278 m @ Rs.2491 per RMT | 6,92,498.00 |
| D. | Terracing of OB dump over a length of 840 m. @ Rs.1065/- per RMT | 8,94,600.00 |
| E. | Construction of 2 nos. of check dam@ Rs 4,93,407 00/- per each | 9,86,814.00 |
| F. | Construction of 1 no. of settling tank @ Rs.19,059.00/- per each | 19,059.00 |
| G. | Construction of 1 no. of catch drain (26 m. at dump slope) @ Rs.3,84,977.00/- per each | 3,84,977.00 |
| | **Total** | **32,19,226.00** |
| 3 | De-siltation work for Garland drain, settling pond and check dam twice in a year on LS | 5,00,000.00 |
| 4. | Maintenance of retaining walls | 5,00,000.00 |
| | **Sub Total (1+2)** | **53,44,074.00** |
| 5. | 15% of the total cost for motivation of VSS / People involved | 8,01,611.00 |
| | **Total** | **61,45,685.00** |
| | **Price escalation @ 20%** | 12,29,137.00 |
| | **GRAND TOTAL** | **73,74,822.00 Or, 73,74,900.00** |

**(Rupees Seventy Three Lakh Seventy Four Thousand Nine Hundred) only**

*Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.*

CHAND PRASAD SHARMA

*Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma.*

PA HOLDER

*Countersigned*

**Technically Approved**

Regional Chief Conservator of Forests
Rourkela Circle

Divisional Forest Officer
Bonai Division

ANNEXURE-S

**BASE COST NORM FOR COMPENSATORY AFFORESTATION (DEDICK PLANTATION)**
**@ 1600 PLANTS/HECTARE (10 mtr x 10 mtr x 10 mtr old spacing)**

**WAGE RATE: Rs. 311/- PER MANDAY**

| Sl No | Name of work | Preferable Period of Execution | No. of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **1st Year (Advance work) Pre-Planting Operation** | | | | | |
| 1 | Survey, Demarcation and Pillar posting | Nov/Dec | 2 | 622 | 0 | 622 |
| 2 | Preparation of Treatment Map (Digital Form) | Nov/Dec | 1 | 311 | 100 | 411 |
| 3 | Site preparation (Shrubs & removal of stumps) | Nov/Dec | 12 | 3732 | 0 | 3732 |
| 4 | Excavation of 4.00 m. wide Inspection Path | Feb/Mar | 1 | 311 | 0 | 311 |
| 5 | Alignment and staking | Feb/Mar | 2 | 622 | 0 | 622 |
| 6 | Digging of pits (45 cm x 45 cm x 45 cm) in hard and gravelly soil | Feb/Mar | 64 | 19904 | 0 | 19904 |
| 7 | Establishment of Temporary Labour Sheds, Drinking water facility and First-Aid etc. | Jan/Mar | 0 | 0 | 3500 | 3500 |
| | Total | | 82 | 25503 | 3600 | 29102 |
| | **1st Year (Planting) Cost** | | | | | |
| 1 | Refilling of pits by clearing the dug-out soil of the pits application of Organic compounds/CUM/ FYM if required same properly | Jul/Aug | 12 | 3732 | 8000 | 11732 |
| 2 | Transportation of 12 months old polybag seedlings in closed truck/tractor trolley for planting/Mega nursery to planting site including loading & unloading. (Average load of 14 Opt) & Stacking the seedlings @ Rs.0/- per Seedling (17nd rate) | Jul/Aug | 0 | 0 | 10560 | 10560 |
| 3 | Watering the subject seedlings at pit one time | Jul/Aug | 3 | 933 | 0 | 933 |
| 4 | Transporting of polybag seedlings and local leaf litter/Coir waste etc to individual dug-out pits within the plantation site, applying Lopper/Jute/Khurpa to carefully slice open the soil with supplied materials & providing the soil properly around the planted seedlings. | Jul/Aug | 36 | 11196 | 0 | 11196 |
| 5 | Cost of Fertilizers/Pesticides<br>(a) NPK/Bio-fertilizers @ 50 gms/plant as basal dose = 80kg @ Rs.20/- per kg = Rs 1600.00<br>(b) Urea/Chemical pest/Bio Kranta/any other fertilizer as per requirement doses @ Rs. 1470.00<br>(c) Insecticide/ Bio pesticide @ 5 gms/plant = 8 kg @ Rs.300/- per kg = Rs. 1040.00 | Jul/Aug | 0 | 0 | 4110 | 4110 |

(93)

| BASE COST NORM FOR COMPENSATORY/AFFORESTATION (BLOCK PLANTATION) @ 1660 PLANTS PER HECTARE (All months old seedling) | | | | | | |
|---|---|---|---|---|---|---|
| WAGE RATE Rs. 315/- PER MANDAY | | | | | | |
| Sl. No | Items of work | Preferable Period of Execution | No of Mandays | Labour Cost (Rs.) | Material Cost (Rs Rs.) | Total cost (in Rs.) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| a | Casualty replacement @ 10% (166 nos) | Jul/Aug | 4 | 1260 | 0 | 1344 |
| b | Soil weeding & Mulching | Aug/Sept | 13 | 4095 | | 4095 |
| c | 2nd Weeding, Soil working (Soil, dead wood, stone, dry plants) and Watering | Oct/Nov | 24 | 8400 | 0 | 8400 |
| d | Fire line making (2 m wide fire line over 4/8km long) including maintenance of inspection path | Feb/Mar | 3 | 945 | 0 | 945 |
| e | Watch & Ward including watering as per requirement | Aug/Mar | 12 | 3780 | 0 | 3780 |
| | Total | | 196 | 61425 | 33600 | 94025 |
| 2nd Year Maintenance | | | | | | |
| 1 | Transportation of 160 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs.6/- per seedlings | Jul | 6 | 6 | 960 | 966 |
| 2 | Casualty replacement- 10% | Jul | 4 | 1260 | 0 | 1344 |
| 3 | Cost of Fertilizer & Insecticide<br>a) Cow dung/Vermin Jal/ Bio-pesticide @ 5 gm/pit = 166 Kg @ Rs.150/- per qtl = Rs.120/-<br>Urea/NPK/Zink fertilizer/Vermicompost/Neem khali/any other fertilizer @Rs.4480/- | Aug/Sept | 0 | 0 | 4480 | 4480 |
| 4 | Weeding (Complete weeding, Mulching & Soil working) (Incl. dead wood around the plants) | Sep/Oct | 20 | 6720 | 0 | 6720 |
| 5 | Fire line making (2 m wide fire line over 4/8 km long) including maintenance of inspection path | Feb/Mar. | 3 | 945 | 0 | 945 |
| 6 | Watch & Ward including watering as per requirement | Apr-Mar | 12 | 3780 | 0 | 3780 |
| 7 | Maintenance of Temporary Cowner Shed, Watching hutter facility and first Aid etc. | | | | 1000 | 1000 |
| | Total | | 45 | 13995 | 6565 | 20561 |

BASE COST NORM FOR CONVERSION OF AFFORESTATION BLOCK PLANTATION
@ 1600 PLANTS PER HECTARE (38 metre old seedling)

WAGE RATE Rs. 311/- PER MANDAY

| Sr. No. | Items of work | Preferable Period of Execution | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | 3rd Year Maintenance | | | | | |
| 3 | Cost of Fertilizer Urea/NPK/Bio-fertilizer/Weedicide/Bio Kleen/any other/Pesticides | Sept/Oct | 0 | 0 | 4486 | 4486 |
| 4 | Weeding, Hoeing & Soil working (Cost also to be accounted for Pipes) | Sep/Oct | 21 | 6230 | 0 | 6230 |
| 5 | Fire line making (2 m wide fire line over 400 m long) including maintenance of inspection path | Feb/Mar | 3 | 933 | 0 | 933 |
| 6 | Watch & Ward including fencing as per requirement | Apr/Mar | 18 | 5598 | 0 | 5598 |
| 7 | Maintenance of Temporary Labour Shed, including water facility and First-Aid etc. | Apr/Mar | | | 1000 | 1000 |
| | Total | | 42 | 12751 | 5486 | 18237 |
| | 4th Year Maintenance | | | | | |
| 1 | Fire line making (2 m wide fire line over 400 m long) including maintenance of inspection path | Feb/Mar | 3 | 933 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 5th Year Maintenance | | | | | |
| 1 | Fire line making (2 m wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 6th Year Maintenance | | | | | |
| 1 | Fire line making (2 m wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 7th Year Maintenance | | | | | |
| 1 | Fire line making (2 m wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 8th Year Maintenance | | | | | |
| 1 | Fire line making (2 m wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |

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**WAGE COST NORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION)**
**@ 1600 PLANTS PER HECTARE (18 months old seedling)**

**WAGE RATE Rs. 311/- PER MANDAY**

| Sl. No. | Details of work | Preferable Period of Execution | Need Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) | |
|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | |
| 1 | Total | | 21 | 6531 | 0 | 6531 | |
| | **Annual Maintenance** | | | | | | |
| 1 | Fire line making (3 m. wide fire line, one side cutting) | Feb/Mar | 3 | 933 | 0 | 933 | |
| 2 | Watch & Ward | Apr/Mar | 30 | 5598000 | 0 | 5598 | |
| 3 | Total | | 33 | 6531 | 0 | 6531 | |

**Year wise Abstract of Cost Norm (showing ceiling per cent wise)**

| Sl. No. | Year | No. persons days | Labour cost @ Rs. 311/- per day (Rs) | Material cost | Monitoring, Evaluation, Reporting, Documentation and other Contingency [5% of (4+5)] | Cost of Saplings @Rs.8.00 per seedling | TOTAL COST |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 0th year | 82 | 25502 | 3608 | 1398.00 | 0 | 30508.00 |
| 2 | 1st year | 285 | 88635 | 73008 | 8000.00 | 86146 | 255789.00 |
| 3 | 2nd year | 45 | 13955 | 6666 | 1000.00 | 8058 | 29679.00 |
| 4 | 3rd year | 41 | 12751 | 5486 | 911.00 | 0 | 19148.00 |
| 5 | 4th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 6 | 5th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 7 | 6th year | 26 | 8086 | 0 | 404.00 | 0 | 8490.00 |
| 8 | 7th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 9 | 8th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 10 | 9th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 11 | 10th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| | Total | 426 | 132476 | 89032 | 8897 | 96596 | 279200 |

Note:

1. Priority must be given to the indigenous local species particularly to the site of plantation.
2. 33 % beneficiaries from Local registered must be preferred in Plantation.
3. Site specific Soil conservation work like LHDP, Gully Plugging, Staggered Trench, Contour Trench, Graded bund etc. may be
4. Craft Hole/Saucer may be adopted as the CA Plantation when sprinkle the Gel at root and Bamboo Mulch may be
5. Watering be done by procurement of water tanker (if) be adopted as per the availability of water.
6. The Cost Practical varies items can be changed with the approval of the concerned DCCF keeping the overall cost norm fixed for each
7. Year wise Year

Accepted by Executive Engineer, KCDC

Divisional Forest Officer,
Bonai Division.

**ANNEXURE-II**

## COST NORM FOR AGAVE PLANTATION (FOR 5 ROWS & 40 MTRS)

Wage Rate : ₹450/day.

| Sl. No. | Name of the work | Man-day | Labour cost (₹) | Material | Total |
|---|---|---|---|---|---|
| **FIRST YEAR OPERATION.** | | | | | |
| 1 | Site clearance alignment and stacking | 2 | 900.00 | - | 900.00 |
| 2 | Cost of lime materials including transportation | 0 | | 494.00 | 494.00 |
| 3 | Digging pits and application of lime | 6 | 2700 | | 2700.00 |
| 4 | Cost of 200 Ac. (sucker) including transportation | | | 2,483.00 | 2,483.00 |
| 5 | Carriage and planting | 2 | 900.00 | - | 900.00 |
| 6 | Soil working and application of fertilizers (twice) and lime | 8 | 3600.00 | | 3600.00 |
| 7 | Cost of fertilizer | | | 554.00 | 554.00 |
| 8 | Contingency | | | 554.00 | 554.00 |
| | **Total:-** | **18** | **8100.00** | **4085.00** | **12180.00** |
| **SECOND YEAR OPERATION** | | | | | |
| 1 | Casuality replacement (20%) including cost of suckers and pitting | 2 | 900.00 | 494.00 | 1394.00 |
| 2 | Weeding and application of fertilizer and lime | 6 | 2700.00 | - | 2700.00 |
| 3 | Cost of fertilizer insecticides & lime | | | 374.00 | 374.00 |
| | **Total:-** | **8** | **3600.00** | **868.00** | **4468.00** |
| **THIRD YEAR OPERATION** | | | | | |
| 1 | Weeding, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | 748 | 3448.00 |
| **FORTH YEAR OPERATION** | | | | | |
| 1 | Weeding, cleaning, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | 6 | 2700.00 | 748 | **3448.00** |
| **FIFTH YEAR OPERATION** | | | | | |
| 1 | Weeding, cleaning, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | **748** | **3448.00** |
| **SIXTH YEAR OPERATION** | | | | | |
| 1 | Weeding, cleaning, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | **748** | **3448.00** |
| | **G.Total** | 50 | **22500.00** | **7945.00** | 30445.00 |
| Cost norm for Agave fencing with five rows 01 km for 6 year | | $\frac{30445}{40}$ | x 1000 = | 7,61,126.00 | |

CHANDI PRASAD SHARMA

P. A. HOLDER

**Annexure-III**

## Detail Estimate of Loose Boulder Structure (S.M.C)

**Wage Rate- Rs.450/-**

**Span – 4 mtr. Ht.= 1.3 mtr**
**Slope- U/S :- 1:1.5 D/S slope :- 1:2.0**

| | | | | |
|---|---|---|---|---|
| 1. | Leveling the unshape surface of the selected site & layout the structure foundation L.S 1 MD. | | | **450.00** |
| 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 6.15 x5.00 x 0.30 = | 9.225 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.30 = | 0.30 | 9.525 | |
| | **@ 19741.02 per 100 cum.** | | | **1880.33** |
| 3. | **Rough stone dry packing** | | | |
| | up to GL | | | |
| | Base with apron- 1 x 6.15 x 5.00 x 0.30 = | 9.225 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.30 = | 0.30 | | |
| | Above GL | | | |
| | Super structure 1 x $\frac{5.15 + 0.60}{2}$ x 1.30 x 4.0 = | 14.95 | | |
| | Wing wall- 4 x 0.50 x 0.50 x 0.50 = | 0.50 | | |
| | Side wall- | | | |
| 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 2.6 x 0.5 = | 2.99 | | |
| iii. | 2 x 0.6 x 1.8 x 0.5 = | 1.08 | | |
| iv. | 2 x 1.0 x 0.5 x 0.5 = | 0.50 | | |
| | **@ 1714.90 per cum** | | 31.785 | **54508.09** |
| | | | **G.Total:-** | **56838.42 Or 56838.00** |

**(Rupees Fifty Six Thousand Eight Hundred Thirty Eight) only**

CHANDI PRASAD SHARMA

P.A. HOLDER

**Annexure-IV**

**Wage Rate- Rs.450**

## Detail Estimate of construction of Garland Drain

| Sl No | Description of Items | No | Length | Width | Height | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Clearing of Jungles & bushes | 1 | 200.00 | 7.00 | | 1400.00 | Sqm | 12 15 | 17006 42 |
| 2 | Earth work in hard soil in embankment roads with in 50 mlrintial lead &1.50 mtrintial lift including rough dressing &breaking clods to Maximum 5.00c.m. to 7.00 c.m.&laying layers not exceeding 0.30 mtr depth as per specification approved by department along with proper compaction with H.R R Excavation | 1 | 200.00 | 2.00 | 0.75 | 300.00 | Cum | 338.84 | 101652.69 |
| 3 | Rough Stone Dry Packing with local boulder only labour charges (Local boulder will be Supplied by the Company through contractual manner) | 2 | 3.00 | 2.00 | 0.30 | 3.60 | Cum | 2399.63 | 8639.36 |
| | | | | | | | | | 127296.49 Or, 127296.00 |

**Rate/Running metre length – Rs.636.49 or 636/-**

CHANDI PRASAD SHARMA

P. W. HOLDER

Annexure-V

Wage Rate- Rs.450.00

**Detail Estimate of Retaining wall of loose local Boulder with cement-Sand Patching over the surface of Boulder wall.**

| Sl. No. | Description of Items | No | Length | Width | Height | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| For one K M.Length | | | | | | | | | |
| 1 | Rough Stone Dry Packing with local boulder only labour charges (Local boulder will be Supplied by our Company) | 1 | 1000.00 | (1.00+1.50)/2 | 1.20 | 1500.00 | Cum | | |
| | | 1 | 1000.00 | 1.50 | 0.30 | 450.00 | Cum | | |
| | | | | | | 1950.00 | Cum | 885.14 | 1726023.0 |
| 2 | Irregular cement sand patches on the both side of the wall with 2" thick cement sand mortar(1:6) on top | 1 | 1000.00 | 1.00 | | 1000.00 | Sqm | | |
| | | 2 | 1000.00 | 1.20 | | 2400.00 | Sqm | | |
| | | | | | | 3400.00 | Sqm | 225.00 | 765000.00 |
| | | Rate per one K.M. Length | | | | Total | | | 2491023.00 Or 2491023.00 |
| | | Cost for Running Meter length | | | | | | | 2491.00 |

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P. A. HOLDER

**Annexure-VI**

**Wage Rate-Rs.450.00**

## TERRACING OF THE DUMP SLOPE

**Engagement of HEMM on the O/B dump slope for terracing**

Location – Over Burden Dump

Work efficiency per hour – 3.38 running metre on the dump.

Width & height of the terrace – 5 m. & 5 m.

Rate for engagement of HEMM – Rs.3600.00/hr. i.e. Rs.3600.00/3.38 running meter i.e. Rate X running metre = Rs.1065.08/-

Therefore, terracing to be done over a length of RM is Rs.1065/-

CHANDI PRASAD SHARMA

P. A. HOLDER

Annexure- VII

Wage Rate- Rs.450.00

## Detail Estimate of Concrete Structure of Check Dam

| Sl No | Description of Items | No | Length | Width | Height | Qty | Rate | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Earthworkin hard soilin embankment roads with in 50 mtr initial lead &1.50 mtr initial lift including rough dressing &breaking clods to Maximum 5.00c m. to 7.00 c.m.&laying layers not exceeding 0.30 mtr depth as per specification approved by department along with proper compaction with H.R.R Excavation | | | | | | | |
| | Base | 1 | 5.00 | 5.50 | 0.50 | 13.75 | | |
| | Wing Wall | 4 | 2.00 | 0.50 | 0.50 | 2.00 | | |
| | Appron | 2 | 3.00 | 5.00 | 0.20 | 6.00 | | |
| | Cut of wall | 2 | 5.00 | 0.45 | 0.50 | 2.25 | | |
| | | | | | | 24.00 | 338.83 | 8131.90 |
| 2 | Plain cement concrete (1:4:8) | | | | | | | |
| | Base | 1 | 4.00 | 5.50 | 0.075 | 1.65 | | |
| | Wing Wall | 4 | 2.00 | 0.50 | 0.08 | 0.30 | | |
| | Appron | 2 | 3.00 | 5.00 | 0.08 | 2.25 | | |
| | Cut of wall | 2 | 4.00 | 0.45 | 0.08 | 0.27 | | |
| | | | | | | 4.47 | 9842.83 | 43997.44 |
| 3 | Cement concrete (1:2:4) | | | | | | | |
| | Below Ground Level | | | | | | | |
| | Base | 1 | 4.00 | 5.50 | 0.40 | 8.80 | | |
| | Wing Wall | 4 | 2.00 | 0.50 | 0.40 | 1.60 | | |
| | Appron | 2 | 3.00 | 5.00 | 0.10 | 3.00 | | |
| | Cut of wall | 2 | 4.00 | 0.45 | 0.50 | 1.80 | | |
| | | | | | | 15.20 | | |
| | Above Ground Level | | | | | | | |
| | Base | 1 | 4.00 | (2.00+5.00)/2 | 1.00 | 14.00 | | |
| | Wing Wall | 4 | 2.00 | 0.40 | 1.00 | 3.20 | | |
| | | | | | Total | 17.20 | | |
| | | | | Grand Total | | 32.40 | 13619.67 | 441277.36 |
| | Rate per one No Check Dam. Length=4.00 mtrHt=1.30 mtr Slope U/S=1:1.5 D/S=1:2 | | | | | Total | | 493406.70 Or, 493407.00 |

CHANDI PRASAD SHARMA

P. A. HOLDER

**Annexure-VIII**

**Wage Rate- Rs.450.00**

## ESTIMATE FOR PER RMT CONSTRUCTION OF SETTLING TANK
**(Length: 1m., width: 3.0m. height: 1.5m.)**

| Sl No | Description of Items | No | Length | Width | Height | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Earth work in hard soil In embankment roads within 50 metintial lead &1.50 mtrintial lift including rough dressing &breaking clods to Maximum 5.00c.m. to 7.00 c.m.&laying layers not exceeding 0.30 mtr depth as per specification approved by department along with proper compaction with H.R.R Excavation | 1 | 4.00 | 3.00 | 1.50 | 18.00 | Cum | 338.83 | 6098.93 |
| 2 | Rough Stone Dry Packing with local boulder only labour charges (Local boulder will be Supplied by our Company) | 1 | 4.00 | 6.00 | 0.20 | 4.80 | Cum | 2399.83 | 11519.18 |
| 3 | Transportation charges for 5.00 K.M. lead by truck load from quarry to work site with all cost of , labour, T. & P. etc. all complete in all respect as per specification and direction of | As same as Item No-2 | | | | 4.80 | Cum | 300.12 | 1440.57 |
| | | | | | | | | **Rate per one No Settling tank** | **19058.68 Or, 19059.00** |

[illegible] PRASAD SHARMA

P.A. HOLDER

**Annexure –IX**

**Wage Rate-Rs.450.00**

## Details & Estimate for Construction of Catch Drain (26.00 Mtr.) at Dump Slope

| Sl. No | Description of items | No. | Length | Width | Height | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Earth work excavation in F&P** | | | | | | | | |
| | Foundation | | | | | | | | |
| | Side wall both sides | 2 | 29.000 | 0.400 | 0.400 | 9.280 | Cum | | |
| | Between wall | 1 | 29.000 | 3.000 | 0.300 | 26.100 | Cum | | |
| | | | | | **Total** | **35.380** | **Cum** | 338.83 | 11987.78 |
| 2 | Sand Filling | 1.00 | 29.00 | 3.60 | 0.05 | **5.510** | **Cum** | 2205.00 | 12149.55 |
| 3 | **R R Stone Masonry with Local Boulder** | | | | | | | | |
| | Foundation | | | | | | | | |
| | Side wall both sides | 2 | 29.000 | 0.400 | 0.60 | **13.920** | Cum | 5031.42 | 70037.39 |
| 4 | Rough stone Dry packing with top layer grouting | | | | | | | | |
| | Floor | 1 | 29.000 | 3.000 | | 87.000 | Sqm | 611.99 | 53243.74 |
| | | | | | **Total=** | **100.920** | **Cum** | | |
| 5 | **Earth Filling** | | | | | | | | |
| | Back filling (1/3rd of earth work) | | | | | 11.793 | Cum | | |
| | | | | | **Total=** | **11.793** | **Cum** | 143.99 | 1698.04 |
| 6 | **20mm thick plastering in C.M (1:6)** | | | | | | | | |
| | Both sides wall | 4 | 29.000 | 0.600 | | 69.600 | Sqm | | |
| | Top | 2 | 29.000 | 0.400 | | 23.200 | Sqm | | |
| | | | **Plastering work Total** | | | **92.800** | **Sqm** | 406.12 | 37673.47 |
| 7 | **C.C,work(1:2:4)** | | | | | | | | |
| | Well | 2.00 | 29.00 | 0.40 | 0.10 | 2.320 | Cum | | |
| | Floor | 1 | 29.000 | 3.000 | 0.100 | 8.700 | Cum | | |
| | | | | | **Total** | **11.02** | **Cum** | 13409.53 | 147772.98 |
| | | | | | | | **Total** | | 334762.95 |
| | **Add 15% for Critical Area** | | | | | | | | 50214.44 |
| | | | | | | **Grand Total** | | | **384977.39** |
| | | | | | | | | | **Or** |
| | | | | | | | | | **384977.00** |

**CHANDI PRASAD SHARMA**

**P. A. HOLDER**

SCALE-1:2,000

20 0 40 80 120 160 200 240 280 320 360 400 440 480

MAGNETIC MERIDIAN

DATE OF OBSERVATION:- 01.11.1985
MAGNETIC DECLINATION - 0° 50' WEST

TO TENSA

TO KOIRA

CHECK DAM

WASTE DUMP

TEMPLE

MINES OFFICE

R.L 684m

MINE APPROACH ROAD

CHECK DAM

ULTIMATE PIT LIMIT

TOP SOIL STACK

RETAINING WALL 49 MTR.

TOP SOIL STACK-0.3 HECTARE

TOP SOIL QUANTITY-1500 CUM.

TERRACING 840 MTR.

PROPOSED WASTE DUMP

LOOSE BOULDER STRUCTURE 1No.

RETAINING WALL 278 MTR.

GARLAND DRAIN-290 MTR.

DUMP AREA- 1.42 HECTARE.

NALA

TO BHUTUDA

## PROPOSED

- DUMP SLOPE PLANTATION
- AVAGE PLANTATION
- BLOCK PLANTATION
- RETAINING WALL
- GARLAND DRAIN
- SETTLING TANK
- CHECK DAM
- TERRACE
- CATCH DRAIN
- PROPOSED MINERAL STACKYARD
- PROPOSED MINERAL REJECT STACKYARD

## INDEX

- BOUNDARY OF M.L AREA
- CONTOUR
- PUBLIC ROAD
- EXISTING DUMP
- NALA
- POWER LINE
- TEMPLE
- EXISTING RETAINING WALL
- ULTIMATE PIT LIMIT
- SAFETY ZONE

CHANDI PRASAD SHARMA

P. A. HOLDER

# PLAN SHOWING THE MITIGATIVE MEASURESN TO MINIMIZES SOIL EROSION & CHOKING OF STREAMS

RAIKELA, TENSA & BAHAMBA IRON & MANGANESE MINE

LESSEE - : SRI CHANDI PRASAD SHARMA

M.L. AREA- 69.606 HECTS. | SCALE-: 1:2,000

COUNTERSIGNED

Divisional Forest Officer
Bonai Division

ANNEXURE- II

# *Scheme For*

**PLANTING OF ADEQUATE DROUGHT HARDY PLANT SPECIES AND SOWING OF SEEDS IN THE APPROPRIATE AREA WITHIN MINING LEASE TO ARREST SOIL EROSION.**

**In compliance**

**with**

**Condition No.10 (b) of**

**Stage-I approval granted vide**

**Letter No.8-25/2022-FC dt.4.12.2023 of**

**Government of India, Ministry of Environment,**

**Forest& Climage Change**

**for**

**Diversion of 67.352 Hects of Forest Land**

**for U/s-2 (ii) of F.C. Act'1980**

**within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines**

**of**


## ANIL KUMAR SHARMA,

## PoA OF LATE CHANDI PRASAD SHARMA

**in village Raikela, Bahamba and Tensa in Koira Tahsil,**

**Bonai Forest Division**

**Dist.Sundargarh Odisha.**

## SCHEME FOR PLANTING OF DROUGHT HARDY PLANT SPECIES AND SOWING OF SEEDS WITHIN MINING LEASE TO ARREST SOIL EROSION

### 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I. Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha. and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C Act'1980 has been granted by MoEF&CC, Govt. of India vide their Letter No.8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.10(b) for preparation and Implementation of a plan for planting of drought hardy plant species and sowing of seeds within mining lease to arrest soil erosion.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 43.967" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to latentic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest. i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## 7. EXISTING VEGETATION

The vegetation of the applied area is composed of Sal (*Shorea robusta*), Sidha (*Lagerstroemia parviflora*). Sishu (*Dalbergia latifolia*), Char (*Buchanania lanjan*), Dhaura (*Anogeissus latifolia*), Kurum (*Adina cordifolia*), Asan (*Terminalia tomentosa*), Mango (*Mangifera indica*), Kendu (*Diospyros melanoxylon*), Bahada (*Terminalia bolerica*) Jamu (*Syzygium cumini*), Kusum (*Schleichera oleosa*), Mahul (*Madhuca indica*), Bel (*Aegle marmelos*), Antidesma acidum, Ardisia solanaceae, Blumeopsis flava, Kasi (*Bridelia retusa*) etc. are major species among flora available in the applied area. **Sal *(Shorearobusta)*** is the pre-dominant species

## 8. LAND USE PATTERN

During the life of the mine, about 69.606 hectares will be utilized for mining and its allied activities, Road, and green belt plantation in Safety Zone area etc. The details of land use pattern will be as follows:

| Sl. No | Purpose | Proposed land use pattern (Ha.) | | | | | |
|---|---|---|---|---|---|---|---|
| | | PRF | DLC | Revenue Forest | Total Forest | Non-Forest | Total |
| 1 | Mining & its allied activities. | 0.050 | 6.834 | - | 6.884 | - | 6.884 |
| 2 | Public Road & Nala | - | 0.510 | - | 0.510 | 2.254 | 2.764 |
| | **Sub-Total :-** | **0.050** | **7.344** | - | **7.394** | **2.254** | **9.648** |
| | **Safety Zone / Green belt area** | | | | | | |
| 3 | 7.5 mt wide along the ML boundary | 0.542 | 2.053 | 0.241 | 2.836 | - | 2.836 |
| 4 | 50 mt wide along the nala | - | 5.408 | - | 5.408 | - | 5.408 |
| 5. | 10 mt wide along the public road | - | 2.409 | 0.031 | 2.440 | - | 2.440 |
| | **Sub-Total :-** | **0.542** | **9.870** | **0.272** | **10.684** | - | **10.684** |
| 6. | Area for mining after exploration | 8.359 | 35.708 | 5.207 | 49.274 | - | 49.274 |
| | **Grand Total :-** | **8.951** | **52.922** | **5.479** | **67.352** | **2.254** | **69.606** |

## 9. PLANTATION PLANNING DURING THE LEASE PERIOD

Planning for plantation is done with the following objectives:

Planning for plantation is done keeping in view the following objective:

(i) To meet the stipulation No.10 (b) of Stage –I Forest clearance accorded vide letter No.8-25/2022-FC dt.4.12.2023 by MoEF, GOI. One of the condition is "planting of adequate drought hardy plant species & showing of seeds within mining lease to arrest soil erosion."

(ii) To compensate the loss to vegetation due to operation of the mine

(iii) To prevent spread of fugitive dust generated due to mining and allied activities.

(iv) To attenuate noise generated by the mine.

(v) To reduce soil erosion.

(vi) To stabilize the slope of external over-burden dumps.

(vii) To increase the green cover and to improve aesthetics.

(viii) To attract the birds, which are addressed as litmus of nature.

(ix) To provide recreational value to colony inhabitants.

(x) Attract Animals to re-colonize the area where the Mine is abandoned.

Development of plantation in the available areas would be carried out in a phased manner. Saplings would be planted at the rate of 1600 trees /ha in Block plantation mode. The cost norm of Block Plantation is enclosed at Annexure-I. Post planting care would be taken to replace casualties, remove dead, dying, diseased and top broken trees etc.

The details of proposed afforestation programme within the Mining Lease area of M/s C.P. Sharma are given below:

| Proposed Location | Area |
|---|---|
| Block Plantation | 2.440 ha. |
| Agave plantation | 1130 mt |

The choice of species is based on the following parameters: (i) Drought hardy and (ii) it should prevent soil erosion. Selection of the plant species is based on the inventory of the local forest species like ***Neem (Azadirachta indica), Karanja (Pongamia pinnata), Asan (Terminali aatata), Kusum (Schleichera oleosa), Amla (Emblica officinalis), Mundi (Mitragyna parviflora)*** etc. The species for green belt development will be selected in consultation with the State Forest Department. Further, 1130 mt length on the road side Agave plantation to be done. The cost estimate of Agave Plantation has been provided as **Annexure-II**.

## 10. METHODOLOGY

It is proposed to plant the Seedlings in pits (45cmx45cmx45cm) at spacing of 2.5 m along contours. The pits shall be filled with a mixture of good quality soil and organic manure (cow dung, agricultural waste, kitchen waste). The saplings shall be planted just after commencement of the monsoon to ensure maximum survival.

## 11. PLANTATION

Plantation on the large Over Burden dumps cannot be started till dumping activities have ceased at least in a part of the dump and the site is prepared for plantation. Once dumping is completed, a path would be cleared to the particular area so that the basic inputs (water, manure, and seedlings) can be carried to the site. Next, a layer of top soil has to be spread over the area and roughly leveled. Grass seeds would be broad casted on the soil layer to stabilize the dump. Trenches of size 45 cm X 45 cm would be dugout on the flat top of the dumps, and the excavated materials used to form a bund on the deep side of the trenches to trap maximum water in the trenches during rains. 45 cm X 45 cm pits would be dug in the contour trenches at 2.5 m intervals. The pits would be filled with a mixture of top-soil, organic manures and phosphoric fertilizers. Saplings would be planted in these pits after monsoon has commenced in order to ensure optimum survival of the saplings




*PROPOSED PLANTATION OVER DEAD WASTE DUMP.*

**a. Pre-Planting and Planting Operation**

Different operations that will be taken up for plantation are as follows:

**I) Raising of nursery**

Seedlings required for plantation shall be raised in a temporary nursery nearer to the planting site and water sources. Nursery work will be started one and half year before the year of plantation so that one and half year old seedlings will be available for plantation. 20% extra seedlings shall be raised besides the actual requirement to compensate the casualties. Seedlings will be raised in polythene bags of 10" x 6" size following standard nursery practice.



*RAISING OF NURSERY PROPOSED WITHIN M.L AREA*

**II) Alignment and pitting**

Alignment and pitting will be taken up in the month of March-April. Pits of size 45cm X 45cm X 45cm will be dug maintaining a spacing of 2.5mtr X 2.5mtr.

iii) **Actual Planting**

The seedling would be planted in the dugout pits of size 45cm x 45cm x 45cm with a spacing of 2.5mtr x 2.5mtr. Plantation will be taken up after first regular shower of monsoon and will be completed by the end of July. Species will be planted as per suitability of the soil condition. NPK fertilizer @50gms per plant will be applied as basal dosage 5 gm of anti-termite insecticide will also be applied to each pit while planting. Casualties, if any noticed, shall be replaced with the extra seedlings raised for the purpose. During second year also, casualty replacement will be done for which seedlings shall be raised.

iv) **Weeding, Soil working & Manuring**

For establishment and better growth of the planted seedlings, timely weeding, soil working and manuring are necessary. It is proposed to carryout two weedings, soil working and manuring during the first year and second year of plantation and one weeding and soil working during third year. During first year and second year, first weeding and manuring shall be carried out during August-September and the second one during October-November along with soil working after rains. First weeding shall be around the plants and the second one will be done in strip. In the third year the weeding will be done around the plants, which will be carried out during August.

After each weeding, intensive soil working will be done around each plant at a radius of 0.5mtr, followed by manuring of @50grms NPK per plant in ring form.

v) **Application of insecticides**

The plantation site, after planting with good and healthy seedlings, may cause influx of insects, which usually eat and damage the tender leaves and shoots of the plants. To get rid of such insect attack, application of insecticides will be taken up in required doses at desired intervals. Spraying of insecticides shall be done preferably in a sunny day in the forenoon as per requirement.

b. **Post Plantation Care**

Post Plantation care shall be adopted to ensure maximum survival of the plants. Funds would be provided for maintenance of the plants for ten years (i.e. nine years) after the year of plantation. In the present Scheme, provision of fund would be made immediately after planting the seedlings. Watering would be done at regular interval during the dry spell. In the dry season, watering would be regularly done especially during February to June. Watering in one year planted saplings would be more frequent (10 days in a month). Manuring would be done by using organic manure (cow dung, agricultural waste, kitchen waste, etc.). Diseased and dead plants would be uprooted, destroyed and replaced by fresh saplings. Growth and survival of saplings would be regularly monitored and remedial actions would be undertaken as required.

Plantation on slope of the dumps would commence as soon as the first terrace is ready. The terraces on the slopes would be sloped inward. 45 cm X 45 cm pits would be dug at 2.5 m intervals and filled with a mixture of top soil and organic manure. Before the commencement of the monsoon, the slopes and terraces would be covered with a layer of soil and sprinkled with water. The norm for Block plantation has been appended as **Annexure-I**

## 12. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the above measures under the instant Scheme, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for technical experts shall be provided by the User Agency for proper execution of these programmes.

## 13. MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Divisionare to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 15% of the plantation cost has been earmarked for expenditure on this score.

## 14. EXECUTING AGENCY

The works in the present Scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish its own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

**SPECIALISED CELL**

| Sl. No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining operation projects |

## 15. REQUIREMENT OF FUNDS

The total cost of the implementation of will be ₹23,38,200.00 **(Rupees Twenty Three Lakh Thirty Eight Thousand Two hundred) Only**. The above expenditure would be made over the next seven years period. Therefore, budget provision has been kept by the user agency for implementation of the above plantation program over a period of next ten years. This budget would be subjected to increase in amount considering the increase in material cost and labour charges.

### TOTAL COST OF THE PROJECT

**Wage Rate Rs.450/-**

| Sl. No. | Description of the work | Funds Required (inRs.) |
|---|---|---|
| 1 | Block Plantation 2.440 ha. @ Rs.341903/- | 8,34,243.00 |
| 3. | Agave Plantation at the toe of dump over a length of 1130 m. @ Rs.7,61,126/- for 1000 RMT | 8,60,072.00 |
| | **Total :-** | **16,94,315.00** |
| 3. | 15% of the total cost for motivation of VSS / People involved | 2,54,147.00 |
| | **Sub Total** | **19,48,462.00** |
| 4. | Price escalation @ 20% | 3,89,692.00 |
| | **Grand Total** | **23,38,154.00 OR 23,38,200.00** |

(Rupees Twenty Three Lakh Thirty Eight Thousand Two hundred) only

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.***

CHANDI PRASAD SHARMA

*Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma*

***Countersigned***

**Divisional Forest Officer**
**Bonai Division**

**Technically Approved**

**Regional Chief Conservator of Forests**
**Rourkela Circle**

ANNEXURE-5

**BASIC COST NORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION) @ 1,600 PLANTS PER HECTARE (3M x 2M with a hill spacing)**

**WAGE RATE Rs. 340/- PER MANDAY**

| Sl. No | Items of work | Permissible Period of Operation | No. of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **0th Year (Advance work) Pre-Planting Operation** | | | | | |
| 1 | Survey, demarcation and Pillar posting | Nov/Jan | 2 | 680 | 0 | 680 |
| 2 | Preparation of Treatment Map (DI/RI/Map) | Nov/Dec | 1 | 340 | 100 | 440 |
| 3 | Site preparation (Clearing & removal of debrises) | Nov/Dec | 12 | 4080 | 0 | 4080 |
| 4 | Erection of RCC or wire fencing with GI | Feb/Mar | 1 | 340 | 0 | 340 |
| 5 | Maintenance of staff | Feb/Mar | 2 | 680 | 0 | 680 |
| 6 | Digging of pits (45 cm x 45 cm x 45 cm) in loose and gravelly soil | Feb/Mar | 64 | 21760 | 0 | 21760 |
| 7 | Construction of Temporary Labour Shed, Electricity, water and Internal Road etc. | Lump/Year | 0 | 0 | 3500 | 3500 |
| | Total | | 82 | 27880 | 3600 | 31480 |
| | **1st Year/Planting Year** | | | | | |
| 1 | Refilling of pits by mixing the dug out soil of the pits, application of Organic compost/ FYM/ Fly Ash in situ, the same property. | Jan/Jul | 12 | 4080 | 9000 | 13080 |
| 2 | Transportation of 11 months old polybag seedlings in lined truck/tractor from the permanent/temporary nursery to planting site (Lump), Loading & unloading. (Average lead of 10 Km) & Stacking the seedlings @ Rs 6/- per Seedling (1760 nos.) | Jul/Aug | 0 | 0 | 10560 | 10560 |
| 3 | Watering the polybag seedlings at planting site | Jul/Aug | 3 | 1020 | 0 | 1020 |
| 4 | Engagement of polybag seedlings on head load from the stacking site to individual dug out pits within the planting site, applying insecticide, fertilizers by mixing after watering the soil and other application in the pit, mending the soil properly around the planted seedlings | Jul/Aug | 36 | 12240 | 0 | 12240 |
| 5 | Cost of Fertilizer & Insecticide<br>(a) N:P:K/Di-ammonium Phosphate (DAP) 50 gms/pit once in a year @ Rs 50/- per kg = Rs. 4000.00<br>(b) Urea/Ammonium Sulphate/Neem Khali any other fertilizer in two subsequent years @ Rs. 1,200.00<br>(c) Insecticide (Phorate 10 G) 5 gms/pit once @ Rs 630/- per kg = Rs. 1,260.00 | Jul/Aug | 0 | 0 | 4000 | 4800 |

## BASE COST FORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION) @ 1600 PLANTS PER HECTARE (1st mouth old seedling)

WAGE RATE Rs. 315/- PER MANDAY

| Sl. No | Items of work | Particulars for unit of Plantation | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total Cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | Capacity Replacement (@ 10% [1st year] | Jul/Aug | 4 | 1211 | 0 | 1244 |
| 3 | Fencing & Manuring | Aug/Sept | 15 | 4685 | | 4685 |
| 4 | Soil Working, Soil working [1st, 2nd, 3rd year] Weeding [1st, 2nd, 3rd year] and Manuring | Oct/Nov | 20 | 6320 | 0 | 6320 |
| 5 | Protection Fencing (Barbed wire fencing 400 m long) including maintenance inspection path | Feb/Mar | 3 | 939 | 0 | 939 |
| 10 | Watch & Ward including watering as per requirement | Aug/Nov | 12 | 3732 | 0 | 3732 |
| | Total | | 105 | 33075 | 27169 | 60035 |
| | 2nd Year Maintenance | | | | | |
| 1 | Transportation of 200 seedlings from Nursery to plantation including loading, unloading, conveyance by Tractor @ Rs.xx/- per seedlings | Jul | 0 | 0 | 960 | 960 |
| 2 | Casualty replacement- 10% | Jul | 4 | 1244 | 0 | 1244 |
| 3 | Cost of Fertilizers/ Insecticide/ A) Cost of Insecticide/ Biopesticide (1 kg/plant = 1.6 kg) @ Rs.150/- per kg – Rs.720/- B)Urea/MOP/Zinc Sulphate/Vermicompost/Mu Khad/equivalent for 1 Year @ Rs.4480/- | Aug/Sept | 0 | 0 | 4000 | 4000 |
| 4 | Weeding (Complete one Ring), Manuring & Soil working (Pre-dominant grass plants) | Sep/Oct | 20 | 6220 | 0 | 6220 |
| 5 | Protection Fencing (Barbed wire fencing 400 m long) including maintenance inspection path | Feb/Mar | 3 | 939 | 0 | 939 |
| 6 | Watch & Ward including watering as per requirement | Apr-Nov | 18 | 5591 | 0 | 5591 |
| 7 | Maintenance of Temporary Labour Shed, Drinking water facility and First Aid etc. | | | | 1000 | 1000 |
| | Total | | 49 | 15995 | 6566 | 20561 |

**WORK LOAN FORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION)**
**@ 1600 PLANTS PER HECTARE (18 months old seedlings)**

**WAGE RATE Rs. 318/- PER MANDAY**

| Sl. No. | Name of work | Preferable Period of operation | No of Mandays | Labour cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **3rd Year Maintenance** | | | | | |
| 3 | Casual Fertilizer dose/NPK/DAP/ Urea/Vermicompost/Mix Khata/any other fertilizer | Sept/Oct | 0 | 0 | 4488 | 4488 |
| 4 | Weeding, Hoeing & Soil working (3m. diameter around the plants) | Sep/Oct | 20 | 6220 | 0 | 6220 |
| 5 | Fire line making (2 m. wide fire line over 400 m length) including maintenance of inspection path | Feb/Mar | 3 | 933 | 0 | 933 |
| 6 | Watch & Ward, mending watering as per requirement | Apr/May | 18 | 5590 | 0 | 5590 |
| 7 | Maintenance of temporary labour shed, drinking water facility and miscellaneous | Apr/Mar | | | 1000 | 1000 |
| | Total | | 41 | 12751 | 5488 | 18239 |
| | **4th Year Maintenance** | | | | | |
| 1 | Fire line making (2 m. wide fire line over 400 m length) including maintenance of inspection path | Feb/Mar | 3 | 933 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | **5th Year Maintenance** | | | | | |
| 1 | Fire line making (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | **6th Year Maintenance** | | | | | |
| 1 | Fire line making (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933.0 |
| 2 | Pruning of branches, thinning out of undesirable shoots | Jan/Mar | 5 | 1555.0 | 0 | 1555.0 |
| 3 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598.00 |
| | Total | | 26 | 8086 | 0 | 8086.0 |
| | **7th Year Maintenance** | | | | | |
| 1 | Fire line making (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | **8th Year Maintenance** | | | | | |
| 1 | Fire line making (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | **9th Year Maintenance** | | | | | |
| 1 | Fire line making (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |

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**BASE COST NORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION)**
**@ 1600 PLANTS PER HECTARE (18 months old seedling)**

WAGE RATE Rs. 311/- PER MANDAY

| Sl. No | Items of work | Productive Period of Execution | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | **1st Year Maintenance** | | | | | |
| 2 | Pre line cleaning (1 m wide) for 1lm over 400 m length) | Feb/Mar | 3 | 935 | 0 | 935 |
| 3 | Weed & Wed | Aug/Sep | 30 | 9330 | 0 | 9330 |
| | Total | | 33 | 10265 | 0 | 10265 |

**Year wise Abstract of Cost Norm (showing seedling cost separately)**

| Sl. No | Year | No. persons days | Labour cost @ Rs 311/- per day (Rs) | Material Cost | Monitoring, Evaluation, Learning, Documentation and Other Contingency (3%) of (4+5) | Cost of Seedlings @Rs.50-81 per seedlings | TOTAL COST |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 1st year | 82 | 25502 | 7600 | 1398.00 | 0 | 34500.00 |
| 2 | 2nd year | 305 | 12665 | 15300 | 8306.10 | 68546 | 147661.00 |
| 3 | 3rd year | 45 | 13995 | 6566 | 1138.00 | 8058 | 29698.00 |
| 4 | 4th year | 43 | 13703 | 5481 | 927.00 | 0 | 20348.00 |
| 5 | 5th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 6 | 6th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 7 | 7th year | 26 | 8086 | 0 | 404.00 | 0 | 8490.00 |
| 8 | 8th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 9 | 9th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 10 | 10th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| 11 | 10th year | 21 | 6531 | 0 | 326.00 | 0 | 6857.00 |
| | Total: | 625 | 152374 | 39012 | 8495 | 83504 | 276280 |

Note:

1. Strictly must be given to the indigenous tree species available nearest to the site of plantation.
2. 10 % undigenous trees bearing trees must be made for 10 Plantation.
3. Separate fix fund conservation work like Bench, Gully Plugging, Approach Trench, Contour Trench, Digital Bund etc. may be
4. Pre line cleaning, under progress in the Old plantation taken up outside compartment and Bamboo may be removed by
5. Watering, before the plantation of water & watering may be adopted as per the availability of water.
6. The Deviation of Unit norms to be ranged with the approval of the competent Authority keeping the overall unit norm cost in mind.

b Current Year

ACCF (Forest Conservation & RD, PC Act)

Divisional Forest Officer,
Bonai Division.

**ANNEXURE-II**

## COST NORM FOR AGAVE PLANTATION (FOR 5 ROWS & 40 MTRS)

Wage Rate : ₹450/day.

| Sl. No. | Name of the work | Man-day | Labour cost (₹) | Material | Total |
|---|---|---|---|---|---|
| **FIRST YEAR OPERATION.** | | | | | |
| 1 | Site clearance alignment and stacking | 2 | 900.00 | - | 900.00 |
| 2 | Cost of lime materials including transportation | 0 | | 494.00 | 494.00 |
| 3 | Digging pits and application of lime | 6 | 2700 | | 2700.00 |
| 4 | Cost of 200 Ac. (sucker) including transportation | | | 2,483.00 | 2,483.00 |
| 5 | Carriage and planting | 2 | 900 00 | - | 900.00 |
| 6 | Soil working and application of fertilizers (twice) and lime | 8 | 3600.00 | | 3600.00 |
| 7 | Cost of fertilizer | | | 554.00 | 554.00 |
| 8 | Contingency | | | 554.00 | 554.00 |
| | **Total:-** | **18** | **8100.00** | **4066.00** | **12180.00** |
| **SECOND YEAR OPERATION** | | | | | |
| 1 | Casualty replacement (20%) including cost of suckers and pitting | 2 | 900.00 | 494.00 | 1394.00 |
| 2 | Weeding and application of fertilizer and lime | 6 | 2700.00 | - | 2700.00 |
| 3 | Cost of fertilizer insecticides & lime | | | 374.00 | 374.00 |
| | **Total:-** | **8** | **3600.00** | **868.00** | **4468.00** |
| **THIRD YEAR OPERATION** | | | | | |
| 1 | Weeding, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | **748** | **3448.00** |
| **FORTH YEAR OPERATION** | | | | | |
| 1 | Weeding, cleaning, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374 00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | **748** | **3448.00** |
| **FIFTH YEAR OPERATION** | | | | | |
| 1 | Weeding, cleaning, soil working and application of fertilizers | 6 | 2700.00 | | 2700.00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | **748** | **3448.00** |
| **SIXTH YEAR OPERATION** | | | | | |
| 1 | Weeding, cleaning, soil working and application of fertilizers | 6 | 2700.00 | | 2700 00 |
| 2 | Cost of fertilizer and insecticides | | - | 374.00 | 374.00 |
| 3 | Plant protection measures including material cost | | - | 374.00 | 374.00 |
| | **Total:-** | **6** | **2700.00** | **748** | **3448.00** |
| | **G.Total** | **50** | **22500.00** | **7945.00** | **30445.00** |
| Cost norm for Agave fencing with five rows 01 km for 6 year | | $\frac{30445}{40}$ | **x 1000 =** | **7,61,126.00** | |

CHANDI PRASAD SHARMA

P. A. HOLDER

SCALE-1:2,000

MAGNETIC MERIDIAN

DATE OF OBSERVATION:- 01.11.1985
MAGNETIC DECLINATION - 0° 50' WEST

TO TENSA

TO KOIRA

CHECK DAM

WASTE DUMP

AGAVE PLANTATION ALONG 10 MTR. OUTER OF SAFETY ZONE- 1130 MTR.

MINES OFFICE

CHECK DAM

NALA

ULTIMATE PIT LIMIT

TO BHUTUDA

TO KOIRA

B B1 B2 B3 B4 B5 B6

A A1 A2 A3 A4 A5 A6

C C1 C2 D D1 D2 D3 D4 D5

O1 O2 O3 O4

## PROPOSED

- DUMP SLOPE PLANTATION
- AVAGE PLANTATION
- RETAINING WALL
- GARLAND DRAIN
- SETTLING TANK
- CHECK DAM
- TERRACE
- CATCH DRAIN
- TOP SOIL STACK
- PROPOSED MINERAL STACKYARD
- PROPOSED MINERAL REJECT STACKYARD

## INDEX

- BOUNDARY OF M.L AREA
- CONTOUR
- PUBLIC ROAD
- EXISTING DUMP
- NALA
- POWER LINE
- TEMPLE
- EXISTING RETAINING WALL
- ULTIMATE PIT LIMIT
- SAFETY ZONE
- DRAUGHT HARDY PLANTATION ALONG WITH 10 METER EXISTING PWD ROAD

CHANDI PRASAD SHARMA
P. A. HOLDER

PLAN SHOWING THE PLANTING OF ADEQUATE DRAUGHT HARDY PLANT SPECIES & SOWING OF SEEDS IN THE APPROPRIATE AREA WITHIN THE MINING LEASE TO ARREST SOIL EROSION

RAIKELA,TENSA & BAHAMBA IRON & MANGANESE MINE

LESSEE - : SRI CHANDI PRASAD SHARMA

M.L. AREA- 69.606 HECTS. | SCALE-: 1:2,000

COUNTERSIGNED
Divisional Forest Officer
Bonai Division

ANNEXURE – 12

# *Scheme For*

## CONSTRUCTION OF CHECK DAMS, RETENTION/TOE WALLS TO ARREST SLIDING DOWN OF THE EXCAVATED MATERIAL ALONG THE CONTOUR

In compliance

with

Condition No.10 (c) of

Stage-I approval granted vide

Letter No.8-25/2022-FC dt.4.12.2023 of

Government of India, Ministry of Environment,

Forest& Climage Change

for

Diversion of 67.352 Hects of Forest Land

for U/s-2 (ii) of F.C. Act'1980

within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines

of

**ANIL KUMAR SHARMA,**

**PoA OF LATE CHANDI PRASAD SHARMA**

in village Raikela, Bahamba and Tensa in Koira Tahsil,

Bonai Forest Division

Dist.Sundargarh Odisha.

# SCHEME FOR CONSTRUCTION OF CHECK DAMS, RETENTION/TOE WALLS TO ARREST SLIDING DOWN OF THE EXCAVATED MATERIAL ALONG THE CONTOUR.

## 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha. and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C. Act'1980 has been granted by MoEF & CC, Govt. of India vide their Letter No.8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.10 (c) for preparation and implementation of a plan construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1 and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 43.867' (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature.

## 6. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest, i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West Area remains calm for nearly 50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## OBJECTIVE OF THE SCHEME

The main objective of the present scheme is to fulfill the **Condition No. 10 (c)** which provides for **preparation of a plan for construction of Check Dams, Retention/Toe walls etc. to arrest sliding down of the excavated material along the contour in accordance with the approved scheme**. The different steps proposed to be adopted are as under:

a) To prevent erosion of sediment due to surface runoff.

b) To prevent of obstruction of natural water sources.

c) To complete construction activities efficiently before surface soil is exposed.

d) To prevent overflow of eroded soil from the mining areas to the natural streams and habitations.

## 7. PROPOSED METHODOLOGY

To achieve the above objectives, it has been proposed to take up both biological and structural works for soil and water conservation. In this Scheme, considering the topography and contours of the lease area, emphasis has been given to arrest sliding down of excavated materials along the contour by constructing check dams, retention / toe walls at specified locations within the mining lease Locations have been properly selected within the leasehold and plans are listed in the following tables & maps.

### a) The Salient features of the drainage management plan/scheme

The overall drainage Planning has been made in such a manner which follows the existing drainage pattern the block area in order to prevent silt and sediments, a number of measures have been proposed.

The major part of the mining activities is confined to the North-west and central part of the lease hold area. Runoff water near the dump area will be channelized by garland drain so that solid waste and the force of run-off which will be restricted by a loose boulder structure and settling tank.

### b) The drainage pattern of overburden dump

The runoff water will flow through the dump surface along the bund which will be developed as the edge of the dump. The dump surface needs to be terraced so that runoff can flow smoothly to meet the garland drain at the end for proper flow of water. Similarly, runoff from different terrace will be channelized from both sides into the proposed catch drains so that from each terrace of the dump the runoff will flow through the dump surface following the contour and will be deposited in the proposed catch drain shown in enclosed plan. Finally, the water will flow from the catch drain to the settling pit which has been proposed at the foot of the catch drain. After settling down, over flow water will go through weep holes of retaining wall & finally join the garland drain. Loose boulder structures have been proposed in the garland drain of Dumps which will help to arrest the solid waste intermittently. Ultimately, part of runoff water of ore stack yard that will be released, will also be channelized up to the garland drain. The rain water from proposed storing yard and dumps will drain down to the garland drain of proposed dumps which will help to arrest the solid waste by means of boulder structures across the garland drain as well as settling pits. The channelized proposed garland drain, and runoff water will accumulate in the proposed settling tank. The loose boulder structures have been proposed in the garland drain of proposed settling- pit which will help to arrest the solid waste.

c) **Slope of the Proposed Dump**

As per approved Modification of Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) the waste generation from the quarries will be dumped on the earmarked dumping site. The generation of waste from the quarries is shown as below.

| Year | Volume of Waste Generation ($m^3$) from quarry |
|---|---|
| 2023-2024 | 20315 |
| 2024-2025 | 26548 |
| 2025-2026 | 32810 |

The proposed generation of waste will be dumped on the proposed dump in Block-B in the north western side of the lease area inside the broken-up area during the ensuing review period. During the review period a volume of 79673 $m^3$ (Insitu) or 127476 (Swell) waste will be generated which will be accommodated in the proposed dump over an area of 0.802 ha. with 30m height (max). The proposed dump is temporary in nature as the proposed dumping site has been proposed to be proved barren by exploring the area through boreholes. The maximum height of the dump will be 30m in 3 terraces and terrace height will be maintained at 10m maximum height. The ultimate dump slope will be maintained at $20^0 - 22^0$ with individual terrace slope not exceeding $37^0$.

d) **Management**

Re-treating fashion will be adopted to dump the total waste material generated during planned period. Three (3) terraces will be formed during planned period of 5 years in all the three proposed dump.

Each terrace will have inward slope with catch drain at inward side of the terrace. The catch drain of the individual terrace will be connected to the garland drain outside the periphery of the dump. These catch drain will preferably have half concrete open pipe followed by settling tank to avoid wash offs. Each terrace will have a provision of berms at the outer end to reduce gully formation due to rain water wash offs.

To control erosion in the proposed waste dumps, regular compaction, development of terraces and vegetation are proposed to be done. Also, the retaining wall and garland drain for the proposed waste dump will be constructed to arrest wash-offs from the dump. It is proposed to construct both the retaining wall and garland drain at the end of $5^{th}$ year plan period. No proposal has been given for the rehabilitation of the dump during planned period of five (5) years.

## 8. MEASURES ALREADY ADOPTED

There are some Biological and Structural measures exist within the Mining Lease area of C.P. Sharma.

## 9. MEASURES PROPOSED TO BE ADOPTED

### a. Structural Measures

Vegetative means of erosion control are the most feasible and economic measures. However, as the pressure on land is increasing, it is necessary to bring even highly eroded land underutilization. In these lands, vegetative measures are not adequate to keep down the erosion. Some structural measures are required to be taken before vegetative measures are adopted. Structural measures, therefore, serve as supplementary to vegetative measures. The objective behind building mechanical structures is to reduce the degree and length of the slope, reducing run-off and consequently, reducing soil erosion.

#### i) Plan for Construction of Loose Boulder Structure

The User Agency has proposed to construct 01 no. of loose boulder structure of 4m span across the existing & proposed garland drain along the dumps & in phase-2, settling pit will help in stabilization of silt & sediment as well as prevention of soil erosion & enrichment of vegetation & greenery development.



*Loose Boulder Structures*

#### ii) Plan for Construction of Garland drain

A shallow trench (1.0 m wide x 1.5 m deep) will be dug for storage of runoff accumulated for draining surface water before it is released to the agriculture land or natural water course. Details of proposed Garland drain 290 mt. shall be constructed during the ensuing seven years period with location is shown in the map.



*Garland Drain around Waste Dump*

### iii) Construction of Retaining wall

A retaining wall is a structure designed and constructed to resist the lateral pressure of soil when there is a change in ground elevation that exceeds the angle of repose of the soil. The Retaining walls are proposed for construction over 278 mt. Also, there is a provision for maintenance of the retaining wall for the next 4 years.



*Details of Retaining walls*

### iv) Terracing of OB Dump Slope

It is proposed to construct berm & terraces over a length of 840 mt. on the proposed dumps considering the volume of OB materials &the area earmarked for dumping. The slope of individual terrace should be within the permissible range considering the angle of repose of the soil and space available, thereby maintaining the angle of repose at less than $28^0$. The terracing will be done through the internal resources by deploying the operating mining equipment. All these operations will be carried out after sufficient deposition of OB. When OB dump will partially maturate, the work will be executed.



*Terracing of OB Dumps*

### v) Plan for Construction of Check Dams

After studying the drainage pattern it has been found total number of check dam required is and accordingly, **2 nos.** of Check Dam will be constructed near the rain water harvesting pit. During monsoon there is heavy on-rush of water as a runoff arising from up slope/higher elevation to lower elevation. Hence, attention is to be paid to reduce the flow velocity of runoff & settle the silts/sediments flown from overburden dumps, haul roads inside the mine and areas cleared of vegetation. The check dam will be constructed near proposed dump area. Details of proposed Check Dams are furnished below and location of the said coordinates is shown in the map.



*Check Dam to restrict Soil erosion & silt flow*

### vi) Plan for Construction of Settling Tanks

It is a process that involves seperation of solid material from slurry. Sometimes, this process is called sedimentation. When waste water is treated, a large quantum of materials is filtered out of the liquid by physical barriers. Even then, the water will contain some solids which need to be removed. It has been proposed to construct 1 no. of settling tanks. Details of proposed 2 nos. of settling Tanks are shown in the map.

### vii) Plan for Construction of catch drain

A pyramid structure catch drain has been proposed to stream-line the flow of surface runoff from the dump to the foot of the dump, and stair of the catch drain will be placed inward to restrict flow of water. Catch drain is preferably made up of half concrete with number of stairs to reduce gully formation due to rain water wash off, so that runoff water will flow through each terrace of the dump & connect to the catch drain, the water of which goes through catch drain via settling pit to the garland drain. The catch drain will be constructed after the proposed dump height exceeds 26 m. 1 no. of catch drain have been proposed.



*Catch Drains*

### a) Desiltation

The de-silting works of the settling tank will be taken up both manually & mechanically at regular intervals to prevent choking of streams. This de-silting of settling tank will provide space and base to hold the sediment laden runoff thereby allowing settling and clear water to flow down. This de-silting work will be undertaken once in a year before & after monsoon. The implementation of the plans will be site specific in nature depending upon the severity of the sedimentation and choking of stream.

## 10. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the above Mitigative measures, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for technical experts shall be provided by the user agency for proper execution of these programmes. Budgetary provision of 15% of the total project cost has been earmarked.

## 11. MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Division are to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 15% of the plantation cost has been earmarked for expenditure on this score.

## 12. EXECUTING AGENCY

The works in the present Scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish its own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

**SPECIALISED CELL**

| SL No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining oparation projects |

## 13. REQUIREMENT OF FUNDS:

The financial forecast for construction of Check Dams, Retention/ Toe Walls to arrest sliding down of the excavated material along the contour by Construction of Check Dam, Retaining wall, Catch Drain, Settling Tank and Loose Boulder Structure of 4m span has already been provided in the Scheme for **Mitigative measures to minimize soil erosion and choking of streams** as per Condition **No.10 (a) of Stage-I approval granted by MoEF in their letter Dt.4.12.2023.** The financial forecast of the project has been furnished in the table below:

**FINANCIAL FORECAST OF THE PROJECT (69.606 HA.)**

**Wage Rate Rs.450.00**

| Sl. No. | Description of the Work | Fund Required (in Rs.) |
|---|---|---|
| 1. | **Biological Measures** | The financial forecast has already been provided in the earlier scheme prepared in compliance with Condition No.10 (a). **So, no budgetary provision has been suggested** |
| A. | Block Plantation (1600 no./ha.) on the dumps and pit to be reclaimed in future over 1.420 ha.@ Rs.3,41,903/- per ha. | |
| B. | Agave Plantation at the toe of dump over a length of 840 m. @ Rs.7,61,126/- for 1000 RMT | |
| | **Total** | |
| 2. | **Structural Measures** | |
| A. | 01 no. of Loose Boulder Structure of 4mt span @ Rs.56,836/- per each | |
| B. | Construction of Garland drain over a length of 290 m @ Rs.636/- per RMT | |
| C. | Construction of retaining wall over 278 m @ Rs.2491 per RMT | |
| D. | Terracing of OB dump over a length of 840 m. @ Rs.1065/- per RMT | |
| E. | Construction of 02 no. of check dam@ Rs.4,98,407.00/- per each | |
| F. | Construction of 1 no. of settling tank @ Rs.19,059.00/- per each | |
| G. | Construction of 1 nos. of catch drain (26 m. at dump slope) @ Rs.3,94,773.00/- per each | |
| | **Total** | |
| 3. | De-siltation work for Garland drain, settling pond and check dam twice in a year on LS | |
| 4. | Maintenance of retaining walls | |
| | **Sub Total** | |
| 5. | 15% of the total cost for motivation of VSS / People involved | |
| | **Total** | |
| | **Price escalation @ 20%** | |
| | **GRAND TOTAL** | |

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.***

CHANDRA PRASAD SHARMA

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma***

LAND HOLDER

***Countersigned***

Divisional Forest Officer
Bonai Division

**Technically Approved**

Regional Chief Conservator of Forests
Rourkela Circle

SCALE-1:2,000

MAGNETIC MERIDIAN

DATE OF OBSERVATION:- 01.11.1985
MAGNETIC DECLINATION - 0° 50' WEST

TO TENSA

TO KOIRA

CHECK DAM

WASTE DUMP

TEMPLE

MINES OFFICE

MINE APPROACH ROAD

R.L-684m

CHECK DAM

ULTIMATE PIT LIMIT

TOP SOIL STACK

RETAINING WALL 49 MTR.
TOP SOIL STACK-0.3 HECTARE
TOP SOIL QUANTITY-1500 CUM.

TERRACING 840 MTR.

PROPOSED WASTE DUMP

LOOSE BOULDER STRUCTURE 1No.

RETAINING WALL 278 MTR.

GARLAND DRAIN-290 MTR.

DUMP AREA- 1.42 HECTARE

NALA

TO BHUTUDA

## PROPOSED

- DUMP SLOPE PLANTATION
- AVAGE PLANTATION
- RETAINING WALL
- GARLAND DRAIN
- SETTLING TANK
- CHECK DAM
- TERRACE
- CATCH DRAIN
- PROPOSED MINERAL STACKYARD
- PROPOSED MINERAL REJECT STACKYARD

## INDEX

- BOUNDARY OF M.L AREA
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- POWER LINE
- TEMPLE
- EXISTING RETAINING WALL
- ULTIMATE PIT LIMIT
- SAFETY ZONE

CHANDI PRASAD SHARMA

P. A. HOLDER

# PLAN SHOWING THE CONSTRUCTION OF CHECKDAM, RETENTION/TOEWALL TO ARREST SLIDING DOWN OF THE EXCAVATED MATERIAL ALONG THE CONTOUR

RAIKELA, TENSA & BAHAMBA IRON & MANGANESE MINE

LESSEE - : SRI CHANDI PRASAD SHARMA

M.L. AREA- 69.606 HECTS. | SCALE-: 1:2,000

COUNTERSIGNED

Divisional Forest Officer
Bonai Division

*Scheme*
*For*

ANNEXURE - 15

# STABILIZE THE OVERBURDENDUMPS BY APPROPRIATE GRADING/BENCHINGSO AS TO ENSURE THAT THAT ANGLES OF REPOSE AT ANY GIVEN PLACE IS LESS THAN $28^0$

in compliance

with

Condition No.10 (d) of

Stage-I approval granted vide

Letter No.8-25/2022-FC dt.4.12.2023 of

Government of India, Ministry of Environment,

Forest& Climage Change

for

Diversion of 67.352 Hects of Forest Land

for U/s-2 (ii) of F.C. Act'1980

within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines

of


## ANIL KUMAR SHARMA,

## PoA OF LATE CHANDI PRASAD SHARMA

In village Raikela, Bahamba and Tensa in Koira Tahsil,

Bonai Forest Division

Dist.Sundargarh Odisha.

## SCHEME FOR STABILIZE THE OVERBURDEN DUMPS BY APPROPRIATE GRADING/BENCHING SO AS TO ENSURE THAT THE ANGLES OF REPOSE AT ANY GIVEN PLACE IS LESS THAN $28^0$

### 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6 2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC ($4^{th}$ Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha. and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C. Act'1980 has been granted by MoEF&CC, Govt. of India vide their Letter No.8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.10(d) for preparation and implementation of a plan for stabilize the overburden dumps by appropriate grading/benching so as to ensure that the angles of repose at any given place is less than $28^0$.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21$^0$ 51' 28.632" - N21$^0$ 52' 03.340" (North) and longitude E85$^0$ 09' 54.852" – E85$^0$ 10' 43.867" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7$^0$C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest, i.e., 7$^0$ C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## 7. EXISTING VEGETATION

The vegetation of the applied area is composed of Sal (*Shorea robusta*), Sidha (*Lagerstroemia parviflora*), Sishu (*Dalbergia latifolia*), Char (*Buchanania lanjan*), Dhaura (*Anogeissus latifolia*), Kurum (*Adina cordifolia*), Asan (*Terminalia tomentosa*), Mango (*Mangifera indica*), Kendu (*Diospyros melanoxylon*), Bahada (*Terminalia belerica*) Jamu (*Syzygiumcuminii*), Kusum (*Schleichera oleosa*), Mahul (*Madhuca indica*), Bel (*Aegle marmelos*), Antidesma acidum, Ardisia solanaceae, Blumeopsis flava, Kasi (*Bridelia retusa*) etc. are major species among flora available in the applied area. ***Sal (Shorea robusta)*** is the pre-dominant species.

## 8. PHASE WISE MINING ACTIVITY AND MANAGEMENT OF OVERBURDEN DUMP

As per the approved modification of Review of Mining Plan along with Progressive Mine Closure Plan the mineable reserve of the mines comes to 0.906 Million Tonnes over the already broken up area which is 6.884 ha. and an area of 49.274 ha. is virgin area and after approval of diversion proposal exploration will be carried out on an area of 49.274 ha. and new modified Mining Plan will be prepared on the basis of the fresh reserve calculation as per the guidelines of the UNFC.

In the ensuing scheme period, a quantity of maximum 50,000 MT per annum has been proposed for production from Block-A. To achieve the required production target method of mining will be semi-mechanized on single shift basis from quarry No.5.

## 9. Waste Generation

As per approved Modification of Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) the waste generation from the quarries will be dumped on the earmarked dumping site. The generation of waste from the quarries is shown as below.

| Year | Volume of Waste Generation ($m^3$) from quarry |
|---|---|
| 2023-2024 | 20315 |
| 2024-2025 | 26548 |
| 2025-2026 | 32810 |

The proposed generation of waste will be dumped on the proposed dump in Block-B in the north western side of the lease area inside the broken-up area during the ensuing review period. During the review period a volume of 79673 $m^3$ (Insitu) or 127476 (Swell) waste will be generated which will be accommodated in the proposed dump over an area of 0.802 ha. with 30m height (max). The proposed dump is temporary in nature as the proposed dumping site has been proposed to be proved barren by exploring the area through boreholes. The maximum height of the dump will be 30m in 3 terraces and terrace height will be maintained at 10m maximum height. The ultimate dump slope will be maintained at $20^0$ – $22^0$ with individual terrace slope not exceeding $37^0$.

**The salient features of OB/waste dump management practices**

1. The total waste generation will be will be stacked on the proposed dump in dry state.
2. Retaining wall and garland drain will be provided around the proposed dumps. Precautionary measures to be adopted during waste disposal are as follows: -

   i) The ultimate dump slope to be maintained around $28^0$.

   ii) Terrace should have inward slope with a provision of catch drain.

iii) The dump edge will be covered with bund. A garland drain will be constructed adjacent to proposed dump, following the contour & different terrace will be connected to the catch drain. The drainage pattern should be such that the runoff will be channelized to the catch drain before releasing to the garland drain outside the periphery of dump. Catch drain will be made up of concrete with number of cemented stairs to check the heavy flow of water as well as to reduce gully formation due to constant run off.

## 10. THE OBJECTIVES OF THE PROPOSED PLAN

The objectives of the proposed plan are as follows:

1. To fulfill the stipulation i.e., Condition No. 10 (d) imposed in the Stage-I approval granted vide Letter No.8-25/2022-FCdated4.12.2023 to prepare plan for **Stabilization of Over burden dump by appropriate grading/benching so as to ensure that angle of repose at any given place is less than $28^0$.**
2. To adopt proper Management and scheduling of overburden materials so as to minimize external dumping.
3. To provide methodologies and implement the proposed works in time bound manner to prevent slope failures there by providing stable OB dump slopes.
4. To stabilise the over burden dumps by plantation.
5. To prevent overflow of eroded soils from the fines, OB dump areas leading to siltation in the streams natural streams.

In order to stabilize over burden dump, the user agency will implement some mitigative measures which are given as below:

## 11. MEASURES ALREADY ADOPTED

There is some structural measures exist within the said Mining Lease area of Chandi Prasad Sharma.

## 12. PROPOSED METHODOLOGY

Due to the geological feature of the mining lease area, the dumps would be higher than the adjoining ground level. Top soils from the slopes of the dump are likely to flow during heavy rains and disturb the topography of its adjoining land, till the dump surface is completely stabilized by biological means. In order to curb this situation, retaining walls of minimum one & half meter height have been planned all along the peripheral contour of the dumps to arrest the possibility material running down on the slopes. Waste dumping has been planned in such a manner that backfilling can be done with a view to reclaim the degraded land.

The methods to be adopted for stabilization of OB dumps are as follows:

a. **Vegetative methods (Biological Measures)**
   - Plantation would be done on the OB dump surface.

b. **Bio-engineering Measures**
   - Plantation of over the proposed dump area will be done *Agavesisilana* or terraces as a soil conservation measure.

c. **Structural measures**
   - Terracing of slopes, plugging of gullies by construction of catch drain
   - Construction of Garland drains, Check dam, Settling tank, loose boulder structure etc. sub-grade dump meant for dumping sub-grade ore.

To give an ideal shape to the dump, appropriate slope has to be maintained for which terraces to be made in dumps to maintain the slope. The angle of repose of the terrace would be around 28°. Backfilled areas would be biologically reclaimed. Terraces would be developed having maximum height of 10m in dumps keeping in view the gradual progress ofdump and area available for minimum utilisation of virgin land. The details of dumps and terraces to be made have been summarized as follows:

a. **Biological Measures**

i) **Plantation on OB dumps**

It is proposed to undertake plantations over the dump. Green coverage of the dump area will be developed by raising plantation at the rate 1600 plants per hectare through block plantation. Taking into consideration the site specific soil condition, indigenous species growing naturally are proposed to be planted. It is also proposed to plant hardy species such as Agave as it can survive in degraded and poor soils along the slope & toe of O.B. dump and prove to be most useful for controlling soil erosion.

| Sl.No. | Item | Location | Area |
|---|---|---|---|
| 1 | Plantation | Dump Slope Plantation | 1.42 ha. |

The list of species to be adopted for the plantation is as follows:

| Sl. No. | Local Name | Scientific Name |
|---|---|---|
| 1 | Amla | *Emblica officinalis* |
| 2 | Karanj | *Pongamia glabra* |
| 3 | Asan | *Terminalia alata* |
| 4 | Pahadisisso | *Dalbergia latifolia* |
| 5 | Simaruba | *Simarubaglauca* |
| 7 | Siris | *Albizzia lebbek* |



*Plantation over OB Dumps*

**II) Soil Treatment & Planting Activities**

The topsoil which is encountered during mining operation would be preserved for utilization during plantation on OB dump areas. Planting shall be done during onset of monsoon in earlier-dugout pits of size 30cmX30cmX30cm. A basal dose of (N.P.K) fertiliser shall be applied at the time of planting, besides mixing with insecticides to prevent termites & insects. A minimum distance of 2.5 mt X 2.5 mt shall be maintained. Care should be taken to complete the planting during July. The proposed biological measures along with the maintenance works will also be executed with internal resources by the user agency in consultation with local Forest Dept. field executives. Provision of vehicle for technical experts (Internal) for proper supervision of these works by the Executing Agency shall also be made available to them.



*Block Planting Activities*

**b. Structural Measures**

**i) Plan for Construction of Loose Boulder Structure**

The User Agency has proposed to construct 01 no. of loose boulder structures of 4 m span across the existing & proposed garland drain along proposed dumps & in phase-2, settling pit would help in stabilization of silt & sediment as well as prevention of soil erosion & enrichment of vegetation & greenery development.

**II) Plan for Construction of Garland drain**

A shallow trench (2.0 m wide x 1.0 m deep) will be dug for storage of run off accumulated for draining surface water before it is released to the natural water course. Proposed Garland drain to be constructed near proposed dumps over a length of 290m shall be constructed in the ensuing five years period.

iii) **Construction of Retaining wall**

Retaining wall is a structure designed and constructed to resist the lateral pressure of soil when there is a change in ground elevation that exceeds the angle of repose of the soil. The Retaining walls are proposed for construction over **278 m** around proposed dumps during 1$^{st}$ year operation with a provision for maintenance of the retaining wall for the next 4 years.

iv) **Terracing of OB Dump Slope**

It is proposed to construct berm & terraces over a length of **840m**. On the proposed Dumps considering the volume of OB materials & the area earmarked for dumping. The slope of individual terrace should be within the permissible range considering the angle of repose of the soil and space available, thereby maintaining the angle of repose at less than 28$^{0}$. The terracing would be done through the internal resources by deploying the operating mining equipment. All these operations would be carried out after sufficient deposition of OB has been made.

v) **Plan for Construction of Check Dams**

After studying the drainage pattern, it has been found total number of check dam required is 2 and accordingly, 02 nos. of Dams will be constructed near the rain water harvesting pit. During monsoon there is heavy flow of water as a runoff arising from up slope/higher elevation to lower elevation. Hence, attention is to be paid to reduce the flow velocity of runoff & settle the silts/sediments flown from overburden dumps, haul roads inside the mine and areas cleared of vegetation.

vi) **Plan for Construction of Settling Tanks**

It is a process that involves separation of solid materials from slurry. Sometimes, this process is called sedimentation. When waste water is treated, a large quantum of materials is filtered out of the liquid by physical barriers. Even then, the water will contain some solids which need to be removed. A settling tank is proposed to be used to protect the surface water. It has been proposed to construct **1 no.** of settling tank.

vii) **Plan for Construction ofcatch drain**

A pyramid structure catch drain has been proposed to stream-line the flow of surface runoff from the dump to the foot of the dump, and stair of the catch drain will be placed inward to restrict flow of water. Catch drain is preferably made up of half concrete with number of stairs to reduce gully formation due to rain water wash off, so that runoff water will flow through each terrace of the dump & connect to the catch drain. The catch drain will be constructed after the proposed dump height exceeds 26 m. 1 no. of catch drain have been proposed.

## 13. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the above works under the present Scheme, Intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for technical experts shall be provided by the user agency for proper execution of these programmes.

## 14. MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Division to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 15% of the plantation cost has been earmarked for expenditure on this score.

## 15. EXECUTING AGENCY

The works in the present Scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish its own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

**SPECIALISED CELL**

| Sl. No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining operation projects |

## 16. REQUIREMENT OF FUNDS

The financial forecast for construction of Stabilization of over burden Dumps, Retention/ Toe Walls to arrest sliding down of the excavated material along the contour by means of, Construction of Check Dam, Retaining wall, Catch Drain, Settling Tank and Loose Boulder Structure of 4m span has already been provided in the Scheme for mitigative measures to minimize soil erosion and choking of streams as per condition **No.10(a)** of **Stage-I approval granted by MoEF& CC in their letter dt.4.12.2023. So, in order to avoid repetition of financial forecast, no budgetary provision has been furnished here.**

**FINANCIAL FORECAST of the project (69.606Ha.)**

Wage Rate Rs.450.00

| Sl. No. | Description of the Work | Fund Required (in Rs.) |
|---|---|---|
| 1. | Biological Measures | The financial forecast has already been provided in the earlier scheme prepared in compliance with Condition No.10 (a) So, no budgetary provision has been suggested |
| A. | Block Plantation (1600 no./ha.) on the dumps and pit to be reclaimed in future over 1.420 ha @ Rs.3,41,903/- per ha. | |
| B. | Agave Plantation at the toe of dump over a length of 840 m. @ Rs.7,61,126/- for 1000 RMT | |
| | **Total** | |
| 2. | Structural Measures | |
| A. | 01 nos. of Loose Boulder Structure of 4mt span @ Rs.56,838/- per each | |
| B. | Construction of Garland drain over a length of 280m @ Rs.636/- per RMT | |
| C. | Construction of retaining wall over 278 m @ Rs.2491 per RMT | |
| D. | Terracing of OB dump over a length of 840 m. @ Rs.1065/- per RMT | |
| E. | Construction of 02 nos of check dam@ Rs.4,93,407.00/- per each | |
| F. | Construction of 1 no. of settling tank @ Rs.19,059.00/- per each | |
| G. | Construction of 1 no. of catch drain (26 m. at dump slope) @ Rs.3,94,773.00/- per each | |
| | **Total** | |
| 3. | De sittation work for Garland drain, settling pond and check dam twice in a year on LS | |
| 4. | Maintenance of retaining walls | |
| | Sub Total | |
| 5. | 15% of the total cost for motivation of VSS / People involved | |
| | Total | |
| | Price escalation @ 20% | |
| | GRAND TOTAL | |

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.***

**CHANDI PRASAD SHARMA**

***Countersigned***

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma.***

**PA HOLDER**

**Technically Approved**

Regional Chief Conservator of Forests
Rourkela Circle

**Divisional Forest Officer**
**Bonai Division**

SCALE-1:2,000

20 0 40 80 120 160 200 240 280 320 360 400 440 480

MAGNETIC MERIDIAN

DATE OF OBSERVATION:- 01.11.1985
MAGNETIC DECLINATION - 0° 50' WEST

TO TENSA

TO KOIRA

CHECK DAM

WASTE DUMP

TEMPLE

MINES OFFICE

CHECK DAM

ULTIMATE PIT LIMIT

TOP SOIL STACK

RETAINING WALL 49 MTR.
TOP SOIL STACK-0.3 HECTARE
TOP SOIL QUANTITY-1600 CUM.

TERRACING 840 MTR.
PROPOSED WASTE DUMP
LOOSE BOULDER STRUCTURE 1No.
RETAINING WALL 278 MTR.
GARLAND DRAIN-290 MTR.
DUMP AREA- 1.42 HECTARE.

TO BHUTUDA

NALA

## PROPOSED

- DUMP SLOPE PLANTATION
- AVAGE PLANTATION
- RETAINING WALL
- GARLAND DRAIN
- SETTLING TANK
- CHECK DAM
- TERRACE
- CATCH DRAIN
- PROPOSED MINERAL STACKYARD
- PROPOSED MINERAL REJECT STACKYARD

## INDEX

- BOUNDARY OF M.L AREA
- CONTOUR
- PUBLIC ROAD
- EXISTING DUMP
- NALA
- POWER LINE
- TEMPLE
- EXISTING RETAINING WALL
- ULTIMATE PIT LIMIT
- SAFETY ZONE

CHANOI PRASAD SHARMA
P. A. HOLDER

PLAN SHOWING TO STABILIZE THE OVERBURDEN DUMP BY APPROPRIATE GRADING/BENCHING SO AS TO ENSURE THAT ANGLE OF REPOSE AT ANY GIVEN PLACE IS LESS THAN 28 DEGREE

RAIKELA, TENSA & BAHAMBA IRON & MANGANESE MINE

LESSEE - : SRI CHANDI PRASAD SHARMA

M.L. AREA- 69.606 HECTS. | SCALE-: 1:2,000

COUNTERSIGNED
Divisional Forest Officer
Bonai Division

ANNEXURE.-14

# SCHEME FOR

## FENCING, PROTECTION AND REGENERATION OF THE SAFETY ZONE OVER 2.836 HA. OF FOREST LAND ALL ALONG THE INNER BOUNDARY OF THE ML AREA OF 69.606 HA.

**FOR RAIKELA, BAHAMBA AND TENSA IRON & MANGANESE ORE MINES**

**OF**

**SRI ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CHANDI PRASAD SHARMA**

**COMING UNDER**

**BONAI FOREST DIVISION**

**SCHEME FOR FENCING, PROTECTION AND REGENERATION OF THE SAFETY ZONE OVER 2.836 HA. OF FOREST LAND ALL ALONG THE INNER BOUNDARY OF THE ML AREA OF 69.606 HA. FOR RAIKELA, BAHAMBA AND TENSA IRON & MANGANESE ORE MINES OF SRI ANIL KUMAR SHARMA POWER OF ATTORNEY OF LATE CHANDI PRASAD SHARMA COMING UNDER BONAI FOREST DIVISION**

## 1. INTRODUCTION:

Ministry of Environment, Forest and Climate Change, Govt. of India granted Stage-I approval vide Letter No.8-25/2022-FC dt.4.12.2023 for diversion of 67.352 ha. of forest land (including 2.836 ha. of Safety Zone of 7.5 mt. wide the ML area) area in favour of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Sri Anil Kumar Sharma PoA of Late C.P. Sharma in Bonai Forest Division, subject to some conditions. As per condition No.11 of the Stage-I approval order, the fencing, protection and regeneration of the Safety Zone area shall be done at the project cost. The total Safety zone area with a width of 7.5 mtrs along ML boundary comes to 2.836 ha. (Forest-2.836 ha.). The location of the Safety zone area has shown in the map enclosed as **Annexure-VI.**

## 2. LOCATION :

The mining lease area is covered in the Survey of India Toposheet (73 G/1) and situated between the latitudes N21$^0$ 51' 28.632" - N21$^0$ 52' 03.340" (North) and longitude E85$^0$ 09' 54.852" – E85$^0$ 10' 43.867" (East).

## 3. TOPOGRAPHY AND SOIL:

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division. Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature

## 4. CLIMATE

The area experiences Sub-tropical climate. It is characterized by very hot summer and cool winter. Maximum temperature during summer rises upto 44$^0$ Celsius and the minimum goes down to 8$^0$ Celsius. The area gets rain from South-East Monsoon, which breaks during second fortnight of June and continues upto last week of September. The annual rainfall varies from 780 to 1880mm. The annual average rainfall is 1500mm. The bulk of precipitation occurs during July-August. During April-May, occasional rainfall occurs along with thunder storm.

## 5. EXISTING VEGETATION.

The crop composition of the Safety Zone area is Sal (*Shorea robusta*), Sidha (*Lagerstroemia parviflora*), Sishu (*Dalbergia latifolia*), Char (*Buchanania lanjan*), Dhaura (*Anogeissus latifolia*), Kurum (*Adina cordifolia*), Asan (*Terminalia tomentosa*), Mango (*Mangifera indica*), Kendu (*Diospyros melanoxylon*), Bahada (*Terminalia belerica*) Jamu (*Syzygium cuminii*), Kusum (*Schleichera oleosa*), Mahul (*Madhuca indica*), Bel (*Aegle marmelos*), Antidesma acidum, Ardisia solanaceae, Blumeopsis flava, Kasi (*Bridelia retusa*) etc.

## 6.OBJECTIVES OF THE SCHEME:

The objectives of the proposed scheme are as mentioned under :-

i) To restock the degraded forest land within the Safety Zone by planting suitable species.

ii) To improve the micro-edaphic conditions by undertaking suitable soil and moisture conservation measures.

iv) To protect the area against encroachment, illicit felling, fire occurrence, grazing etc., so as to check further degradation of the area.

## 7. PROPOSED TECHNIQUE:

To achieve the above aims and objectives, basing on field survey it has been proposed to take up AR plantation over 2.836 ha. @ 1000/ ha. at a spacing of 2.5 mtr X 2.5 mtr., in the safety zone of the lease hold area of Anil Kumar Sharma, PoA Late C.P. Sharma under Bonai Forest Division. The Plantation work will be done in the 1st year followed by maintenance during 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th and 10th year. The detailed expenditure statement of AR Plantation is enclosed as **Annexure-I**.

### (A) Survey & Demarcation.

The M.L. area has been surveyed and demarcated in the field by the User Agency at their cost by erecting 4 feet high reinforced cement concrete pillars inscribed with its serial number, forward and back bearing and distance from pillar to pillar after due consultation with the concerned Range Officers. The length of outer periphery of Safety Zone area is 3549 mt. The inner perimeter comes to 3486 mt. The total perimeter, i.e., outer perimeter and inner perimeter comes to 7035 MT (3549 mt. + 3486 mt.).

**(B). REGENERATION, CLEANING AND TENDING OPERATION:**

The operation aims at tending the existing crop silviculturally for better growth. It involves removal of inferior and diseased tree growth. During this operation, weeds, climber and other unwanted & species which interferes with the growth of the existing crop are to be cut. This operation helps saplings to grow better and faster. The site clearance is to be done by cutting and removing of Eupatorium and all other unwanted growth.

Detailed activities to be taken up are as discussed below.

i) Cutting back of individual inferior poles interfering with the growth of better ones.
ii) Cutting back of malformed and diseased individuals.
iii) Singling of coppice shoots & retaining healthier ones.
iv) Cutting of climbers.
v) Cutting back of high live stumps flush to the ground.
vi) Pruning the branches of the promising poles up to hand reach height.

During 0th year operation, climber cutting, high stump cutting and cutting back of malformed and diseased plants will be done. Followed by next three years, i.e, (1st, 2nd, 3rd year), cutting back of unwanted individuals and singling of economically important species will be done.

**(C) Plantation.**

The safety zone area will be planted with the species mentioned below. Some existing forest growth is available over 2.836 ha. for which AR Plantation @ 1000 seedlings per ha. at a spacing of 2.5 mtr X 2.5 mtr. has been proposed. So, 2836 nos. of seedlings will be required for AR plantation @1000 plants per hectare. As far as possible, species suitable for the site shall be planted as detailed below;

1. *Pongamia pinnata* (Karanja).
2. Ficus religiosa (Jari)
3. *Psidium guajava* (Guava).
4. *Azadirachta indica* (Neem).
5. *Syzizium cumuni* (Jamun).
6. *Mangifera indica* (Mango).
7. *Artocarpus heterophyllus* (Panas).
8. *Ficus bengalensis* (Bara).
9. *Aegle marmelos* (Bela).

and other indigenous species.

The following items of work will be taken up for planting the area.

**(I) Raising of Nursery :-**

Seedlings required for plantation shall be raised in a temporary nursery nearer to the planting site and water sources. Nursery work will be started 18 months prior to the year of plantation so that quality seedling stock will be available for plantation. The seedlings shall be raised 10% extra besides the actual requirement to compensate the casualties. Seedlings will be raised in polythene bags of 9" x 5" size following standard nursery practice.

**(ii) Site Clearance:**

The miscellaneous unwanted growth in the Safety Zone area will be cleared before taking up pitting work.

**iii) Alignment and pitting.**

Alignment and pitting will be taken up in March-April. Pits of size 45 cm x 45 cm x 45 cm will be dug, maintaining a spacing of 2.5 mtr. X 2.5 mtr. in the safety zone area.

**Iv) Actual planting.**

The seedlings will be planted @ 1000 seedlings per ha. in the dug out pits of size 45cm x 45cm x 45cm with a spacing of 2.5mtr x 2.5mtr. Plantation shall be taken up after first regular shower of monsoon and completed by the end of July. Species will be planted as per suitability of the soil condition. NPK/ Bio fertilizer @50gms per plant shall be applied as basal dosage. Anti-termite insecticide shall also be applied to each pit while planting. Casualties if any noticed shall be replaced with the excess seedlings raised for the purpose. During second year also, casualty replacement will be done for which seedlings shall be raised.

**v) Weeding, Soil working and Manuring.**

For establishment and better growth of the planted seedlings, timely weeding, soil working and manuring are necessary. It is proposed to carry out two weedings, soil working and manuring during the first year and second year of plantation and one weeding and soil working during third year. During first year and second year, first weeding and manuring shall be carried out during August-September and the second one during October-November along with soil working. First weeding shall be around the plants and the second will be of strip weeding. The weeding of third year will be around the plants, which will be carried out during August.

After each weeding, soil working will be done around each plant at a radius of 0.5mtr, and manuring of each plant will be done @50gms of NPK/ Bio fertilizer per plant in ring form.

**(vi) Application of Insecticides.**

After planting of good healthy seedlings, the plantation site may cause influx of insects, which usually eat and damage the tender leaves and shoots of the plants. To get rid of such insect attack, application of insecticides will be taken up in required doses at desired intervals. Spraying of insecticides shall be done preferably in a sunny day in the forenoon as per requirement.

**(vii) Fire line tracing and maintenance.**

Fire causes heavy loss to the forest & plantation during fire season. To prevent incidence of fire, the area shall be divided in to suitable blocks by tracing fire lines. Boundaries of the plantation patches and these block lines will be scrapped of the growth to a width of 2.0mtr during February-March and the cut back materials and the dry leaves stacked along these lines will be burnt under strict supervision. This operation shall be carried out for three years.

**(D) Soil Conservation Measures.**

The site selected for Safety Zone Afforestation is undulating, and gullies have been formed due to erosion. So, Soil Conservation Measures like Staggered Trench, Percolation Pit, Contour Trench, Graded earthen bund, LBCD, Wire mesh LBCD, Sub surface Dyke and WHS as per site requirement have been proposed. The cost norm of SMC is enclosed as **Annexure-II.**

**(E) Fencing.**

To protect the AR plantation from biotic interference, Barbed wire fencing is proposed over the Safety Zone area of 2.836 ha. The length of outer periphery of Safety Zone area is 3549 mt. The inner perimeter comes to 3486 mt. The total perimeter, i.e., outer perimeter and inner perimeter comes to 7035 MT (3549 mt. + 3486 mt.) are required to be fenced with Barbed wire fencing.

The cost norm of Barbed wire fencing is enclosed as **Annexure-IV**

**(F) Protection.**

The Safety Zone area is exposed to biotic interference. The User Agency shall deploy 2 nos. of special watchers for protection of the Plantation under the supervision of the Forest Department.

**(G). WATERING :**

Watering of the plantation will be carried out aided by solar system with Borewell (1 system for 5 ha. plantation) fitted with Drip system. The cost norm is furnished as **Annexure-III**.

**(H) Motivation of People from adjoining villages:**

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba, Tensa of Bonai Forest Division are to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 10% of the plantation cost has been earmarked for expenditure on this score.

**(I) Executing Agency:**

The User Agency shall execute the work under the supervision of the State Forest Department.

## FINANCIAL FORECAST

For implementation of all the prescriptions outlined above **₹ 1,32,54,300/-** (Rupees One Crore Thirty Two Lakh Fifty Four Thousand Three Hundred only) will be required as detailed below.

| | **Works to be executed by the User Agency.** | | |
|---|---|---|---|
| 1. | AR Plantation @1000 plants per hectare over 2.836 ha. @₹ 2,58,777/- per ha. | ₹ | 7,33,892.00 |
| 2. | Soil conservation measures structures like staggered trench, percolation pit, contour trench, graded earthen bund, LBCD, wire mesh, LBCD, Sub surface Dyke and Water Harvesting structures = 2.836 ha X ₹39,284/-. | ₹ | 1,11,409.00 |
| 3. | Water provision to plantation: Solar system with Bore well (1 system for 5 Ha. Plantation) fitted with Drip system @ ₹2,45,476/- X 1 nos. | ₹ | 2,45,476.00 |
| 4. | Special plantation watcher 2 Nos. (2 x 13500 x 12 x 10 years). | ₹ | 32,40,000.00 |
| 5. | Cost of Barbed wire Fencing over 7035 RMT (Outer periphery-3549 Rmt. (+) Inner Periphery-3486 Rmt), (Or, 7035 RMT = 7.035 Km) @1073/- per RMT with 3 years maintenance of 3 years (3rd, 6th & 9th) year. | ₹ | 75,48,555.00 |
| 6. | 2 nos. of fire blower (₹60,000/- x 2 nos.) with POL (₹5,000/- x 5 years x 2 nos.). | ₹ | 1,70,000.00 |
| | **Total :-** | ₹ | **1,20,49,332.00** |
| 7. | Entry Point Activities 10% of the cost | ₹ | 12,04,933.00 |
| | **Total :-** | ₹ | **1,32,54,265.00** Or ₹ **1,32,54,300.00** |

(Rupees One Crore Thirty Two Lakh Fifty Four Thousand Three Hundred only).

Technically Approved

Regional Chief Conservator of Forests
Rourkela Circle

Divisional Forest Officer,
Bonai Division.

# ANNEXURE-I

ANNEXURE-I

BASE COST NORMS FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION)
@ 1000 PLANTS PER HECTARE (including pit digging)

WAGE RATE Rs. 311 /- PER MANDAY

| Sl. No | Name of work | Preferable Period of Execution | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | 0th Year (Advance year) Pre-Planting Operation | | | | | |
| 1 | Survey, Demarcation and Pillar making | Nov/Dec | 3 | 622 | 0 | 622 |
| 2 | Preparation of Treatment Map (Digital Map) | Nov/Dec | 7 | 311 | 100 | 411 |
| 3 | Site preparation (Shrubs & territorial obstacles) | Nov/Dec | 12 | 3732 | 0 | 3732 |
| 4 | Creation of 4.00 m wide Inspection Path | Feb/Mar | 5 | 311 | 0 | 311 |
| 5 | Alignment and marking of pits | Feb/Mar | 1 | 311 | 0 | 311 |
| 6 | Digging of pits (45 cm x 45 cm x 45 cm) in hard and gravelly soil | Feb/Mar | 40 | 12440 | 0 | 12440 |
| 7 | Construction of Temporary Labour Shed, Drinking water facility and First Aid etc. | Jan/Mar | 0 | 0 | 3560 | 3560 |
| | Total | | 57 | 17727 | 3660 | 21387 |
| | 1st Year/Planting Year | | | | | |
| 1 | Refilling of pits by allowing the degraded soil of the pits, application of organic compounds/ CDM/ FYM & mixing the same properly | Jan/Jul | 7.5 | 2332.50 | 5040 | 7372.50 |
| 2 | Transportation of 3-4 months old polythene bag seedlings in lots of trolly /tractor from the temporary/Main nursery to planting site including loading & unloading. (Average load of 50 Plants) & watering the seedling @ Rs.6/- per Seedling (1100 nos.) | Jul/Aug | 11 | 0 | 6600 | 6600 |
| 3 | Watering of pre-planted seedlings after planting site | Jul/Aug | 2 | 622 | 0 | 622 |
| 4 | Conveyance of pit/pot seedlings or Seed lead from the stacking site to individual nearest pits while the planting also applying insecticide, fertilizers & plant irrigation covering the soil with other applied materials & pressing the soil perfectly around the planted seedlings. | Jul/Aug | 22.5 | 6997.50 | 0 | 6997.50 |
| 5 | Cost of Fertilizer & Insecticide<br>(a) NPK/Bio-fertilizer @ 50 gms/plant as basal dose @ 50Kg/- Bag/Qty - per kg @ Rs. 15/Bag<br>(b) Urea/Vermicompost/Neem cake/any other fertilizer in two split equal doses @ Rs. 750.00<br>(c) Insecticide/ Bio-pesticide @ 5 gms/plant=5 kg @ Rs.150/- per kg= Rs. 750.00 | Jul/Aug | 0 | 0 | 1500 | 1500 |
| 6 | Casualty replacement @ 10% (100 nos.) | Jul/Aug | 2.5 | 777.5 | 0 | 777.5 |
| 7 | 1st weeding & Manuring | Aug/Sept | 12 | 3732 | 0 | 3732 |
| 8 | Soil Working, Soil working (5mt. diameter around the plants) & Manuring | Oct/Nov | 15 | 4665 | 0 | 4665 |
| 9 | Fire line tracing (2 m. wide fire line over 100 m long) including maintenance of boundary path | Feb/Mar | 3 | 933 | 0 | 933 |
| 10 | Watch & Ward (including watchmen as per requirement) | Apr/Mar | 12 | 3732 | 0 | 3732 |
| | Total | | 74.50 | 23791.00 | 14600.00 | 38391.00 |
| | 2nd Year Maintenance | | | | | |
| 1 | Transportation of 100 seedlings from Nursery to plantation site including loading unloading & conveyance by Tractor @ Rs.6/- per seedling | Jul | 0 | 0 | 600 | 600 |
| 2 | Casualty replacement- 10% | Jul | 2.5 | 777.5 | 0 | 777.5 |
| 3 | Cost of Fertilizer & Insecticide<br>A) Cost of insecticide/ Bio-pesticide @ 5 gms/plant= 0.5 Kg @ Rs.150/- per kg = Rs.75/-<br>B) Urea/NPK/Bio-fertilizer/Vermicompost/Oil Khata/any other fertilizer @Rs. 2000/- | July/Aug | 0 | 0 | 2375 | 2375 |
| 4 | Weeding (Complete weeding), Hoeing & Soil working (1mt. diameter around the plants) | Sep/Nov | 15 | 4665 | 0 | 4665 |
| 5 | Fire line tracing (2 m. wide fire line over 100 m long) Including maintenance of protecting path | Feb/Mar | 3 | 933 | 0 | 933 |
| 6 | Watch & Ward including watchmen as per requirement | Apr/Mar | 18 | 5598 | 0 | 5598 |
| 7 | Maintenance of Temporary Labour Shed, Drinking water facility and First Aid etc. | Apr-Mar | | 0 | 1600 | 1600 |
| | Total | | 38.5 | 11973.5 | 4575 | 16648.5 |

| Sl. No | Name of work | Preferable Period of Operation | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | 1st Year Maintenance | | | | | |
| 1 | Cost of fertilizer(Urea/NPK/Bio-fertilizer/Vermicompost/Herbicide/any other fertilizer | July/Aug | 0 | 0 | 2100 | 2810 |
| 2 | Weeding (Complete weeding), Watering, & Soil working (1 m. diameter around the plant) | Sep/Oct | 15 | 4665 | 0 | 4665 |
| 3 | Fire line cutting (2 m wide fire line over 400 m. long, including maintenance of fire line) | Feb/Mar | 3 | 933 | 0 | 933 |
| 4 | Watch & Ward including watering as per requirement | Apr/Mar | 18 | 5590 | 0 | 5590 |
| 5 | Maintenance of Temporary Labour Shed, Drinking water facility and First Aid box | Apr/Mar | 0 | 0 | 1000 | 1000 |
| | Total | | 36.0 | 11196 | 3100 | 14996 |
| | 4th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 100 m long) including maintenance of fire line | Feb/Mar | 3 | 933 | 0 | 933 |
| 2 | Watch & Ward including maintenance of engagement fencing | Apr-Mar | 18 | 5598 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 5th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 6th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933.0 |
| 2 | Cleaning of trenches, Shelterbelt and boundaries | Jan/Mar | 3 | 933.00 | 0 | 933.0 |
| 3 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598.0 |
| | Total | | 24 | 7464 | 0 | 7464.0 |
| | 7th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 8th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 9th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933.00 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |
| | 10th Year Maintenance | | | | | |
| 1 | Fire line cutting (2 m. wide fire line over 400 m length) | Feb/Mar | 3 | 933 | 0 | 933 |
| 2 | Watch & Ward | Apr/Mar | 18 | 5598.00 | 0 | 5598 |
| | Total | | 21 | 6531 | 0 | 6531 |

Year wise Abstract of Cost Norm (showing seedling cost separately)

| Sl. No | Details of work | Preferable Period of Execution | No of Mandays | Labour Cost (in Rs.) | Material Cost (in Rs.) | Total cost (in Rs.) | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Sl. No | Year | No. of Mandays | Labour cost (in Rs) | Material Cost(in Rs) | Monitoring, Evaluation, Learning, Documentation, Lab and Other Contingency (5%) of (4+5) | Cost of Seedlings @Rs.50.31 per seedlings | TOTAL COST(in Rs) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 0th year | 51.0 | 19229.0 | 2400.0 | 973.00 | 0.00 | 22602.00 |
| 2 | 1st year | 76.5 | 28793.5 | 8400.0 | 1918.50 | 56941.00 | 96053.00 |
| 3 | 2nd year | 28.5 | 11973.5 | 4175.0 | 857.50 | 5931.00 | 22981.00 |
| 4 | 3rd year | 36.0 | 13356.0 | 3050.0 | 744.00 | 0.00 | 167460.0 |
| 5 | 4th year | 27.0 | 6571.0 | 0.0 | 328.00 | 0.00 | 6857.00 |
| 6 | 5th year | 21.0 | 6531.0 | 0.0 | 326.00 | 0.00 | 6857.00 |
| 7 | 6th year | 24.0 | 7464.0 | 0.0 | 373.20 | 0.00 | 7837.00 |
| 8 | 7th year | 21.0 | 6531.0 | 0.0 | 326.00 | 0.00 | 6857.00 |
| 9 | 8th year | 21.0 | 6531.0 | 0.0 | 326.00 | 0.00 | 6857.00 |
| 10 | 9th year | 21.0 | 6531.0 | 0.0 | 326.00 | 0.00 | 6857.00 |
| 11 | 10th year | 21.0 | 6531.0 | 0.0 | 326.00 | 0.00 | 6857.00 |
| | Total: | 358.0 | 111338.0 | 26475.0 | 6791.00 | 60372.0 | 384976.0 |

Note:

1. Priority must be given to the endangered local species available nearby to the site of plantation.
2. 10% indigenous multi bearing trees must be preferred to Plantation.
3. Site specific Soil conservation work like I.W.D, Gully Plugging, Staggered Trench, Contour Trench, Graded Bund, etc may be taken up
4. Chala Pit Sowing can be adopted in the CA plantation taken up outside the forest area and Bamboo Dibbling may be preferred
5. Water conservation for procurement of water & watering may be adopted as per the availability of water.
6. The Cost Norm of various items can be changed with the approval of the concerned DCCFs keeping the overall cost norm fixed for each Financial Year

ACCF (Forest Division & NC, FC Act)

## Matrix for Model-I A Conventional CA Plantation (AR) 1000 plants per Ha

In Rupees

| Sl. No. | Commencement Year | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | XVII | XVIII | XIX | XX | XXI | Total Cost (10 Years) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Values | | 22322 | 95851 | 22301 | 15745 | 8857 | 6957 | 7317 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | |
| 1 | 2021-22 | 22300 | 95852 | 22305 | 15745 | 8855 | 6952 | 7307 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 234718 |
| 2 | 2022-23 | | 95855 | 22305 | 15745 | 8855 | 6952 | 7309 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 246454 |
| 3 | 2023-24 | | | 22305 | 15745 | 8855 | 6952 | 7309 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 258777 |
| 4 | 2024-25 | | | | 15745 | 8855 | 6952 | 7309 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 271715 |
| 5 | 2025-26 | | | | | 8855 | 6952 | 7309 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 285302 |
| 6 | 2026-27 | | | | | | 6952 | 7309 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 299567 |
| 7 | 2027-28 | | | | | | | 7309 | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 314546 |
| 8 | 2028-29 | | | | | | | | 6357 | 6857 | 6857 | 6857 | | | | | | | | | | | 330273 |
| 9 | 2029-30 | | | | | | | | | 6857 | 6857 | 6857 | | | | | | | | | | | 346788 |
| 10 | 2030-31 | | | | | | | | | | 6857 | 6857 | | | | | | | | | | | 364127 |

APCCF (Forest Diversion & FC Act)

# Annexure-II

Annexure-II

Cost Norms for creation of Silvipasture Afforestation with Establishment of Soil & Conservation of Moisture (1000

WAGE RATE Rs. 311/- PER DAY

| Sl.No | Item of Works | Proforma/d Period of Execution | Total Cost |
|---|---|---|---|
| | 0th Year (Pre-Planting Operation) | | |
| 1 | Nil | | 0 |
| | 1st Year | | |
| 2 | Soil Conservation measure structures like Staggered Trench, Pergolation pit, Contour trench, Graded earthen bund, 10/12 Wire mesh L&GD, Nah earthen dyke & WHS as per the slope & site requirement as LS | Apr/Sept. | 20,215 |
| | 2nd Year | | |
| 3 | Maintenance of SMC structures @ 15 % of initial year cost | Apr/Jul | 3,032 |
| | 3rd Year | | |
| 4 | Maintenance of SMC structures @ 15 % of initial year cost | Apr/Jul | 3,032 |
| | 4th Year | | |
| 5 | Maintenance of SMC structures @ 15 % of initial year cost | Apr/Jul | 3,032 |
| | 5th Year | | |
| 6 | Maintenance of SMC structures @ 15 % of initial year cost | Apr/Jul | 3,032 |
| | Total | | 32,343.0 |

Abstract

| Sl. No | Year | No. person days | Labour cost @ Rs. 311/-per day | Material Cost | Total cost (Rs.) |
|---|---|---|---|---|---|
| 1 | 0th year | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 1st year | 0.0 | 0.0 | 20,215.0 | 20,215.00 |
| 3 | 2nd year | 0.0 | 0.0 | 3,032.00 | 3,032.00 |
| 4 | 3rd year | 0.0 | 0.0 | 3,032.00 | 3,032.00 |
| 5 | 4th year | 0.0 | 0.0 | 3,032.00 | 3,032.00 |
| 6 | 5th year | 0.0 | 0.0 | 3,032.00 | 3,032.00 |
| | Total | 0.00 | 0.00 | 32,343.0 | 32,343.0 |

Different types of SMC structures may be taken up as per the scope & requirement and the plantation site on the design & specification of different structures ensured along this direction.

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## Matrix for (SMC)

In Rupees

| Sl No. | Commencement Year | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Base Value | 0 | 20615 | 3012 | 3082 | 3082 | 2082 | | | | | | | | | | | |
| 1 | 2021-22 | 0 | 21228 | 3342 | 3513 | 3685 | 3870 | | | | | | | | | | | 55638 |
| 2 | 2022-23 | | 0 | 17267 | 3508 | 3656 | 3809 | 4054 | | | | | | | | | | 37415 |
| 3 | 2023-24 | | | 0 | 3497 | 3684 | 3870 | 4062 | 4257 | | | | | | | | | 30284 |
| 4 | 2024-25 | | | | 0 | 3697 | 3888 | 4084 | 4265 | 4460 | | | | | | | | 41243 |
| 5 | 2025-26 | | | | | 0 | 3900 | 4086 | 4282 | 4478 | 4704 | | | | | | | 43310 |
| 6 | 2026-27 | | | | | | 0 | 27393 | 4264 | 4486 | 4703 | 4938 | | | | | | 45475 |
| 7 | 2027-28 | | | | | | | 0 | 28445 | 4477 | 4703 | 4917 | 5106 | | | | | 47749 |
| 8 | 2028-29 | | | | | | | | 0 | 29867 | 4701 | 4899 | 5106 | 5445 | | | | 50136 |
| 9 | 2029-30 | | | | | | | | | 0 | 30390 | 4898 | 5106 | 5443 | 5717 | | | 52542 |
| 10 | 2030-31 | | | | | | | | | | 0 | 32428 | 5104 | 5443 | 5715 | 6009 | | 56276 |

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## ANNEXURE-III

| Watering Module-III | | | |
|---|---|---|---|
| **Watering provision in CA Plantation** | | | |
| **Solar system with Bore well (1.5 HP) for 5 Ha Plantation) fitted with Drip system, Wage rate @ Rs 311/-** | | | |
| Year of Installation (0th Year) | | | |
| 1 | Cost of Bore well | 150000 | |
| 2 | Installation of Solar panel & motor System | 380000 | |
| 3 | Cost of 0.5 HP submersible motor with accessories | 90000 | |
| 4 | Water Storage Tanks / Flexible pipes | 16000 | |
| 5 | Cost of drip irrigation system including all accessories, Solar panel etc. with 12% GST | 381481 | |
| Total | | 1017481 | |
| 6 | Sum of Water & watering per Ha (1017481/5) = Rs. 203496/- | | 203496 |
| 1st Year Watering | | | |
| 7 | No maintenance required | | 0 |
| | | Total | 0 |
| 2nd Year Watering | | | |
| 8 | Maintenance of system @ 5% of initial cost of installation | | 8174 |
| | | Total | 8174 |
| 3rd Year Watering | | | |
| 9 | Maintenance of system @ 5% of initial cost of installation | | 8174 |
| | | Total | 8174 |
| 4th Year Watering | | | |
| 10 | Maintenance of system @ 5% of initial cost of installation | | 8174 |
| | | Total | 8174 |
| 5th Year Watering | | | |
| 11 | Maintenance of system @ 5% of initial cost of installation | | 8174 |
| | | Total | 8174 |

| Abstract | | | | | |
|---|---|---|---|---|---|
| Sl No | Year | No. persons days | Labour cost @ Rs 311/- per day | Material Cost | Total cost (Rs.) |
| 1 | 0th year | 0 | 0.0 | 1681480 | 1680480 |
| 2 | 1st year | 0 | 0.0 | 0.0 | 0.0 |
| 3 | 2nd year | 0 | 0.0 | 81744 | 81744 |
| 4 | 3rd year | 0 | 0.0 | 81744 | 81744 |
| 5 | 4th year | 0 | 0.0 | 81744 | 81744 |
| 6 | 5th year | 0 | 0.0 | 81744 | 81744 |
| | Total | 0 | 0 | 1901162 | 1901162 |

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## Matrix for Watering W1 (Solar Borewell) fitted with Drip System (per Ha)

In Rupees

| Sl. No. | Commencement Year | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Norm | | 163486 | 0 | 8174 | 8174 | 8174 | 8174 | | | | | | | | | | | |
| 1 | 2021-22 | 163486 | 0 | 9811 | 9463 | 9935 | 10758 | | | | | | | | | | | 223653 |
| 2 | 2022-23 | | 171660 | 0 | 9463 | 9936 | 10632 | 12256 | | | | | | | | | | 233788 |
| 3 | 2023-24 | | | 180344 | 0 | 9685 | 10483 | 12954 | 23961 | | | | | | | | | 245476 |
| 4 | 2024-25 | | | | 128755 | 0 | 10432 | 10853 | 11502 | 85607 | | | | | | | | 257751 |
| 5 | 2025-26 | | | | | 135718 | 0 | 12554 | 11503 | 12077 | 87387 | | | | | | | 270539 |
| 6 | 2026-27 | | | | | | 108694 | 0 | 11502 | 12078 | 12681 | 96256 | | | | | | 284171 |
| 7 | 2027-28 | | | | | | | 113037 | 0 | 12677 | 12682 | 13515 | 41215 | | | | | 298880 |
| 8 | 2028-29 | | | | | | | | 138341 | 0 | 12651 | 13316 | 13881 | 43289 | | | | 313199 |
| 9 | 2029-30 | | | | | | | | | 141545 | 0 | 13315 | 13982 | 14680 | 45444 | | | 328964 |
| 10 | 2030-31 | | | | | | | | | | 255630 | 0 | 13981 | 14681 | 15414 | 47715 | | 345412 |

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**ANNEXURE-IV**

# ESTIMATE FOR BARBED WIRE FENCING

ANNEXURE-37

ESTIMATE FOR BARBED WIRE FENCING

01). 02 ply barbed wire (5 Rmt per kg)
7 straight strand x 1000 Mt +7000Mt
2 Diagonal strand = $2 \times \sqrt{(6.5')^2 - (8.2')^2} = 2 \times 10.50$ ft
=21.00 ft x 400 nos=8400 ft or +2560Mt
+9560Mt

Requirement of Barbed wire per Km
Cost per KM=9560/5=1912 kg @ Rs.80/Kg Rs.1,52,960.00

02). Construction of RCC pillars of size-
Length—8ft, Bottom width 6"x6", Top width-4"x4"
Reinforced with 6mm rods with proper curing

$$\left\{ 8' \times \frac{6"+4"}{2} \right\} \times \frac{6"+4}{2} = 1.34 \text{ cft or } 0.038 \text{ cum}$$

i) Cost of c.c. work 1:2:4=0.038 cum @5262.57/cum = 199.98
ii) Cost of rod including cutting, bending & binding
0.038x0.9qtl=0.0342 qtl@ Rs. 10,595.80/qtl. = 362.38
iv) Contingency (15%) including = 81.05
Curing, stacking, provision of hooks etc.
Rs.643.41 or Rs. 644/-

Requirement of pillars per KM-
Spacing=2.5mtx2.5mt
Requirement=1000mt/2.5mt =400
Strut pillar in every 10th pillars=(400/10)x2 = 80
480 Nos

Cost of pillars per Kilometer= 480@ 644/- Rs.3,09,120.00

03).Fitting fixing of RCC pillars in position with hbg metal (4cm) in C.M (1:4:8)
i) Digging of pits 1.5'x1.5'x1.5'=3.375cft/pit
for 480 pits, 480x3. 375=1620 cft or 45.86 cum @ Rs. 12,040/100cum = 5521.54
ii) Fixing of pillars with 4cm hbg metals in C.M 1:4:8
pit size-1.5'x1.5'x1.5' =3.375 cft
Deduct 1/3rd of butt of pillar i.e.3.375/3 =(-) 1.125 cft
Total c.c. work per pillar
2.25cft
For 480 pillars=480x2.25=1080cft or 30.577 cum @ Rs. 3629.46/cum Rs.1,10,978.00

04). Labour for straightening the barbed wire and fixing & clipping with pillars
70M.d per km@280/- = Rs.19,600.00
05). Carriage of Barbed wire & pillars to work site
@Rs.1000/d. and cost of loading & unloading within 5 km distance
Approximately 10 MS @ 800/Md = Rs.18,000.00
06). Provision of one Iron Gate of size (4' x 5') or LS = Rs. 7,500.00
Total = Rs.6,23,680.00
Labour Cess 1% = Rs. 6,237.00
Expenditure per 1 km of barbed wire fencing Rs.6,29,917.00
Or say, Rs.629.91/- or Rs.630/- per meter

07|.Expenditure towards maintenance for 3 years (3rd, 6th & 9th year)
@ 2% of cost per Km = 3 x 2% x Rs.6,29,917/- = Rs.37,795.00
Expenditure per 1 Km of barbed wire fencing including maintenance = Rs.6,67,712.00

So, expenditure per running meter for fencing = Rs.667.71/Mtr. or say Rs.668/-Mtr.
[Rupees Six hundred sixty eight] only

Addl.PCCF (FB&A) Addl.PCCF (Nodal & FC) Addl.PCCF (PP&A) Addl.PCCF (WE & W)

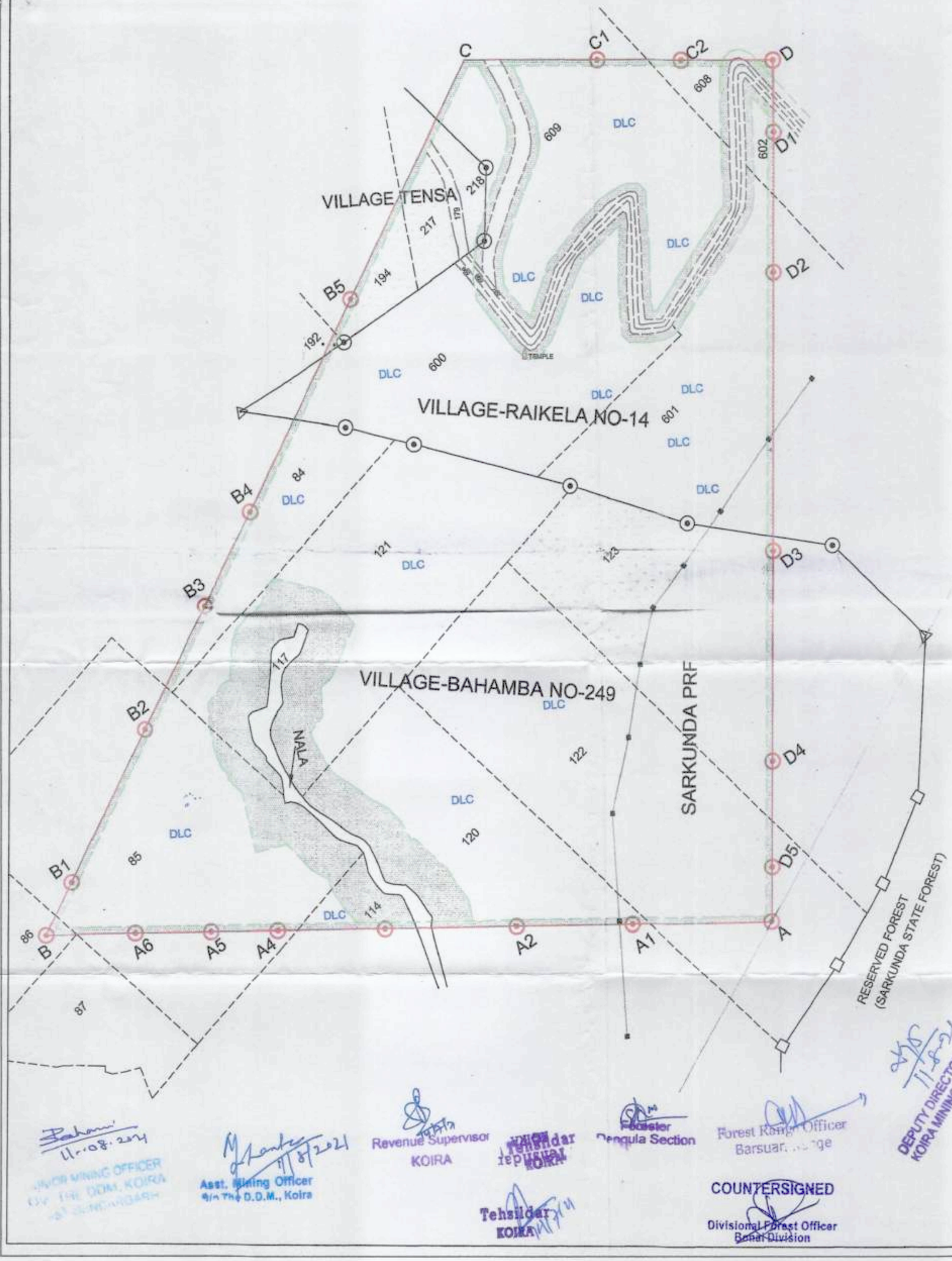
CCF (CAMPA) RCCF, Bhubaneswar Dy.CF (Affn.)

Principal CCF, Odisha

**@ 280.00 per MD = Rs.667.71 / Mtr.**

**Now @ 450.00 per MD = Rs.1073.10 (Or, say 1073.00 / Mtr.)**

Divisional Forest Officer,
Bonai Division.




# INDEX

- BOUNDARY OF M.L. AREA
- PUBLIC ROAD
- SAFETY ZONE
- TEMPLE
- VILLAGE BOUNDARY
- REVENUE FOREST
- DLC — DLC FOREST
- BOUNDARY OF SARKUNDA PRF

**SAFETY ZONE AREA**

All figures are in Hectares

| Sl No | Item wise land use | PRF | DLC Forest | Revenue Forest | Total Forest | Non-Forest | Total Area |
|---|---|---|---|---|---|---|---|
| 1 | 7.5m wid. along the ML boundary | 0.542 | 2.053 | 0.241 | 2.836 | | 2.836 |
| 2 | 50m wide along the nala | | 5.408 | | 5.408 | | 5.408 |
| 3 | 10m along the public road | | 2.409 | 0.031 | 2.44 | | 2.44 |
| | Total | 0.542 | 9.87 | 0.272 | 10.684 | 0 | 10.684 |

PLATE NO - VII

RAIKELA, TENSA & BAHAMBA IRON & MANGANESE MINE
OVER 69.606 Ha.IN SUNDARGARH DISTRICT, ODISHA

SAFETY ZONE PLAN

SCALE-: 1 : 4000

LESSEE : SRI CHANDI PRASAD SHARMA

Asst. Mining Officer
O/o The D.D.M., Koira

Revenue Supervisor
KOIRA

Tehsildar
KOIRA

Forester
Dengula Section

Forest Ranger Officer
Barsuan... Range

COUNTERSIGNED
Divisional Forest Officer
Bonai Division

DEPUTY DIRECTOR OF MINES
KOIRA MINING CIRCLE, KOIRA

COUNTERSIGNED
Divisional Forest Officer
Bonai Division

ANNEXURE -15

# Scheme

# For

# TOP SOIL MANAGEMENT

in compliance

with

Condition No.12 of

Stage-I approval granted vide

Letter No.8-25/2022-FC dt.4.12.2023 of

Government of India, Ministry of Environment,

Forest& Climage Change

for

Diversion of 67.352 Hects of Forest Land

for U/s-2 (ii) of F.C. Act'1980

within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines

of

## ANIL KUMAR SHARMA,

## PoA OF LATE CHANDI PRASAD SHARMA

in village Raikela, Bahamba and Tensa in Koira Tahsil,

Bonai Forest Division

Dist.Sundargarh Odisha.

# SCHEME FOR TOP SOIL MANAGEMENT

## 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-06/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filling Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23 11 2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela, Bahamba, Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha , PRF-8.951 ha. and 2.254 ha. of Non-forest land. The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ll) of F.C. Act'1980 has been granted by MoEF&CC, Govt. of India vide their Letter No 8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.12 for preparation and implementation of a plan containing for Top Soil Management.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 43.867" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature. The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest, i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly 50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## 7. PLAN FOR TOP SOIL MANAGEMENT

This Topsoil Management Plan provides description of the soil stripping and stockpiling procedures to minimize top soil degradation and maximum availability of suitable soil for future rehabilitation within the 69.606 hectares mining lease of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma in Sundargarh District of Odisha. Topsoil is to be stripped in areas proposed to be disturbed, i.e., 10.016 Hect. of virgin forest land Non forest land for mining operation. A comprehensive top soil management plan has been prepared keeping in view of the conservation, regeneration and afforestation in and around the site where top soil will be stored.

In non-mineralized area also, there is existence of very thin layers of top soil say 5 to 10 cm varying from site to site, which is very difficult to slice down and is stored separately for use during future reclamation. However, grass seed will be broadcasted over this area to prevent erosion of the top soil.

## 8. OBJECTIVES

The objectives of Top soil management to be executed are as follows:

- To fulfill the stipulation (Condition No.12, i.e strict adherence to the top soil management imposed by the Ministry of Environment & Forests, GOI vide their letter No.8-25/2022-FC dated 4.12.2023 during approval of Stage-I forest clearance.
- To identify top soil resources, and to follow stripping guidelines for optimum recovery.
- To identify stockpile locations and dimensions.
- To identify surface areas suitable for stripping (to minimize over clearing).
- To manage and conserve the top soil reserves.
- To provide sufficient stable topsoil material for rehabilitation work of dumps, back filled areas and degraded lands.

## 9. PLAN FOR MANAGEMENT OF TOP SOIL TO BE GENERATED FROM MINING

The top soil inside 69.606 hectares of ML area is scanty and present in extremely thin layer. Whatever top soil is available will be excavated during the development of unbroken patch within the mining lease. Precautionary measures will be taken so that this valuable resource is not wasted. This excavated top-soil will be utilized for concurrent plantation works in the mine as per this plan. Some of the top soil will be stored temporarily until it can be used for plantation works / dump reclamation. The details of collection of Top soil are given below.

| Name of the proposed site to be top soil generated | Total surface Area(Sq.m) | Average thickness(m) | Volume of top Soil(Cu.m.) |
|---|---|---|---|
| Patch-1 to Patch-4 | 100160 | 0.3 | 30048 |

This Topsoil Management Plan has provision for soil stripping and stockpiling procedures to minimize top soil degradation and maximize availability of suitable soil for future rehabilitation.

## 10. FUTURE TOP SOIL GENERATIONFROM MINING ACTIVITIES

Soil studies have shown that the average thickness of topsoil in the unbroken areas will be around 5 cm - 10 cm. The quantity of topsoil to be stripped in a phased manner from the site will be used during first 5 years to rehabilitate the existing OB dumps, areas.

Prior to stripping, the area will be cleared by removing the unwanted growth. The proposed procedure for soil handling is given below which includes soil handling measures in order to optimize retention of soil characteristics (in terms of nutrients and micro-organisms) conducive to growth of plant.

## 11. METHODOLOGY

In accordance with the above objective of providing sufficient stable soil material for rehabilitation and to optimize soil recovery, the following strategies have to be followed:

- Topsoil stockpiles are to be identified outside quarry area.
- Stripping off the topsoil by dozers rather than scrappers to minimize structural degradation,
- Construction of stockpiles with a "rough" surface condition to reduce erosion hazard.
- Improvement of drainage and promotion of revegetation.
- Revegetation of stockpiles with appropriate fertilizer etc, to maintain soil organic matter levels, soil structure and microbial activity and maximize the vegetative cover of the stockpile, and
- To utilize stripped top soil as soon as possible for rehabilitation in a phased manner in accordance with the rehabilitation plan as prescribed in Mining Plan.

## 12. PLAN FOR MANAGEMENT OF EXCAVATEDTOPSOIL

To minimize the detrimental effects of long-term storage of topsoil in stockpiles, the following procedures will be ensured prior to stripping activities.

Appropriate delineation of areas for storage of top soil; A small area has been planned & accordingly the area is demarcated for storage of top soil within Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma **(Copy of the Plan enclosed)**. Though in the land use pattern, no area has been earmarked for storage of top soil, as per the stipulation of the Stage-I approval order the storage area has been earmarked within the lease area.

- Dry stone wall to a length of 48 mt. will be constructed around the stockpile followed by grass seeding on the inner side. The cost norm of Toe / retaining wall construction has been provided in **Annexure-2**.
- The topsoil stripping will be completed using bulldozers and tippers of smaller capacity in case of good quantum. In areas where the topsoil is relatively thin, the topsoil will be removed in such a way to prevent mixing of topsoil and sub soils.
- Stockpiles will have erosion control measures by constructing loose boulder wall with cement sand patching.
- Permanent measures include establishment of vegetation (bushes & shrubs) and broadcasting of seeds of local shrubs / grasses will mitigate soil erosion and dust emissions. The total area for sowing of grass seeds comes to 0.30 ha. The cost norm of Grass seedling has been provided in **Annexure-1**.

- Prior to use of the topsoil for reclamation, sample of the topsoil will be collected and chemical analysis including nitrogen, organic content and pH value will be done.
- Re-spreading of topsoil will be undertaken in the areas requiring reclamation, so as to approximate pre-plantation thickness of 2 -3 cm by manual means.

## 13. PLAN FOR CONSERVATION OF TOP SOIL IN BARREN LANDS

The forest land of the region is prone to soil erosion as the entire landscape is affected due to mining activity in the vicinity. Soil erosion problem varies from area to area within the lease, depending on the topography, soil types, vegetation, and management interactions of the catchment. Hence, it is very important to control erosion of top soil from the area, which will result in enhancement of in-situ moisture conservation by enrichment of water table profile for more availability of water so that the top soil is conserved for supporting the growth of trees.

## 14. TOP SOIL CONSERVATION PLAN

The Top soil will be collected and stored preferably at one place and the top surface will be broadcasted with grass seeds so that a mat of grass turf is made over the surface of the top soil and this will prevent erosion of the top soil by rain water and/or weathering conditions like blow of wind.

**TOP SOIL CONSERVATION PLAN**

| Area from which top soil will be collected | Topsoil Spreading on Safety Zone / Green Belt plantation area | Top soil spreading on OB Dump |
|---|---|---|
| 10.416 Ha. | 10.684 Ha. | - |





*CONSERVATION OF TOP SOIL THROUGH SOWING OF GRASS SEEDS.*

## 16. INSPECTION, MONITORING AND EVALUATION

For successful implementation of the above mitigative measures, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for technical experts shall be provided by the user agency for proper execution of these programmes.

## 16. MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Division are to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages.

## 17. EXECUTING AGENCY

The works in the present Scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish its own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

**SPECIALISED CELL**

| Sl. No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining operation projects |

## 18. REQUIREMENT OF FUNDS

The total cost of implementation of measures for Top Soil Management will be **Rs.45,11,900/- (Rupees Forty Five Lakh Eleven Thousand Nine Hundred) only.** This budget will be subject to increase in amount considering the increase in material cost and labour charges.

**TOTAL COST OF TOP SOIL MANAGEMENT**

| Sl. No. | Description of the work | Funds Required (in ₹) |
|---|---|---|
| 1. | Unbroken / Virgin area from where top soil can be collected =10.016 Ha.<br>A. Stripping cost:-0.5ha./hr. @ ₹ 5310.51<br>Therefore –4.216 Ha. Cost =21 hrs. + 1 hrs. marching = 22 hrs x ₹ 5310.51= ₹ 1,16,831.00<br>B. Loading &Transportation cost from site to top soil stockpile comes to be=<br>30048$m^3$ (tonnage factor 1.6) = 48077mt. @<br>₹ 60.75/Mt.= ₹ 29,20,678.00.<br>C. Cost of leveling with 1300 manpower @ ₹ 450.00 i.e. ₹ 5,85,000.00<br>**Hence total cost A+B+C = ₹ 36,22,509.00** | 36,22,509.00 |
| 2. | Cost for sowing of grassseeds over 0.30 ha @ ₹ 59350.00/ha. | 17,805.00 |
| 3. | Cost for erection of 48 m dry retaining wall around top soil stock pile @ ₹ 2491.0 RML | 1,19,568.00 |
| | **TOTAL :-** | **37,59,882.00** |
| | Price escalation @ 20% | 7,51,976.00 |
| | **Grand Total** | **45,11,858.00**<br>**Or,**<br>**45,11,900.00** |

**(Rupees Forty Five Lakh Eleven Thousand Nine Hundred) only**

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.*** CHANDI PRASAD SHARMA

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma.***

***Countersigned***

**Divisional Forest Officer**
**Bonai Division**

**Techinically Approved**

Regional Chief Conservator of Forests
Rourkela Circle

Annexure-1

## COST OF GRASS SEED SOWING

**Wage Rate Rs.460.00**

| Sl No | Purpose | No of Labour / Quantity of materials | Rate (Rs.) | Amount (Rs.) |
|---|---|---|---|---|
| 1 | Spreading of good top soil | 03 Nos | 450 / labour | 1350.00 |
| 2 | Adding FYM and good earth | 2 TL FYM | 1499.82 /TL FYM | 5999.28 |
| | | 2TL good earth | 1499.82 /TL Good earth | |
| 3 | Cost of grass seed 500Kg/ per ha. | | 95/kg | 47,500.00 |
| 4 | Broadcasting | 10 nos. | 450.00/ labour | 4,500.00 |
| | | | **Total** | **59,349.28 Or, 59,350.00** |

**CHANDI PRASAD SHARMA**

**P. A. HOLDER**

Annexure–2

**Wage Rate- Rs.450.00**

**Detail Estimate of Retaining wall of loose local Boulder with cement-Sand Patching over the surface of Boulder wall.**

| Sl. No. | Description of Items | No | Length | Width | Height | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| For one K.M.Length | | | | | | | | | |
| 1 | Rough Stone Dry Packing with local boulder only labour charges (Local boulder will be Supplied by our Company) | 1 | 1000.00 | (1.00+1.50)/2 | 1.20 | 1500.00 | Cum | | |
| | | 1 | 1000.00 | 1.60 | 0.30 | 450.00 | Cum | | |
| | | | | | | 1950.00 | Cum | 885.14 | 1726028.0 |
| 2 | Irregular content sand patches on the both side of the wall with 2" thick cement sand mortar(1:6) on top | 1 | 1000.00 | 1.00 | | 1000.00 | Sqm | | |
| | | 2 | 1000.00 | 1.20 | | 2400.00 | Sqm | | |
| | | | | | | 3400.00 | Sqm | 225.00 | 765000.00 |
| | | Rate per one K.M. Length | | | | Total | | | 2491023.00 Or 2491023.00 |

**Cost for Running Meter length** **2491.00**

CHANDI PRASAD SHARMA

P. A. HOLDER

SCALE-1:2,000

20 0 40 80 120 160 200 240 280 320 360 400 440 480

MAGNETIC MERIDIAN

DATE OF OBSERVATION:- 01.11.1965
MAGNETIC DECLINATION - 0° 50' WEST

TO TENSA

TO KOIRA

C C1 C2 D D1 D2 D3 D4 D5

O1 O2 O3 O4 O5

B B1 B2 B3 B4 B5 B6

A A1 A2 A3 A4 A5 A6

CHECK DAM

WASTE DUMP

TEMPLE

MINES OFFICE

R.S.

MINE APPROACH ROAD

R.L-684m

CHECK DAM

NALA

ULTIMATE PIT LIMIT

TOP SOIL RE-GRASSING

TOP SOIL STACK

TOP SOIL PATCH-2

RETAINING WALL 48 MTR.

TOP SOIL STACK AREA-0.3 HECTARE

TOP SOIL QUANTITY-12648 CUM.

TOP SOIL STACK HEIGHT-4MTR.

TOP SOIL TO BE GENERATED-4.216 HECTARE

TOP SOIL PATCH-1

TO BHUTUDA

Top Soil Patch-3

Top Soil Patch-4

## PROPOSED

- DUMP SLOPE PLANTATION
- AVAGE PLANTATION
- RETAINING WALL
- GARLAND DRAIN
- SETTLING TANK
- CHECK DAM
- TERRACE
- CATCH DRAIN
- TOP SOIL STACK
- PROPOSED MINERAL STACKYARD
- PROPOSED MINERAL REJECT STACKYARD

## INDEX

- BOUNDARY OF M.L AREA
- CONTOUR
- PUBLIC ROAD
- EXISTING DUMP
- NALA
- POWER LINE
- TEMPLE
- EXISTING RETAINING WALL
- ULTIMATE PIT LIMIT
- SAFETY ZONE

CHANDI PRASAD SHARMA

P. A. HOLDER

| PLAN SHOWING STRICT ADHERENCE TO THE PRESCRIBED TOP SOIL MANAGEMENT | |
|---|---|
| RAIKELA,TENSA & BAHAMBA IRON & MANGANESE MINE | |
| LESSEE - : SRI CHANDI PRASAD SHARMA | |
| M.L. AREA- 69.606 HECTS. | SCALE-: 1:2,000 |

COUNTERSIGNED

Divisional Forest Officer
Bonai Division

ANNEXURE – 1/6

# Scheme

## for

## DE-SILTING OF VILLAGE TANKS AND OTHER WATER BODIES LOCATED WITHIN 05 KM FROM THE MINE LEASE BOUNDARY SO AS TO MITIGATE THE IMPACT OF SILTATION OF SUCH TANKS/ WATER BODIES

in compliance

with

Condition No.13 of

Stage-I approval granted vide

Letter No.8-25/2022-FC dt.4.12.2023 of

Government of India, Ministry of Environment,

Forest& Climage Change

for

Diversion of 67.352 Hects of Forest Land

for U/s-2 (ii) of F.C. Act'1980

within 69.606 Ha. of Lease area of Raikela, Bahamba and Tensa Iron & Mn. Ore Mines

of


ANIL KUMAR SHARMA,

PoA OF LATE CHANDI PRASAD SHARMA

In village Raikela, Bahamba and Tensa in Koira Tahsil,

Bonai Forest Division

Dist.Sundargarh Odisha.

# SCHEME FOR DE-SILTING OF VILLAGE TANKS AND OTHER WATER BODIES LOCATED WITHIN 05 KM FROM THE MINE LEASE BOUNDARY SO AS TO MITIGATE THE IMPACT OF SILTATION OF SUCH TANKS/ WATER BODIES

## 1. INTRODUCTION

M/s Chandi Prasad Sharma was granted a Mining Lease for Iron & Mn. Ore in village Raikela, Bahamba and Tensa in Bonai Sub-Division of Sundargarh District, Odisha over an area of 69.606 ha. vide Govt. of Odisha Department of Mining & Geology vide Proceeding No.10903/III (B) MG/44/85/MG, Bhubaneswar dated 25.9.1985. The Mining lease deed was executed on 17.4.1986 for a period of 20 years from 17.4.1986 to 16.4.2006 over an area of 69.606 ha. The lessee has made application for renewal of the mining lease on dated 14.04.2005.

The lease has been declared lapse vide Govt. Proceeding No.5948/III (B) SM-05/2010/S&M dt.26.6.2013. The lessee challenged the lapsing order before the Revisional Authority by filing Revision Application being No.22/(31)/2013/RC-I, Department of Mines, Govt. of India New Delhi. The Revisional Authority vide Common Final order No.105/2016 to 106/2016 dated 11.5.2016 has set aside the impugned order dated 26.6.2013 of the Govt. of Odisha and remanded back to the State Govt. for suitable re-consideration in line with Hon'ble Apex Court direction on the provision of lapsing expeditiously. The Govt. in Steel & Mines Department vide Proceeding No.9841/SM, Date 23.11.2021 have been pleased to decide not to declare and records the Iron & Manganese Mining Lease over an area of 69.606 ha. in village Raikela-Bahamba-Tensa of Sundargarh District of Sri C.P. Sharma as lapsed under Rule 20 (6) of MC Rules,2016 and amended vide MC (4th) Amendment) Rules,2021 without prejudice to any other proceeding pending against the lessee before any Court of Law or authority.

The ML area of 69.606 ha. comprises of DLC-52.922 ha., Revenue Forest-5.479 ha., PRF-8.951 ha. and 2.254 ha. of Non-forest land; The User Agency has applied for diversion of 67.352 ha. of forest land including 10.684 ha. Safety Zone / Green belt vide Proposal No.FP/OR/MIN/39199/2019, State Sl. No.OR-026/2019 dt.26.4.2019.

Further, Stage-I approval over 67.352 ha. of Forest Land for U/s-2 (ii) of F.C. Act'1980 has been granted by MoEF&CC, Govt. of India vide their Letter No.8-25/2022-FC dt.4.12.2023, wherein it has been stipulated as per **Condition No.13** to undertake **desilting of village tanks and other water bodies located within 05 km from the mine lease boundary so as to mitigate the impact of siltation of such tanks/water bodies.**

## 2. LOCATION

Raikela, Bahamba and Tensa Iron & Mn. Ore Mines of Chandi Prasad Sharma is located in Sundargarh District of Odisha and can be approached throughout the year by road. It falls within the survey of India Topo sheet No.73 G/1and finds Place within latitude N21° 51' 28.632" - N21° 52' 03.340" (North) and longitude E85° 09' 54.852" – E85° 10' 43.867" (East). The total mining lease hold area is 69.606.

## 3. TOPOGRAPHY

The area is represented by sloppy area with gentle undulation, resembling a relict type of topography. The highest contour is 765 meters and the lowest one is of 590 meters. Part of the proposed site comes within the Sarkunda PRF of Bonai Forest Division.

## 4. SOIL TYPE

Soil type in the study area varies widely from hard rock to lateritic soil. Areas at higher elevations are usually hard rock consisting of laterite. The top soil is scanty in the area. Whatever top soil is available is thinly spread over all Soil profile in nature The pH of the soil is slightly acidic in nature.

## 5. CLIMATE

The study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature beings to rise rapidly attainting a maximum in the month of May. During the summer maximum temperature can go up to 47.7°C. The weather becomes pleasant with onset on monsoon in June and remains as such upto end of October. The temperature in the month of December is lowest. i.e., 7° C. The average annual rainfall as recorded at IMD observatory is 1325.16 mm. Predominant wind direction is South-West. Area remains calm for nearly50% of the year.

## 6. DRAINAGE

There is one Nalla flowing through the proposed area, which is a third order river. The said nala with its numerous ephemeral to perennial tributaries controls the drainage system in the area.

## 7.RAINFALL

There is a wide variation of rainfall in the catchment area and around 10 kms radius of buffer zone of this mine. The average annual rainfall of this mine area is affected by steep hills, forest cover etc. The average annual rainfall of last 10 years comes to 1216.405 mm.

**Table 1: Monthly Rainfall Data of Koira Block (in mm)**
**Average Rainfall = 1216.405 mm**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009 | 0.00 | 0.00 | 0.00 | 0.00 | 84.30 | 75.70 | 317.20 | 100.80 | 103.90 | 41.30 | 40.90 | 0.00 | 762.30 |
| 2010 | 11.00 | 3.00 | 0.00 | 0.00 | 14.00 | 95.00 | 134.50 | 159.50 | 111.50 | 18.30 | 0.00 | 25.50 | 572.30 |
| 2011 | 47.00 | 11.00 | 17.00 | 113.50 | 88.00 | 247.60 | 146.20 | 336.40 | 480.00 | 57.00 | 0.00 | 0.00 | 1542.40 |
| 2012 | 21.00 | 9.00 | 0.00 | 60.00 | 0.00 | 68.00 | 303.00 | 397.50 | 223.90 | 35.00 | 14.00 | 1.00 | 1131.50 |
| 2013 | 3.00 | 0.00 | 5.00 | 50.00 | 46.00 | 192.00 | 436.10 | 288.00 | 212.00 | 351.00 | 0.00 | 0.00 | 1593.50 |
| 2014 | 0.00 | 48.00 | 78.00 | 0.00 | 29.00 | 141.00 | 484.00 | 488.00 | 166.00 | 92.00 | 0.00 | 0.00 | 1488.00 |
| 2015 | 2.00 | 0.00 | 0.00 | 61.00 | 5.00 | 347.00 | 449.00 | 154.00 | 113.00 | 0.00 | 0.00 | 16.00 | 1137.00 |
| 2016 | 0.00 | 27.00 | 4.00 | 0.00 | 70.00 | 76.10 | 267.70 | 383.40 | 267.40 | 35.40 | 0.00 | 0.00 | 1131.00 |
| 2017 | 0.00 | 0.00 | 0.00 | 0.00 | 96.00 | 201.25 | 546.00 | 132.00 | 90.00 | 167.00 | 9.00 | 0.00 | 1141.25 |
| 2018 | 0.00 | 0.00 | 1.00 | 44.00 | 132.00 | 106.40 | 462.00 | 378.30 | 334.00 | 53.00 | 0.00 | 113.0 | 1664.7 |
| Average | 8.1 | 9 | 10.5 | 32.9 | 64.43 | 155.005 | 366.58 | 281.75 | 209.99 | 76 | 8.3 | 15.65 | 1216.405 |

## 8.FACTORSRESPONSIBLE FOR SILTATION

Siltation is an inherent problem with ponds, lakes and almost all types of water reservoirs world over. Siltation occurs due to deposition or settling of soil eroded from the land mass, decaying fallen leaves, grass and other vegetative materials and decomposed organic materials settled on pond bottoms. Soil erosion may be attributed as the primary factor responsible for pond siltation in this area. Higher gradient and excess rainfall are the most common reasons of soil erosion. Erosion of Soil occurs from the waste dumps, excavated areas and naturally denuded ground surface. However, looking into the current problem of siltation of the village ponds, the major factors are the surface runoff containing silt particles entering into the pond. As the age of the ponds increases, new layers of silt accumulate on the older ones and the silt layers become thicker. Finally the depth of the pond decreases and it loses its water storage capacity. At this time it needs to be de-silted to recover. The best practice against siltation is to de-silt the bottom of the pond at regular intervals as well as taking adequate preventive measures.

## 9.SELECTION OF PONDS

For the purpose as mentioned in Condition No.13 of the Stage-I approval letter, a survey of ponds within the buffer area of 5 Kms from the lease boundary was made. Topo map showing the location of ponds is enclosed as Plate No-1. ***After discussion with the Block Development Officer Koira and Sarpanch of Dengula, Gram Panchayet, total 2 numbers of following government ponds were selection in Bonai Division for de-siltation within 5 km vicinity of the lease area.***

**Information about the ponds proposed for desilting**

| Sl. No. | Name of village / Forest Division | Name of water bodies | GPS reading | Dimension of the pond |
|---|---|---|---|---|
| 1. | Dengula / Bonai Forest Division | Pond | 21.874393<br>85.206807 | Length=85.0 Mt<br>Width= 74.0 Mt<br>Siltation depth= 1.00 Mt |
| 2. | Bandhal / Bonai Forest Division | Pond | 21.899095<br>85.202156 | Length=47.0 Mt<br>Width= 44.0 Mt<br>Siltation depth= 1.00 Mt |

**Matrix to indicate the benefits to be derived by individual Villagers from Pond renovation.**

| Name of the village with water bodies | Population benefited | Cattle to benefited | Irrigation to be derived | Pisciculture benefit |
|---|---|---|---|---|
| Dengula | *** | ** | * | * |
| Bandhal | *** | ** | * | * |

*** = Maximum benefit, **= Average benefit. *= Low benefit




**DENGULA WATER BODY (POND) PROPOSED FOR DE-SILTATION**



**BANDHAL WATER BODY (POND) PROPOSED FOR DE-SILTATION**

## 10.POSSIBILITY OF SILTATION OF THE VILLAGE PONDS/WATER BODIES DUE TO MINING ACTIVITIES

The village ponds in the proximity of the lease are concerned, it is observed that the identified village ponds are not affected from the surface runoff water carrying any silt from the lease area as these are located either beyond the nalla or at higher altitude from the ground RL of the Lease.

However, siltation in these identified village tanks may occur due to possible soil erosion outside the lease area beyond the sub watershed boundary. Hence de-silting of these village ponds may be considered in subsequent phases.

## 11.METHODOLOGY

It is proposed to carry out the total de-siltation of the selected ponds as above every five years during summer when the ponds shall dry up exposing the silts. The dried silt shall be removed manually or mechanically based on the ground condition. In case of mechanical removal of silt, small excavators such as back-hoe / small hydraulic shovels or pay loader, depending upon the quantity of silt accumulation shall be used. For the purpose of evaluation of work required for de siltation, an estimate of de siltation in the individual ponds was made, which has been summarized in **Annexure-1**.

The work shall comprise:-

a) Total de-siltation in the five year period.

b) Implementing preventive measures during the following four years to minimize re-siltation of the ponds.

c) To prevent or slowdown future siltation, the embankment stabilization by grass turfing /stone pitching, plantation of suitable species and constructing bathing ghat is also included in the de-silting and improvement plan.

It is proposed that the ponds having accumulation of over 1000 $m^3$ shall be de-silted by mechanical means and the rest shall be handled manually. It is proposed to deploy one 0.9 $m^3$ back hoe with one 10 tonne tipper for de-silting of the pond in a period of two-three days. The machines shall be deployed in a planned manner to complete the work in a shortest time frame. Necessary advice of BDO, Koira, BDO, Banspal & Panchayat Sarpanch will be taken into account.

In case of smaller ponds, where the accumulation of silt is very small, the de-siltation operation shall be done manually by engaging sufficient manpower.

The ponds shall be allowed to dry up completely during the early summer i.e. during March and April followed by de-siltation in the above described manner.

a) **1st Year Plan & Management:**

The first year work shall also comprise the following preventive measures to minimize siltation.

- Providing embankment to the ponds where ever necessary.
- Strengthening the existing pond embankment to check external flow of surface run-off in to the pond.
- Regular removal of aquatic weeds and polythene bags /bottle thrown by villagers.
- Plantation of trees on the top of the embankment and stone pitching on the slopes to prevent bank erosion.
- Plantation of selected species like Bara, Aswatha, Lemon, Custard Apple, Guava, Papaya, Mango will be taken up.





*Plantation of trees on the top of the embankment*

b) **Subsequent 2 Years Plan and Management:** In the subsequent 2 years, the rate of siltation shall be negligible, which can be dealt by manual methods using the local labourers. This will also otherwise help in employment generation.

c) **Preventive Measures & Maintenance:** It is essential to take up preventive measures in order to minimize re-silt**a**tion of the ponds. Activities like pond bank strengthening and stabilization by way of earth work with stone patching, grass seeding and plantation of appropriate species shall be taken up in the first year followed by their maintenance in successive four years.

d) **Dewatering of village pond:** This will be carried out by engaging dewatering pump.

e) **De-silting:** After pumping out the water from the pond, silts are to be removed either manually by deploying labour or excavator & dumper combination.

f) **Earthwork Excavation:** Wherever required, soil has to be removed for deepening the pond to increase water holding capacity of the pond.

g) **Bathing Ghat(separately for men and women):**In the above Ponds, separate arrangement will be made for bathing by male and female of the Villages. Since the villagers are conscious from mythological point of view, a Tulsi (Ocimum sanctum) Chaura (Platform) has also to be provided where the villagers after bath can offer water to Sun God. The Detailed estimate is enclosed as **Annexure-2**.



*Bathing Ghats*

h) **Sitting Platform on the embankment of the Pond(s)** – In each Pond, a masonry platform will be provided where the villagers (age old persons and youth) can sit duringsummer evening. This platform will also serve the purpose of puja / karma.

I) **Planting all along the embankment of the Pond** – According to availability of land all along the pond (s), plantation of Bela, Pipal, Champa, Baula etc. will be made to form a Green belt. This Green belt will also give an aesthetic view to the area and villagers can collect leaf, fruit, flower etc. for spiritual purposes. The detailed estimate of plantation programme is enclosed in **Annexure- 3.**



*Plantation along the Ponds*

## 12.INSPECTION AND MONITORING

For successful implementation of the above Mitigative measures, intensive inspection and technical guidance from concerned technical wing is required. Sufficient fuel/ conveyance charges for technical experts shall be provided by the user agency for proper execution of these programmes.

## 13.MOTIVATION OF PEOPLE:

As per Govt. resolution of 2011, the villagers of the adjoining village, i.e. Raikela, Bahamba and Tensa of Bonai Division are to be involved in protection and management of plantation. Before execution of the work, a meeting will be conducted in the above villages and resolution regarding support to plantation activities will be made. To motivate the people in this direction, they will be provided with incentives in shape of different community articles, buildings, and different community amenities of fixed and movable type through entry point activities (EPA). Health camps shall also be organized in the villages. Thus, 15% of the plantation cost has been earmarked for expenditure on this score.

## 14.EXECUTING AGENCY

The works in the present Scheme shall be executed by the User Agency having specialized departments headed by qualified persons with outsourced man and machinery. To facilitate this, the user agency shall establish its own executing and supervision cells along with required infrastructural facilities. In order to maintain the quality of work, in-house supervision through competent personnel shall be provided. The entire work shall be carried out in co-ordination with the Forest Department.

**SPECIALISED CELL**

| Sl. No. | Name | Educational Qualification | Designation | Expertise |
|---|---|---|---|---|
| 1. | Sri A.K. Sharma | M. Sc. Geology | PoA | 30 Years experience in Mining operation projects |

## 15. REQUIREMENT OF FUNDS

The total cost of this Scheme for de-silting and improvement of the selected pond in Dengula and Bandal villages is **Rs.1,49,35,600.00 (Rupees One Crore Forty Nine Lakh Thirty Five Thousand Six hundred) only.**

**TOTAL COST OF THE PROJECT Wage Rate Rs.450.00**

| Sl. No | Description of Job | Estimate for Pond of village Dengula | Estimate for Pond of village Bandhal | Total fund required (Rs.) |
|---|---|---|---|---|
| 1 | Excavation, loading, unloading & carriage by mechanical means of all kinds of soil including stoneyearth ,gravel&morrumetc inter spread with boulders upto 1/2 cum size with all lifts &dellifts including trimming of slopes & bed to design section &depositing the excavated materials away from work site as per the specification & directed by EIC with an initial lead of 1.00 KM from the place of excavation complete.<br>Providing rough stone (15cm-30cm) dry packing in apron & all top four sides berm with our local boulder (boulder supplied by management). Construction of bathing ghat with local boulder Room near bathing ghat for change of clothes by women. Construction of Bench on the embankment for sitting | | | 81,29,402.00 |
| 2 | TulsiChaura | 30209.00 | 30209.00 | *60,418.00* |
| 3 | Preparation of ramp on one side of the pond with slope for the village cattle to go near the water body on L.S. @ ₹ 50,000/- per pond | 50,000.00 | 50,000.00 | *1,00,000.00* |
| 4 | *Provision for plantation on all three sides to control Soil erosion (plant will be supplied by management) and resting place of villagers coming for bathing* | 200 Plant 11,86,510.00 | 200 Plant 11,86,510.00 | 23,73,020.00 |
| 5 | Provision for annual maintenance of pond for cleaning aquatic weeds from pond & cutting, of bushes from apron & berms on LS. | 80,000.00 | 80,000.00 | *1,60,000.00* |
| | | | Total | *1,08,22,840.00* |
| 6 | 15% of the total cost for motivation of VSS / People involved | | | *16,23,426.00* |
| | | | Total | *1,24,46,266.00* |
| | | | Escalation 20% | *24,89,253.00* |
| | | | Grand Total | 1,49,35,519.00 Or, 1,49,35,600.00 |

**(Rupees One Crore Forty Nine Lakh Thirty Five Thousand Six hundred) only**

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma do hereby undertake to execute the item of works mentioned in this scheme in a phased manner at the project cost.***

CHANDI PRASAD SHARMA

***Anil Kumar Sharma, Power of Attorney of Late C.P. Sharma.***

Title HOLDER

***Countersigned***

Techinically Approved

Regional Chief Conservator of Forests
Rourkela Circle

Divisional Forest Officer
Bonai Division

**Annexure-1**

## De-silting the Pond, Construction of Bathing Ghat & banch at Dengula and Bandal Pond by Anil Sharma, PoA of Late C.P. Sharma @ Rs.450.00 per MD.

| Sl. No. | Items | Location | No | L | B | H | Qty | unit | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Pumping of water by diesel pump Incl. apllying diesel & lubricant | | | | | | 16 | hours | 750.13 | 11251.98 |
| 2 | Desilting the pond | Dengula | 1 | 66.0 | 74.0 | 1.0 | 4884.0 | cum | | |
| | | Bandal | 1 | 47.0 | 44.0 | 1.0 | 2068.0 | cum | | |
| | | | | | | | 6952.0 | cum | 900.00 | 6256800.00 |
| 3 | Removing weeds & bush from the burd of the pond | Dengula, Bandal | 2 | 40.00 | 4.00 | | 320.00 | sqm | 16.63 | 5320.64 |
| 4 | Removing amary from the pond | Dengula, Bandal | 2 | 30.00 | 7.00 | | 420 | sqm | 46.33 | 19460.56 |
| 5 | Rough stone masonry for bathing ghat | Dengula | 4 | 10.00 | 0.60 | 0.45 | 10.80 | | | |
| | | | 2 | 10.00 | 2.50 | 0.45 | 22.50 | | | |
| | | Bandal | 4 | 10.00 | 0.60 | 0.45 | 10.80 | | | |
| | | | 2 | 10.00 | 2.50 | 0.45 | 22.50 | | | |
| | | | | | | | 66.6 | cum | 6601.42 | 439654.79 |
| 6 | 20mm c p 1:4 | Dengula | 1 | 10.00 | 3.20 | | 32.00 | | | |
| | | Bandal | 1 | 10.00 | 3.20 | | 32.00 | | | |
| | | step face | 80 | 2.50 | 0.20 | | 40.00 | | | |
| | | change room floor | 4 | 5.00 | 2.00 | | 40.00 | | | |
| | | | | | | | 144.00 | sqm | 301.49 | 43414.16 |
| 7 | Neat cement punning | Dengula | 1 | 10.00 | 3.20 | | 32.00 | | | |
| | | Bandal | 1 | 10.00 | 3.20 | | 32.00 | | | |
| | | step face | 80 | 2.50 | 0.20 | | 40.00 | | | |
| | | change room floor | 4 | 5.00 | 2.00 | | 40.00 | | | |
| | | | | | | | 144.00 | sqm | 37.79 | 5442.10 |
| 8 | Earth work in excavation | Change room | | | | | | | | |
| | | Dengula | 1 | 3.00 | 0.40 | 0.40 | 0.48 | | | |
| | | | 2 | 1.25 | 0.40 | 0.40 | 0.40 | | | |
| | | | 1 | 2.00 | 0.40 | 0.40 | 0.32 | | | |
| | | | 1 | 6.00 | 0.40 | 0.40 | 0.96 | | | |
| | | Bandal | 1 | 3.00 | 0.40 | 0.40 | 0.48 | | | |
| | | | 2 | 1.25 | 0.40 | 0.40 | 0.40 | | | |
| | | | 1 | 2.00 | 0.40 | 0.40 | 0.32 | | | |
| | | | 1 | 6.00 | 0.40 | 0.40 | 0.96 | | | |
| | | Bench | 12 | 2.50 | 0.40 | 0.40 | 4.80 | | | |
| | | | | | | | 9.12 | cum | 450.00 | 4104.00 |
| 9 | C C 1:3:6 | Change room | | | | | | | | |
| | | Dengula | 1 | 3.00 | 0.40 | 0.10 | 0.12 | | | |
| | | | 2 | 1.25 | 0.40 | 0.10 | 0.10 | | | |
| | | | 1 | 2.00 | 0.40 | 0.10 | 0.08 | | | |

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|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 6.00 | 0.40 | 0.10 | 0.24 | | | |
| | | Bandal | 1 | 3.00 | 0.40 | 0.10 | 0.12 | | | |
| | | | 2 | 1.25 | 0.40 | 0.10 | 0.10 | | | |
| | | | 1 | 2.00 | 0.40 | 0.10 | 0.08 | | | |
| | | | 1 | 6.00 | 0.40 | 0.10 | 0.24 | | | |
| | | Bench | 12 | 0.50 | 0.40 | 0.10 | 0.24 | | | |
| | | Flooring | 2 | 5.00 | 2.00 | 0.10 | 2.00 | | | |
| | | | | | | | 3.32 | cum | 9908.25 | 32888.75 |
| 10 | C C 1:2:4 | Bathing ghat | 2 | 10.00 | 2.50 | 0.05 | 2.50 | cum | 9600.78 | 24001.94 |
| 11 | B W 1:6 | Change room | | | | | | | | |
| | | Dengula | 1 | 3.00 | 0.24 | 3.20 | 2.30 | | | |
| | | | 2 | 1.25 | 0.24 | 3.20 | 1.92 | | | |
| | | | 1 | 2.00 | 0.24 | 3.20 | 1.54 | | | |
| | | | 1 | 6.00 | 0.24 | 3.20 | 4.61 | | | |
| | | Bandal | 1 | 3.00 | 0.24 | 3.20 | 2.30 | | | |
| | | | 2 | 1.25 | 0.24 | 3.20 | 1.92 | | | |
| | | | 1 | 2.00 | 0.24 | 3.20 | 1.54 | | | |
| | | | 1 | 6.00 | 0.24 | 3.20 | 4.61 | | | |
| | | Bench | 12 | 0.50 | 0.24 | 0.80 | 1.15 | | | |
| | | | | | | | 21.89 | cum | 12600.0 | 275814.00 |
| 12 | 12mm c p 1:6 | Change room | | | | | | | | |
| | | Dengula | 1 | 3.00 | | 3.00 | 9.00 | | | |
| | | | 2 | 1.25 | | 3.00 | 7.50 | | | |
| | | | 1 | 2.00 | | 3.00 | 6.00 | | | |
| | | | 1 | 6.00 | | 3.00 | 18.00 | | | |
| | | Bandal | 1 | 3.00 | | 3.00 | 9.00 | | | |
| | | | 2 | 1.25 | | 3.00 | 7.50 | | | |
| | | | 1 | 2.00 | | 3.00 | 6.00 | | | |
| | | | 1 | 6.00 | | 3.00 | 18.00 | | | |
| | | Bench | 12 | 0.50 | | 0.10 | 0.60 | | | |
| | | | | | | | 81.6 | sqm | 255.13 | 20818.78 |
| 13 | 20mm c p 1:6 | Change room | | | | | | | | |
| | | Dengula | 1 | 3.00 | | 3.00 | 9.00 | | | |
| | | | 2 | 1.25 | | 3.00 | 7.50 | | | |
| | | | 1 | 2.00 | | 3.00 | 6.00 | | | |
| | | | 1 | 6.00 | | 3.00 | 18.00 | | | |
| | | Bandal | 1 | 3.00 | | 3.00 | 9.00 | | | |
| | | | 2 | 1.25 | | 3.00 | 7.50 | | | |
| | | | 1 | 2.00 | | 3.00 | 6.00 | | | |
| | | | 1 | 6.00 | | 3.00 | 18.00 | | | |
| | | Bench | 12 | 0.50 | | 0.10 | 0.60 | | | |
| | | | | | | | 81.6 | sqm | 270.00 | 22032.00 |
| 14 | Lift charge for B W 1:6 | Change room | | | | | | | | |
| | | Dengula | 1 | 3.00 | 0.24 | 2.40 | 1.73 | | | |
| | | | 2 | 1.25 | 0.24 | 2.40 | 1.44 | | | |
| | | | 1 | 2.00 | 0.24 | 2.40 | 1.15 | | | |
| | | | 1 | 6.00 | 0.24 | 2.40 | 3.46 | | | |
| | | Bandal | 1 | 3.00 | 0.24 | 2.40 | 1.73 | | | |
| | | | 2 | 1.25 | 0.24 | 2.40 | 1.44 | | | |
| | | | 1 | 2.00 | 0.24 | 2.40 | 1.15 | | | |
| | | | 1 | 6.00 | 0.24 | 2.40 | 3.46 | | | |
| | | | | | | | 15.56 | cum | 301.49 | 4691.14 |

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|---|---|---|---|---|---|---|---|---|---|---|
| 15 | Lift charge for C p | Change room | | | | | | | | |
| | | Dengula | 2 | 3.00 | | 2.40 | 14.40 | | | |
| | | | 4 | 1.25 | | 2.40 | 12.00 | | | |
| | | | 2 | 2.00 | | 2.40 | 9.60 | | | |
| | | | 2 | 6.00 | | 2.40 | 28.80 | | | |
| | | Bandal. | 2 | 3.00 | | 2.40 | 14.40 | | | |
| | | | 4 | 1.25 | | 2.40 | 12.00 | | | |
| | | | 2 | 2.00 | | 2.40 | 9.60 | | | |
| | | | 2 | 6.00 | | 2.40 | 28.80 | | | |
| | | | | | | | 129.6 | sqm | 16.63 | 2154.86 |
| 16 | Roofing with GCI sheet | | 2 | 5.00 | 3.00 | | 30.00 | sqm | 301.49 | 9044.82 |
| | | | | | | | | | | |
| 17 | Carrying cutting to size & erecting str steel | | 2 | 3.00 | 5.00 | 4.50 | 135.00 | kg | | |
| | | | | | | | 0.135 | MT | 9000.00 | 1215.00 |
| 18 | White wash 3 coats on new surface | Change room | | | | | | | | |
| | | Dengula | 2 | 3.00 | | 2.40 | 14.40 | | | |
| | | | 4 | 1.25 | | 2.40 | 12.00 | | | |
| | | | 2 | 2.00 | | 2.40 | 9.60 | | | |
| | | | 2 | 6.00 | | 2.40 | 28.80 | | | |
| | | Bandal | 2 | 3.00 | | 2.40 | 14.40 | | | |
| | | | 4 | 1.25 | | 2.40 | 12.00 | | | |
| | | | 2 | 2.00 | | 2.40 | 9.60 | | | |
| | | | 2 | 6.00 | | 2.40 | 28.80 | | | |
| | | | | | | | 129.6 | sqm | 36.00 | 4665.27 |
| | | | | | | | | | **Sub Total** | **7162774.58** |
| 19 | Cement | | | | | | 11 | MT | 17399.24 | 191391.61 |
| 20 | Angle | | | | | | 0.135 | MT | 119996.9 | 16199.59 |
| | | | | | | | | | **Total** | **7380365.78** |
| | | | | | | | | | Contigency @ 10% | 738036.57 |
| | | | | | | | | | **Grand Total** | **8129402.35 Or, 8129402.00** |

CHANDI PRASAD SHARMA

P. A. HOLDER

**Annexure-2**

## CONSTRUCTION OF TULSICHAURA ON THE BATHING GHAT @ Rs.450.00

| Sl. No. | Description of Items | Unit | Nos | L | B | H | Quantity | Rate | Amount |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Earthwork in excavation | M3 | 1 | 6 | 0.4 | 0.3 | 0.63 | 319.03 | 200.99 |
| 2 | Plain cement concrete 1:3:6 | M3 | 1 | 6 | 0.35 | 0.1 | 0.21 | | |
| | | | | | | | **0.21** | 10342.33 | 2171.89 |
| 3 | Brick Work ( 1:6 ) ( Above G.L In Super Structure) | M3 | 1 | 6 | 0.25 | 1.5 | 2.25 | 10091.22 | 22705.25 |
| | | | | | | | | | |
| 4 | 12 mm thick plaster | M2 | 1 | 6 | | 1.5 | 9 | | |
| | | | | | | | 9 | 234.87 | 2113.82 |
| | | | | | | | | | |
| 5 | Applying Lime Wash | M2 | | Same qty as item no 4 | | | 9 | 23.56 | 212.04 |
| | | | | | | | | **Sub total** | **27463.03** |
| | | | | | | | | **Contingency 10 %** | 2746.30 |
| | | | | | | | | **Total Amount (Rs.)** | **30209.33 Or, 30209.00** |

(Rupees Thirty Thousand Two hundred Nine) only

CHANDI PRASAD SHARMA

P. A. HOLDER

Annexure-3

## COST NORM FOR PLANTATION OF FRUIT BEARING SPECIES ALONG THE POND EMBANKMENT @ Rs.450.00 per MD
## 400 Plants per Km. in 2 rows

| Sl No. | Item of work | Mandays | Labour rate @ 450.00 | Material cost in Rs. | Total (Rs.) |
|---|---|---|---|---|---|
| **0 th year advance work/pre-planting/ 1st Yr. plant.** | | | | | |
| 1 | Site preparation & alignment | 2 | 900.00 | | 900.00 |
| 2 | Pitting 45 cm cube | 25 | 11250.00 | | 11250.00 |
| 3 | Cost of 400 nos. of 1 yr. old seedling @ Rs.141/- per seedling | 0 | 0 | 56400 | 56400 |
| 4 | Carriage of plants & planting | 6 | 2700.00 | | 2700.00 |
| 5 | 1st weeding &manuring | 2 | 900.00 | | 900.00 |
| 6 | Casualty replacement | 2 | 900.00 | | 900.00 |
| 7 | Soil working, application of insecticides | 2 | 900.00 | | 900.00 |
| 8 | Cost of FYM& fertilizer including transportation | | 0 | 4480 | 4480.00 |
| 9 | Cost of Iron gabion 400 Nos. @ 1869/- per gabion on LS | | 0 | 747600 | 747600.00 |
| 10 | Misc expenditure | | 0 | 3734 | 3734 |
| 11 | Cost of engaging one watcher for year (9 month) | 234 | 105300.00 | | 105300.00 |
| 12 | Watering at least 5 days in a month for 4 months (8 person X 6 times in a month X 4 month) | 192 | 86400.00 | | 86400.00 |
| 13 | Const. of 2 nos. Sign-board on LS. @ Rs 1500/- per signboard | | 0 | 3745 | 3745.00 |
| | **Total :-** | **465** | **209250.00** | **815959.00** | **1026209.00** |
| **2nd Year Operation** | | | | | |
| 14 | Weeding, soil working, manuring (twice) | 4 | 1800.00 | | 1800.00 |
| 15 | Casualty replacement 15% including cost of seedling including cost of seedlings (60 Nos. @ 112/-) | 2 | 900.00 | 8400 | 9300.00 |
| 16 | Cost of fertilizer & pesticides | | 0 | 2240 | 2240.00 |
| 17 | Gabion maintenance including painting | 20 | 9000.00 | 37333 | 46333.00 |
| 18 | Misc expenditure | | 0 | 1672 | 1872.00 |
| 19 | Watering at least 6 days in a month for 8 months (April to July & November to March) (8 person X 5 times in a month X 8 month) | 320 | 144000.00 | | 144000.00 |
| 20 | Cost of engaging one watcher for year (12 month) | 312 | 140400.00 | | 140400.00 |
| | **Total :-** | **658** | **296100.00** | **49845.00** | **345945.00** |

CHANDI PRASAD SHARMA

P. A. HOLDER

| Sl No. | Item of work | Mandays | Labour rate @ 450.00 | Material cost in Rs. | Total |
|---|---|---|---|---|---|
| **3rd Year Operation** | | | | | |
| 25 | Weeding, soil working | 3 | 1350.00 | | 1350.00 |
| 26 | Gabion maintenance | 20 | 9000.00 | 37333 | 46333 |
| 27 | Cost of engaging one watcher for year (12 month) | 312 | 140400.00 | | 140400.00 |
| 28 | Unforeseen | | 0 | 1872 | 1872 |
| 29 | Watering at least 6 days in a month for 8 months (April to July & November to March) (8 person X 5 times in a month X 8 month) | 320 | 144000.00 | | 144000.00 |
| | **Total :-** | **655** | **294750.00** | **39205.00** | **333955.00** |
| **4th Year Operation** | | | | | |
| 25 | Weeding and pruning | 3 | 1350.00 | | 1350.00 |
| 26 | Gabion maintenance | 20 | 9000.00 | 37333 | 46333 |
| 27 | Cost of engaging one watcher for year (12 month) | 312 | 140400.00 | | 140400.00 |
| 28 | Unforeseen | | 0 | 1872 | 1872 |
| 29 | Watering at least 6 days in a month for 8 months (April to July & November to March) (8 person X 5 times in a month X 8 month) | 320 | 144000.00 | | 144000.00 |
| | **Total :-** | **655** | **294750.00** | **39205.00** | **333955.00** |
| **5th Year Operation** | | | | | |
| 30 | Weeding and purning | 3 | 1350.00 | | 1350.00 |
| 31 | Gabion maintenance | 20 | 9000.00 | 37333 | 46333 |
| 32 | Cost of engaging one watcher for year (12 month) | 312 | 140400.00 | | 140400.00 |
| 33 | Unforeseen | | 0 | 1872 | 1872 |
| 34 | Watering at least 6 days in a month for 8 months (April to July & November to March) (8 person X 5 times in a month X 8 month) | 320 | 144000.00 | | 144000.00 |
| | **Total :-** | **655** | **294750.00** | **39205.00** | **333955.00** |
| | **Grand Total :-** | **3088.00** | **1389600.00** | **983419.00** | **2373019.00** |

**ABSTRACT**

| Sl No. | Year | Amount (in Rs.) |
|---|---|---|
| 1 | 1st year | 1025209.00 |
| 2 | 2nd year | 345945.00 |
| 3 | 3rd year | 333955.00 |
| 4 | 4th year | 333955.00 |
| 5 | 5th year | 333955.00 |
| | **Total :-** | **2373019.00** |

Total Expenditure for 400 plants = **Rs.23,73,019.00**

**Expenditure for 200plant = Rs.11,86,609.5 (Or, 11,86,510.00)**

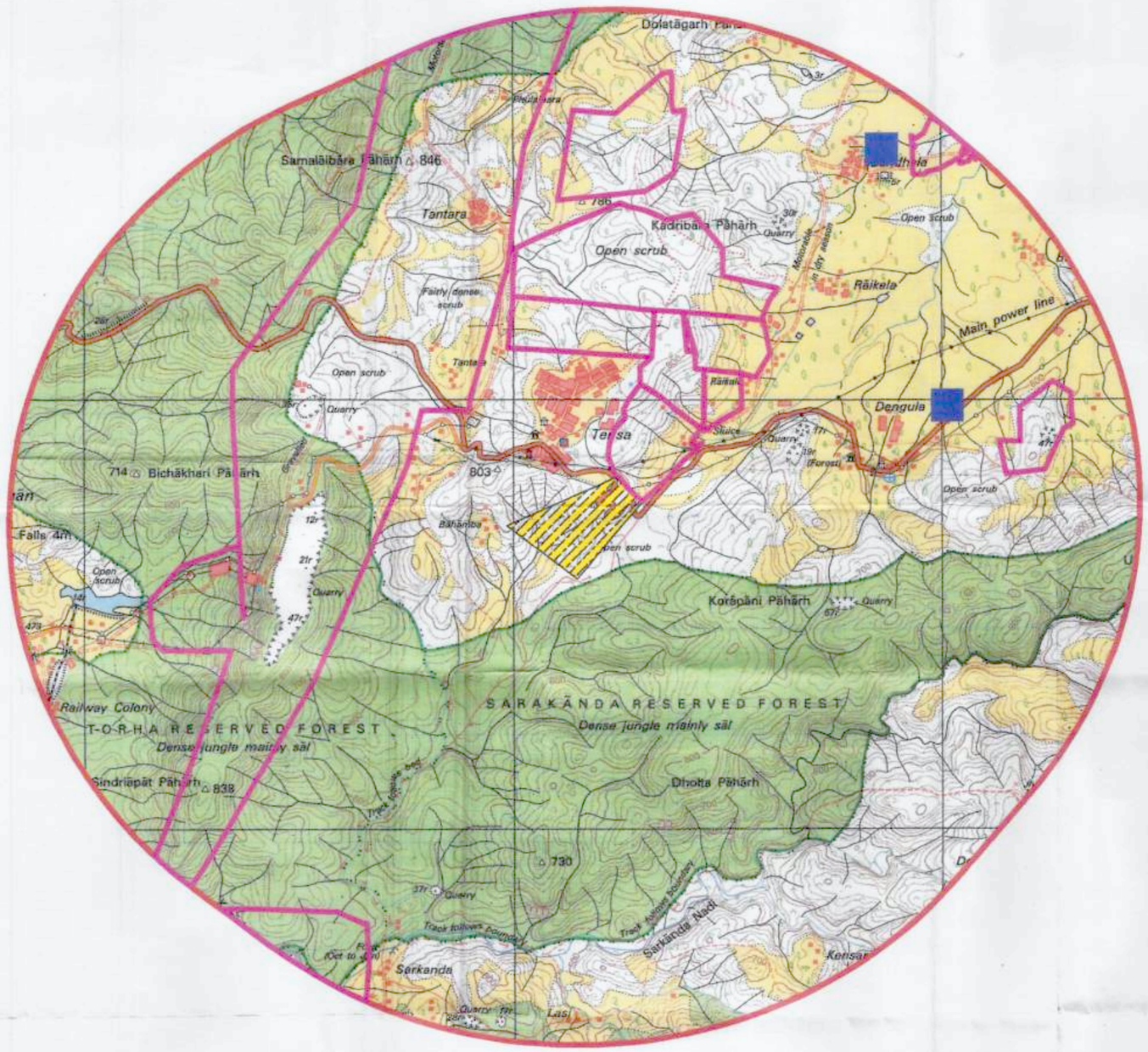
CHANDI PRASAD SHARMA

P. A. HOLDER

# TOPO MAP SHOWING THE LOCATION OF PONDS/ WATER BODIES WITHIN 05 KM RADIUS FROM THE LEASE BOUNDARY OF RAIKELA BAHAMBA AND TENSA MINES OF SRI CP SHARMA UNDER BONAI FOREST DIVISION

N
W E
S

SCALE:-1:80,000




Legend

- Water_Body
- OTHER ML AREA
- 5 KM BUFFER
- DGPS ML POLYGON

## Water body Location

| Sl No | Latitude | Longitude |
|---|---|---|
| 1 | 21.899095 | 85.202156 |
| 2 | 21.874393 | 85.208607 |

CHANDI PRASAD SHARMA
P. A. HOLDER

COUNTERSIGNED
Divisional Forest Officer
Bonai Division

ANNEXURE - 17

# RAIKELA, BAHAMBA & TENSA IRON & MANGANESE ORE MINES

# SITE SPECIFIC WILDLIFE CONSERVATION PLAN FOR RAIKELA, BAHAMBA & TENSA IRON & MANGANESE ORE MINES OF SRI CHANDI PRASAD SHARMA IN BONAI AND KEONJHAR FOREST DIVISION



**Prepared By**

**DIVISIONAL FOREST OFFICE, BONAI DIVISION & DIVISIONAL FOREST OFFICE,KEONJHAR DIVISION**

Approved copy

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# PREFACE

Raikela, Bahamba & Tensa Iron & Manganese Ore Mines of Sri Chandi Prasad Sharma is one of the Mining Project for production of Iron ore & Manganese ore in Koira Tehsil of Sundergarh District in Odisha. Govt. of Odisha vide proceeding no. 10903 /III (B) MG/44/85/MG, Bhubaneswar, dated 25.09.1985 granted the Mining Lease for Iron & Mn. Ore in villages Raikela, Bahamba & Tensa in Bonai Sub-division of Sundergarh District, Odisha over an area of 69.606 Hectares to Sri Chandi Prasad Sharma. The mining lease was executed on 17.04.1986 for a period of 20 years and the lease was valid up-to 16.04.2006.

Initially, the mines area of 69.606 hectares was consisting of both forest (10.42 Ha) and non-forest land (59.186 Ha). Accordingly surface right in the non-forest areas was granted in two phases for 3.991 hectares vide memo No 513 dt 09.06.1986 of the Collector, Sundargarh and for 3.18 hectares vide letter No 788 dt 06.09.1991. Hence, total surface right area comes to 7.171 hectares.

Later on, the non-forest area of the leasehold was declared under DLC which was informed by the DFO vide his letter No 2508 dt.24.04.98. Total forest land within the area comes to 67.352 hectares after inclusion of the non-forest land within DLC, including 6.88 hectares of broken up land which attracts the provisions of Forest (Conservation) Act, 1980 (Amended). This Proposal for Diversion of Forest Land for Non-forestry Use under Sec 2 of the said Act has been prepared and submitted accordingly.

The Lessee Sri Chandi Prasad Sharma applied for renewal of the said mining lease within statutory period in FORM- I on 15.04.2005 to The Commissioner- Cum- Secretary, Department of Steel & Mines, Govt. of Odisha, Bhubaneswar.

The Divisional Forest Officer, Bonai Division, Bonai vide letter no. 2886/6F dt. 05-06-2010 raised demand for payment of NPV for Rs.4,94,32,680/- and the same has been paid by the Lessee vide Demand Draft No. 094765 dt. 25-06-2010 for Rs.4,94,32,680/ - in favour of Compensatory Afforestation Fund (CAF)-Orissa, A/C No. CA - 1585, Corporation Bank, Lodhi Road, New Delhi.

*During the pendency of the 1st renewal Govt. of Odisha declared the said mines as lapsed vide proceeding no.5948/III(B)SM-06/2010/ S&M dated. 26.06.2013. Lessee has challenged the said order of the State Govt. before the Revisional Authority by filling Revision Application being no. 22/ (31)/2013/RC-I, Department of Mines, Govt. of India, New Delhi. The Revisional Authority vide Final Order No. 105/2016 to 160/2016 dated 11.05.2016 has set aside the impugned order dated 26.06.2013 of the Govt. of Odisha.*

*The Lessee received a demand notice bearing No 5074/Mine dated 02.09.2017 in respect of the Judgement passed by the Hon'ble Supreme Court of India in WP(C) No. 114/2014 dated 02.07. 2017. Lessee deposited total demanded amount of Rs. 10,00,20,186 (Rupees ten crore twenty thousand one hundred eighty-six only) only being the principal amount of compensation and an amount of Rs.1,75,79,915/- (Rupees one crore seventy-five lacs seventy-nine thousand nine hundred fifteen) only towards interest on the compensation amount as per the Hon'ble Supreme Court's order dated 02.07.2017 in WP (C) No.114/2014.*

*Further, The Deputy Director of Mines, Koira Circle, Koira raised a demand on account of CTO and Mining Plan for Rs. 43,71,185/- only vide letter no. 5092/Mines, Date 09.12.2020 and Lessee has deposited the said amount.*

*The State Govt. has challenged the Final Order No. 105/2016 to 160/2016 dated 11.05.2016 of the Revisional Authority before the Hon'ble High Court of Orissa as WP (C) No. 25023/2017 and the matter was disposed by the Hon'ble High Court of Orissa on 23.07.2019.*

*Lessee received a copy of the Order No.9841/S&M, Bhubaneswar dated 23.11.2021 whereby the State Govt. have been pleased to decide not to declare and record the Iron & Manganese Mining lease over an area of 69.606 hects. In village Raikela, Bahamba and Tensa of Sundergarh District of Sri Chandi Prasad Sharma as lapsed under rule 20(6) of MC Rules 2016 as amended vide MC (4th Amendment) Rules 2021 without prejudice to any other proceedings pending against the lessee before any court of law or authorities.*

## SITE SPECIFIC WILDLIFE CONSERVATION PLAN FOR RAIKELA, BAHAMBA & TENSA IRON & MANGANESE ORE MINES OF SRI CHANDI PRASAD SHARMA

*The lessee is having valid Mining Plan granted vide letter no. RMP/A/50-ORI/BHU/2020-21 dated 03.03.2021 for a period up to 31.03.2026.*

*As per the approved mining plan by the Indian Bureau of Mines, Bhubaneswar the iron ore resources of Raikela, Bahamba & Tensa Iron Ore and Manganese Mines is 1.351 million tonnes (Fe content is > 45% and Fe content varies between 45% and 63 %). This ore body needs to be judiciously exploited in view of systematic mining with optimum exploitation of ore to meet the growing demand of raw materials for indigenous steel plant, sponge iron plant, pellet plants etc. for ultimate production of Steel and also for export to earn foreign exchange for development of our country.*

*Environmental Clearance granted vide order no. F. No. J-11015/481/2007-IA. II (M) dated 16.06.2008.*

*The area proposed to be diverted under the project and neighboring forest areas are characterized by variety of flora and fauna. Hence, impact of this project on wildlife and wildlife habitat needs to be studied and properly addressed. Protection and monitoring of wildlife, wildlife habitat management, support to local forest dependent communities through proper eco-development measures etc. are some areas which need specific attention. Since the area is characterized by the movement of elephant's measures need to be adopted for its protection, monitoring, habitat management and mitigation of HEC issues. Surrounding Forest areas are vulnerable to fire and hence fire protection activities also need to be ensured. In the above said context a Site-Specific Wildlife Conservation plan is suggested to be prepared and implemented.*

*As per the guidelines of MoEF & CC detailed study has to be done to ascertain the impact of mining project on wildlife of the study area with surrounding area should be furnished. Accordingly detailed mitigative measures required should be worked out with cost implications and a detailed biological study with core zone and 10 km buffer zone should be done. Details of flora and fauna in the core zone and buffer zone should be submitted along with the list of Schedule – I fauna.*

*Necessary plan for **schedule - I** fauna along with budgetary provisions for their conservation should be prepared in consultation with State Forest department.*

*Necessary allocation of the funds for implementing the same should be made as part of the project cost.*

*During mining operation precautionary measures shall be taken for conservation and protection of endangered fauna noticed in the ZoI like elephant and Sloth Bear etc. and afforestation has to be done by using indigenous species outside the M.L. area.*

*We are thankful to the management of Sri Chandi Prasad Sharma, Chaibasa, West Singhbhum, Jharkhand for providing us documents relating to this mine and approval orders issued by various quarters and accompanying during field visit which has given fruitful inputs to this Plan.*

SITE SPECIFIC WILDLIFE CONSERVATION PLAN FOR RAIKELA, BAHAMBA & TENSA IRON & MANGANESE ORE MINES OF SRI CHANDI PRASAD SHARMA

## EXECUTIVE SUMMARY

1. Raikela, Bahamba & Tensa Iron & Manganese Ore Mines is located in Villages- Raikela, Bahamba & Tensa in Bonai Sub-Division of District Sundergarh. It is about 10 km from Koira Township and 1.5 Km from Tensa Township.

2. The said mining lease area comes under Barsuan Range of Bonai Forest Division.

3. The said lease hold area was granted to Sri Chandi Prasad Sharma in villages- Raikela, Bahamba & Tensa for Iron & Manganese Ore over an area of 69.606 Ha. in Bonai Sub-division of Sundergarh District, Odisha vide Govt. of Odisha, Dept. of Mining & Geology vide proceeding no. 10903 /III (B) MG/44/85/MG, Bhubaneswar, dated 25.09.1985.

4. Initially, the mines area of 69.606 hectares was consisting of both forest (10.42 Ha) and non-forest land (59.186 Ha).

5. Later on, the non-forest area of the leasehold was declared under DLC which was informed by the DFO vide his letter No 2508 dt.24.04.98.

6. Total forest land within the area comes to 67.352 hectares after inclusion of the non-forest land within DLC, including 6.98 hectares of broken up land which attracts the provisions of Forest (Conservation) Act, 1980 (Amended).

7. The Mining Plan has been approved by Indian Bureau of Mines vide letter no. RNP/A/50-ORI/BHU/2020-21 dated 03.03.2021 for a period up to 31.03.2026.

8. Later on, modified Mining Plan has been approved by Indian Bureau of Mines vide letter no. MCDR-MIFLOCR/15/2023-BBS-IBM_RO_BBS dated 25.05.2023 and the same is valid up to 2025-26.

9. Environmental Clearance granted vide order no. F. No. J-11015/481/2007-IA. II (M) dated 16.06.2008.

10. During proposed period of mining operation, the mining operation will be semi mechanized opencast with development of benches of height up-to 6 m and width up-to 10 m. The conventional opencast method with utilization of excavator of capacity up-to 0.9 m3, dumpers of capacity up-to 40 MT, rock-breakers, deep-hole drilling blasting will be adopted.

11. The cost of the project is Rs. 11703 Lakhs.

12. Forests in the study area comprise of tropical dry deciduous mixed type, moist peninsular high-level Sal with several plant associations, prominent being Sal associated with Anogeissus latifolia and Terminalia-Lagerstroemia - Anogeissus formations of varying density and openness.

13. The fauna in the M.L area is confined to small animals like squirrels, lizards, crows and common myna. Endangered fauna, viz., elephant, (which generally migrates through the region) sloth bear, python, etc. are noticed in the buffer zone of the project. There is no endemic flora or fauna noticed.

14. The M.L. area or study area does not form a part of Sanctuary, National Park, Conservation or Community reserve, tiger or elephant reserve or biosphere reserve. The known elephant corridor is outside the study area.

15. The Forest Blocks located within the ZoI are Khajurdihi RF, Sarkunda RF, Bhabanipahar RF, Kathmal RF, Toda RF, Kathmal PRF, Bhabanipahar PRF, Nagaria PRF, Sarkunda PRF, Khandadhar PRF, Amrudi RF etc. of Bonai Forest Division and Mankarnacha RF in Keonjhar Forest Division.

16. There are 50 (Fifty) number of villages within the 10 km buffer zone area in Sundergarh District and 14 nos. of villages in Keonjhar District.

| Name of Range | Name of Village | Name of Range | Name of Village |
|---|---|---|---|
| Koira | Kantarkala | Barsuan | Kolasahi |
| | Kadodihi | | Tinko |
| | Koira | | Bajanrakala |
| | Balajuri | | Kusumdihi |
| | Orahari | | Langalkata |
| | Harischandpur | | Kadadiha |
| | Bhanjapali | | Barsuan |
| | Kashira | | Sasyakela |
| | Kolaparha | | Damalu |
| Barsuan | Jaldihi | | Madanaparha |
| | Tinto | | Rajabasa |
| | Kalmanga | | Khandadhar |
| | Arandapur | | Narhiadih |
| | Tentulidihi | | Raisuan |
| | Dengula | | Batgaon |
| | Raikela | | Kedeshala |
| | Tensa | | Kensera |
| | Bandal | | Bhubude |
| | Nuagaon | | Randa |
| | Kola | Kuliposh | Karinda |
| | Rengua | | Pichatangari |

| | | | |
|---|---|---|---|
| | Tantra | | Ladiadihi |
| | Bahamba | | Thalumunda |
| | Taldihi | | Dhublipathara |
| | Bendrilohra | | |
| | Nuatantra | | |

**Villages in Keonjhar District**

| | |
|---|---|
| Bhejidihi | Sundra |
| Kadakala | Upparkadakala |
| Nayakote | Singpur |
| Panasuan | Kandakala |
| Sundra | Nayakote |
| Tala Kadakala | Vegidihi |
| Talakadakala | Luhakala |

17. The impacts within M.L. area include habitat loss due to clearance of vegetation, honey combing, soil erosion, lack of water, noise, dust and light pollution, forest fire, vulnerability of wild animals falling in mine pits, generation of garbage etc.

18. The impacts within the ZoI include habitat loss fragmentation of habitat, loss of biodiversity, forest fire, poaching, heavy traffic, depredation by wild animals, disturbance due to noise and light, vulnerability of elephants to electrocution etc.

19. **Schedule-I species like Elephant** (Elephas maximus), **Sloth Bear** (Melursus ursinus), **Indian Rock Python** (Python molurus) and **Peacock** (Pavo cristatus) are noticed in ZoI and rest flora & fauna list is enclosed as **Annexure-I.**

20. In this plan protection and management of Schedule-I species have given sufficient importance. The anticipated degradation due to this project are habitat degradation, habitat fragmentation, Air pollution, Noise pollution, and related impact on wildlife & its habitat and also on local forest dependent community.

20. Mitigative measures have provided both in Core Zone and Zone of Impact.

21. The nearest Sanctuary is Badrama Sanctuary which is about 85.2 km from the project. The Karo – Karampada Elephant corridor is about 17.61 km from the project. This Management Plan has addressed all the above threats with remedial measures to minimize the adversities as detailed below: -

## FOR BONAI DIVISION

### Within the Project area by the User Agency:

- Employment of Fire Watcher
- Fire Fighting equipment
- Awareness promotion
- Provision of bird baths & bird nests
- Provision of Grain bins
- High powered torches
- Provision for awareness campaigning
- Provision of four-wheeler
- Jana Surakhya Gaja Rakhya
- Establishment of crime control cell

### Within the Impact Area/Buffer zone by Forest Division:

#### (I) Protection & Enforcement Activities

- Engagement of squad member for assisting staff in protection, wildlife monitoring
- Hired vehicle + POL

#### (ii) Wildlife Habitat Management

- Habitat enrichment
- De-silting, Renovation & maintenance of existing water bodies

#### (iii) Wildlife Monitoring

- Procurement of Camera Trap
- Procurement of Monitoring Kits
- Construction of anti-poaching barrack

#### (Iv) Human Elephant Conflict Mitigation

- Deployment of Gaja Saathi
- Training for field staff
- Installation of Solar Street lamp/light
- Provision of Tranquilizing kit
- Provision of barricading open wells
- Provision of Elephant Proof Trench

## (v) Public Awareness

**FOR KEONJHAR DIVISION**

**Within the Project area by the User Agency:**

- Strengthening Office of RCCF, Rourkela
- Fire watchers
- High powered torches
- Study on habitat assessment of Asian Elephant
- Jana Raksha GajaSuraksha in village

**Within the Impact Area/Buffer zone by Forest Division:**

**(i) Wildlife Habitat Improvement**

- Provision to create one water body
- Vanya Jantu Katha/Awareness

**(ii) Protection & Surveillance**

- GajaSathi in four villages
- Distribution of grain bins
- High mast solar light
- Elephant squad
- Cattle immunization
- Salt licks

22. The plan is for 5 years. A monitoring committee has been suggested in this plan under the Chairmanship of the DFO, Bonai & Keonjhar with mine representative and others as members for smooth execution and transparency.

23. The total cost of the conservation plan is Rs. 652.58 Lakhs for Bonai Forest Division and Rs.67.5756 Lakhs for Keonjhar Forest Division) including cost escalation @ 20%. The entire amount will be deposited by the User Agency in CAMPA.

# CHAPTER–1

# INTRODUCTION

## 1. i) BRIEF DESCRIPTION OF THE PROJECT

Raikela, Bahamba & Tensa Iron& Manganese Ore Mines of Sri Chandi Prasad Sharma is one of the Mining Project for production of Iron ore & Manganese in Kolra Tehsil of Sundergarh District in Odisha.

This Mining Lease was granted to Sri Chandi Prasad Sharma for Iron & Mn. Ore in villages Raikela, Bahamba & Tensa in Bonai Sub-division of Sundergarh District, Odisha over an area of 69.606 Hectares vide Govt. of Odisha, Dept. of Mining & Geology vide proceeding no. 10903 /III (B) MG/44/85/MG, Bhubaneswar, dated 25.09.1985. The mining lease was executed on 17.04.1986 for a period of 20 years and the lease was valid up-to 16.04.2006.

Initially, the mines area of 69.606 hectares was consisting of both forest (10.42 Ha) and non-forest land (59.186 Ha). Accordingly surface right in the non-forest areas was granted in two phases for 3.991 hectares vide memo No 513 dt 09.06.1986 of the Collector, Sundargarh and for 3.18 hectares vide letter No 788 dt 06.09.1991. Hence, total surface right area comes to 7.171 hectares.Later on, the non-forest area of the leasehold was declared under DLC which was informed by the DFO vide his letter No 2508 dt.24.04.98.Total forest land within the area comes to 67.352 hectares after inclusion of the non-forest land within DLC, including 6.88 hectares of broken up land.

Raikela, Bahamba & Tensa Iron& Manganese Ore Mines of Sri Chandi Prasad Sharma is located in villages- Raikela, Bahamba & Tensa of Bonai sub-division of Sundargarh district. The said mining area is coming under Barsuan Range of Bonai Forest Division.

Modified Mining Plan has been approved by Indian Bureau of Mines vide letter no. MCDR-MIFLDCR/1S/2023-BBS-IBM_RO_BBS dated 25.05.2023 and the same is valid up to 2025-26.During proposed period of mining operation, the mining operation will be semi mechanized opencast with development of benches of height up-to 6 m and width up-to 10 m. The conventional opencast method with utilization of excavator of capacity up-to 0.9 m3, dumpers of capacity up-to 40 MT, rock-breakers, deep-hole drilling blasting will be adopted.

Environmental Clearance granted vide order no. F. No. J-11015/481/2007-IA. II (M) dated 16.06.2008.

## 1.ii) PROJECT COST

The cost of the project is Rs. 1141.89 Lakhs.

## 1. iii) LOCATION

The Mining area is located in villages- Raikela, Bahamba&Tensaof Bonai sub-division of Sundargarh district and is coming under Barsuan Range of Bonai Forest Division. This Mining Block is shown in SoI Topo Sheet No. 73G/1(F45N/1)& This is bounded by the boundary pillars having GPS locations as given below in Table-1:

**Table-1:GPS locations of Boundary Pillars**

| | | LONGITUDE | LATITUDE | UTM CORDINATE | |
|---|---|---|---|---|---|
| SL.NO. | PL-NO. | DD-MM-SS | DD-MM-SS | EASTING | NORTHING |
| 1 | A | 85°10'21.35136" | 21°51'27.46620" | 311162.988 | 2418190.084 |
| 2 | A1 | 85°10'16.58424" | 21°51'30.97476" | 311027.392 | 2418299.627 |
| 3 | A-2 | 85°10'12.67212" | 21°51'33.87492" | 310916.137 | 2418390.164 |
| 4 | A3 | 85°10'08.26032" | 21°51'37.18224" | 310790.674 | 2418493.398 |
| 5 | A4 | 85°10'04.78776" | 21°51'39.71700" | 310691.898 | 2418572.539 |
| 6 | A5 | 85°10'02.55540" | 21°51'41.36292" | 310628.416 | 2418623.929 |
| 7 | A6 | 85°09'59.92992" | 21°51'43.28064" | 310553.74 | 2418683.808 |
| 8 | B | 85°09'56.73564" | 21°51'45.64548" | 310462.893 | 2418757.644 |
| 9 | B1 | 85°09'58.91796" | 21°51'46.62720" | 310525.908 | 2418787.089 |
| 10 | B2 | 85°10'05.61144" | 21°51'49.63788" | 310719.184 | 2418877.402 |
| 11 | B3 | 85°10'10.63704" | 21°51'51.89868" | 310864.299 | 2418945.211 |
| 12 | B4 | 85°10'14.94732" | 21°51'53.83728" | 310988.759 | 2419003.368 |
| 13 | B5 | 85°10'23.59632" | 21°51'57.72744" | 311238.498 | 2419120.065 |
| 14 | B6 | 85°10'28.72020" | 21°52'00.03180" | 311386.444 | 2419189.197 |
| 15 | C | 85°10'34.69440" | 21°52'02.71848" | 311558.935 | 2419269.798 |
| 16 | C1 | 85°10'38.66736" | 21°51'59.30676" | 311671.758 | 2419163.507 |
| 17 | C2 | 85°10'41.31660" | 21°51'57.08448" | 311747.004 | 2419094.26 |
| 18 | D | 85°10'44.39352" | 21°51'54.24156" | 311834.305 | 2419005.769 |
| 19 | D1 | 85°10'42.96216" | 21°51'52.61472" | 311792.623 | 2418956.223 |
| 20 | D2 | 85°10'40.09692" | 21°51'49.24944" | 311709.14 | 2418853.684 |
| 21 | D3 | 85°10'34.33332" | 21°51'42.63444" | 311541.249 | 2418652.197 |
| 22 | D4 | 85°10'25.67964" | 21°51'32.49972" | 311289.094 | 2418343.432 |
| 23 | D5 | 85°10'22.76292" | 21°51'29.12400" | 311204.12 | 2418240.6 |

This Mining area is accessible by the Koira - Tensa main road. The nearest village is Tensa which is at 1.5 km distancefrom the mines. The site is well connected to NH-520 (Earlier NH-215) which is about 10 Kms& the nearest rail head is Barsuan which is at a distance of 20 Km. The nearest portfor export of iron ore is Paradeep Port located at a distance of about 320 km.

Khajurdihi RF, Sarkunda RF, Bhabanipahar RF, Kathmal RF, Toda RF, KathmalPRF, Bhabanipahar PRF, Nagarla PRF, Sarkunda PRF, Khandadhar PRF, Amrudi RF are coming within the impact area i.e., within 10 Km radius of the mining block belonging to Bonai Forest Division of Sundergarh District. *Also, Mankarnacha R.F. of Keonjhar Forest Division of Keonjhar Districtis located within ZoI.*

The village wise abstract of total land and existing land use details are furnished below.

### 1. Iv) NATURE & EXTENT OF LAND REQUIRED

The total area of the mining block is 69.606 Ha. out of which 67.352 Ha. area is forest land (DLC forest - 52.922 ha. + Revenue forest - 5.479 ha. + 8.951 ha) and remaining 2.254 ha. is non- forest land. The breakup of land use is furnished below in Table-2.

**TABLE - 2: The Breakup of The Land Use:**

All figures are in Hectares

| Sl No | Pattern of utilization | PRF | DLC Forest | Revenue Forest | Total Forest | Non-Forest | Total Area |
|---|---|---|---|---|---|---|---|
| 1 | Mining & its allied activities | 0.05 | 6.834 | | 6.884 | | 6.884 |
| 2 | Public Road & Nala | | 0.51 | | 0.51 | 2.254 | 2.764 |
| | **Sub-Total** | **0.05** | **7.344** | **0** | **7.394** | **2.254** | **9.648** |
| | **SAFETY ZONE AREA** | | | | | | |
| 3 | 7.5m wide along the ML boundary | 0.542 | 2.053 | 0.241 | 2.836 | | 2.836 |
| 4 | 50m wide along the nala | | 5.408 | | 5.408 | | 5.408 |
| 5 | 10m along the public road | | 2.409 | 0.031 | 2.44 | | 2.44 |
| | **Sub-Total** | **0.542** | **9.87** | **0.272** | **10.684** | **0** | **10.684** |
| 6 | Area for mining after exploration | 8.359 | 35.708 | 5.207 | 49.274 | 0 | 49.274 |
| | **Sub-Total** | **8.359** | **35.708** | **5.207** | **49.274** | **0** | **49.274** |
| | **Grand Total** | **8.951** | **52.922** | **5.479** | **67.352** | **2.254** | **69.606** |

# CHAPTER-2

# PROJECT AND IMPACT AREA

## 2. i) DESCRIPTION OF THE PROJECT AREA

Raikela, Bahamba & Tensa Iron & Manganese Ore Mines of Sri Chandi Prasad Sharma is one of the Mining Project for production of Iron ore &Manganese in Koira Tehsil of Sundergarh District in Odisha.

This Mining Lease was granted to Sri Chandi Prasad Sharma for Iron & Mn. Ore in villages Raikela, Bahamba & Tensa in Bonai Sub-division of Sundergarh District, Odisha over an area of 69.606 Hectares vide Govt. of Odisha, Dept. of Mining & Geology vide proceeding no. 10903 /III (B) MG/44/85/MG, Bhubaneswar, dated 25.09.1985. The mining lease was executed on 17.04.1986 for a period of 20 years and the lease was valid up-to 16.04.2006.

Initially, the mines area of 69.606 hectares was consisting of both forest (10.42 Ha) and non-forest land (59.186 Ha). Accordingly surface right in the non-forest areas was granted in two phases for 3.991 hectares vide memo No 513 dt 09.06.1986 of the Collector, Sundargarh and for 3.18 hectares vide letter No 788 dt 06.09.1991. Hence, total surface right area comes to 7.171 hectares. Later on, the non-forest area of the leasehold was declared under DLC which was informed by the DFO vide his letter No 2508 dt.24.04.98. Total forest land within the area comes to 67.352 hectares after inclusion of the non-forest land within DLC, including 6.88 hectares of broken up land

Raikela, Bahamba & Tensa Iron& Manganese Ore Mines of Sri Chandi Prasad Sharma is located in villages- Raikela, Bahamba & Tensa of Bonai sub-division of Sundergarh district. The said mining area is coming under Barsuan Range of Bonai Forest Division.

Modified Mining Plan has been approved by Indian Bureau of Mines vide letter no. MCDR-MiFL0CR/15/2023-BBS-IBM_RO_BBS dated 25.05.2023 and the same is valid up to 2025-26.During proposed period of mining operation, the mining operation will be semi mechanized opencast with development of benches of height up-to 6 m and width up-to 10 m. The conventional opencast method with utilization of excavator of capacity up-to 0.9 m3, dumpers of capacity up-to 40 MT, rock-breakers, deep-hole drilling blasting will be adopted.

Environmental Clearance granted vide order no. F. No. J-11015/481/2007-IA. II (M) dated 16.06.2008.

**Topography:**

The Leasehold area displays an undulated topography with hillocks and valleys. The maximum elevation of the area is 765 MSL located towards northern side of the area where as minimum elevation is 590 MSL in the middle of lease hold area. The area can be considered to be of comparatively rugged nature having steep hill slopes. The block is characterized by the presence of elongated and somewhat flat-topped hills.

The natural water course is a seasonal nala which is located in the middle portion of the lease hold. Miner's establishment is located very near to the nala and the camp draws its requirement of water from this nala.

The details of physiographic features and infrastructures available in and around the lease/block area is furnished below (Table-3):

**TABLE - 3:** Physiographic features and infrastructures available in and around the lease/block area

| Description | Location if existing within the lease/block area | Distance from boundary periphery in kms, if existing outside the lease/block area. (Within 5.00 Kms) | Remark if any |
|---|---|---|---|
| River/Nallah/Reservoir | | | |
| Public roads (Tar Road, cart road) | | NH-520 (Earlier NH-215) is about 10Km from the block | NH-520 (Earlier NH-215) is about 10Km from the block |
| Railway Track | Nil | Nil | Nearest rail head is Barsuan 20 Km from the block |
| Human Settlements | Nil | Tensa village 1.5 Km and Raikela village 3 Km | --- |
| Archaeological monuments/places of worships/public utilities etc. | Nil | Nil | Nil |
| Wildlife Sanctuaries/National Parks | Nil | Nil | Nil |
| Coastal Regulation Zone (CRZ) | Nil | Nil | Nil |
| Power transmission lines/telephone lines | Nil | | Nil |
| Firing range | Nil | Nil | Nil |
| Ordinance factory | Nil | Nil | Nil |
| Grazing land/burial ground of cremation ground | Nil | I | Nil |
| Any other specify | Nil | Nil | Nil |

**Climate:**

Climate and meteorology of a place play an important role in the implementation of any developmental Project. Meteorology is also the key to understand local air quality as there is essential relationship between meteorology and atmospheric dispersion involving the wind in the broad sense of them.

**Temperature**

The climate of the study area is characterized by an oppressively hot summer with high humidity. Summer generally commences in the month of March and continue till end of June. Temperature begins to rise rapidly attaining the maximum in the month of May ($47.4^0$) Celsius. No doubt the weather becomes pleasant on the unset of monsoon in 2nd week of June an continues up-to end of October. The temperature in the month of December cools down to 070 Celsius.

**Relative Humidity**

The air is dry excepting during the South-West monsoon season. The maximum humidity ranges from 55% to 76% with annual average of 64.83% while the minimum humidity range from 26% to 43% with an annual average of 34%.

**Rainfall**

There is variation of rainfall in the catchment area and around 10 Kms radius of buffer zone of this mine. The average annual rainfall of Bonai sub-division is 1364.66mm as computed from last 10 years data out of which a major portion i.e., 92% occurs from July to September.

**Pre-dominant wind direction**

This is south-west area which remains calm for nearly 50% of the year.

**2. ii) LAND USE:**

| SL.NO. | PARTICULARS | AREA IN (HA.) |
|---|---|---|
| 1. | DLC Forest | 52.922 |
| | Revenue Forest | 5.479 |
| | PRF | 8.951 |
| | **Total Forest Land** | **67.352** |
| 2. | **Non-forest Land** | **2.254** |
| | ***Grand Total*** | ***69.606*** |

## 2. iii) DESCRIPTION OF FLORA AND FAUNA:

The authenticated list of Flora and Fauna for both the Project area (Core Zone) and the buffer zone has been furnished in Annexure-I.

### Details of Endemic, threatened and Scheduled Species:

So far, according to our study and from the available literature, there is no endemic plant or animal species present in this area. As far as, threatened fauna are concerned all Schedule – I species like is **Elephant** (*Elephas maximus*), **Sloth Bear** (*Melursus ursinus*) & Indian Rock Python (*Python molurus*) are present in the ZoI.

## 2. iv) DESCRIPTION OF FOREST AND OTHER HABITATS:

### Forest Type:

This proposal includes Revenue Forest and DLC Forest. However, Khajurdihi RF, Sarkunda RF, Bhabanipahar RF, Kathmal RF, Toda RF, Kathmal PRF, Bhabanipahar PRF, Nagaria PRF, Sarkunda PRF, Khandadhar PRF, Amrudi RF are coming within the impact area i.e., within 10 Km radius of the mining block belonging to Bonai Forest Division of Sundergarh District. Also, Mankarnacha R.F. of Keonjhar Forest Division of Keonjhar District is located within ZoI. which are being included in the forest type-3c/C2e (I) Moist Peninsular High-Level Sal. The quality of Sal is usually IV but the crop is somewhat open. In these areas, the patches of mixed forests with predominance of *Anogeissus latifolia* are also found within the Sal belts. Regeneration of Sal is fairly good but there is risk of repeated annual fire.

The area is however free from frost. The common associates of Sal in the top canopy are *Terminalia alata* (Asan), *Anogeissus latifolia* (Dhaura), *Syzigium cumini* (Jamun), *Lagerstroemia parviflora* (Paluli) and *Pterocarpus marsupium* (Bija).

The middle storey contains *Careya arborea* (Kumbhi), *Bauhinia purpurea* (Kanchan), *Bridelia retusa* (Kasi), *Ougeinia oogenesis* (Bandhan), *Helectoris isora* (Modaphal) and *Indigofera pulchela* (Butterfly Flower) are commonly found as under growth. The common species of climbers available are *Bauhinia vahlii* (Siali) and *Smylax macrophylla* (Muturi). Themida and Imperata are the common grasses.

## Forest Condition According to the FSI Report:

As per FSI Report 2021, Sundergarh Dist. has a Geographical area over 9712 Sq.Km. Total Forest Area is 4268.17Sq.Km. (43.95% of Geographical area) which include 1020.735q.Km. of Very Dense Forest (Canopy Density above 70%), 1856.46Sq.Km. of Moderate Dense Forest (Canopy density 40% to 70%), Open Forest 1309.985q.Km. (Canopy Density 10 to 40%).

## Working Plan Prescription:

The special objects of management of this working circle as per the approved Working Plan of Bonai Division are; -

a. To tend and improve the existing growing stock through suitable silvicultural measures.
b. To regenerate the barren and blank patches by planting suitable site exacting hardy species.
c. To rehabilitate and improve the productivity of the depleted and degraded forest through enrichment plantation and other suitable measures.
d. To tend the existing plantation so as to get maximum annual increment.
e. To raise block plantation preferably of economically important species in the large gaps having extent of more than 4 Ha.
f. To improve micro-edaphic conditions, especially in dry and open patches by taking suitable soil and water conservation measures.
g. To provide effective protection against illicit felling, encroachment, shifting cultivation, over grazing and fire hazards so as to check further retrogression of site.
h. To meet the bonafied needs and requirements of local inhabitants in regards of fire wood, small timber and fodder etc.

## 2. iv) WILDLIFE HABITAT AND PREVAILING WILDLIFE SCENARIO:

From the primary data collected from the field and executives of Forest Dept. it appears that there is presence of Elephants, Sloth bears & Indian Pythons in the area for whichthere is often wildlife-human conflict. Presence of other wildlife is mentioned in the list of fauna. The habit and habitats of the aforesaid Schedule-I species are narrated below-

### Elephant (*Elephas maximus*):



**Habit:**Elephants are social animals and live-in herds, which vary between 3-6. The Elephants are matriarchal and the herd is led by the oldest female. Herd usually breaks into clans and rejoins again. For long-distance movement some time a few herd mixes and form a big group which is coordinated by the oldest female for searching for better habitat - food and water. Several herds maintain contact through sub-sonic vocalization according to findings on work with African Elephants. Adult males remain away from the herd and occasionally join with the herd when females are in oestrous. They are polygamous. Only dominant males have the chance to mate with females. Old males usually lead a solitary life, while sub-adult males some time form an unstable group of 2 to 7 animals. Such a group is known as Muljuria group. Elephants are very sensitive to hot and prefer shady moist areas during noontime. The matriarch herds, as well as males, are long-ranging. Their home Range varies between 150 and 1200 sq. km., depending on the habitat condition. An Elephant may run at a speed of 45 km per hour for a short distance for two to five minutes.

Their average life span is the same as human beings, and around 70 years. In Elephant there is no seasonality in oestrous cycle, and the interbirth interval varies from 3to 5 years, depending on the habitat quality. The gestation period is 18 to 22 months and the suckling period is around one and a half years. Young calves start taking grass from 6 months onwards.

Mother continues to bestow maternal care to their offspring for several years after weaning. The sense of touch and hearing is well developed in Elephant but its eyesight is poor. Most males have prominent tusks, while some time females have tushes which are hardly visible from outside. Male Elephants sometime have only one tusk (known as Ganesh), or even without tusk (known as Makhna). They have 6 sets of molar teeth, of which only one set is in use at a given time. With the loss of the last set of molar teeth they are deprived of taking any food and eventually do not survive. The unique identity of Elephant is his trunk with a single finger-like tip at the end and it has versatile utility, used in eating, drinking, smelling, breathing, touching, washing & dusting of the body, fighting, and vocalizing. Mud wallowing is fun for the Elephants, though it protects them from insects and sun.

**Habitat:**The body size and food requirement of this non-ruminant "mega-herbivore" have made the Elephant a generalist vegetarian to feed on a variety of plant species. Even within one region, they feed on well over a hundred species of plants. They not only depend on leaves, fruits & twigs but also consume barks, roots, stem pith, flowers, grasses and salt with soil. Though, depending on seasons they select distinctly different plant parts depending on their availability. In the dry deciduous Forest region, their dietary habit usually alternates between predominantly grazing during the wet season and browsing during the dry season. In quantitative terms, they prefer grasses, reeds, and sedges (Poaceae and Cyperaceae). Their preferred tree families are Combretaceae, Euphorbiaceae, Moraceae, Malvaceae, and Legumes. They cannot survive entirely as grazers. Thus, browse species are extremely important in the nutrition of Elephant. On average, take 150 kg of vegetation and 100 litres of water per day. The efficiency of digestion is poor (40 to 45%) with the symbiotic bacteria in the stomach. They are in constant motion while feeding and generally cover 15 to 20 km in a day. Elephants are well established in dry deciduous Forests to moist evergreen Forest.

Human activities like agriculture (cultivation of crop, irrigation system); development works (Roads, Railways, Townships, Dams, Industries, and Mines etc.) are fragmenting their habitat and creating obstructions to their movement which they traditionally follow. They are in conflict with human when they move through that fragmented area and also damage various cultivated crops like paddy, ragi, banana, sugar cane etc.

**Sloth Bear (Melursus ursinus):**



Distributed throughout the Odisha, except a few areas of the coastal Districts and is an endangered species.

**Habit:**Sloth Bear has a long snout and lips are detached from the gum and are well adapted to the forceful intake and expulsion of air. The absence of a middle pair of incisors in the upper jaw permits the passage of air freely. The tongue is large protractible. Long claws of the forelimbs (longer than hind limbs) are good instruments of digging. The animal produces enough suction force to suck out termites from mounds.

Bears are nocturnal in habit; their sense of smell is well developed than their sight and hearing. During an accidental encounter with a human being, they cause severe damage to the human or even death. When they have cubs, they move with them, otherwise, they are solitary or are in pair with the opposite sex. They have a specific breeding season. Mating takes place in June or July and they give birth to cubs in caves during December and January. Litter varies between 1 and 3 cubs. Parental care lies with mother only. Their average life span is around 40 years.

**Habitat:**They are in good number in drier and secondary Forests are also found in dense forests. They are omnivorous in nature. They feed on tubers, roots, grubs, various fruits, various insects, honey, termites, flowers (mahua, simul, etc.). It also damages sugar cane crop, maize, etc. Their home Range is limited and restricted. In the quest of food, they may travel several kilometres. It is believed that their gall bladder and bile have medicinal properties and hence they are exposed to poaching, particularly due to the demand of these parts in China and other southeast Asian countries.

**Indian Python (Python molurus):**



**Habit:** This is a non-venomous snake and can grow up to 4m and weigh 45 kg. The colour is dark brown to yellowish-white in a blotched pattern. They are very good swimmers and take to water when disturbed but on land, they hissand remain motionless. The species is oviparous and lay up to 100 eggs in a clutch protected and incubated by the female. Being exothermic, python basks in open but can also raise body temperature by muscular contraction.

**Habitat:** Python occurs in wide Range of habitats viz. rocky foothills, grasslands, marshes, swamps, woodlands, open jungle. At times, they take refuge in mammal burrows, hollow trees etc. It has also been reported close to habitation and crop fields. The snake feeds on small mammals, birds, and reptiles but prefers the first. Chital deer, fawns, hares, mouse deer, jungle fowl are natural food.

It can swallow prey bigger than its size as the jaw bones are not hinged. The prey is constricted to death by muscular movement and swallows headfirst. Once held in the jaw, prey cannot escape because of inward bent teeth.

It is listed as one of the Lower Risk /Near Threatened species according to IUCN Red List.

## 2. v) WILDLIFE CORRIDORS:

**No notified Elephant Corridor is within 10 Km aerial distance from the Project site. However, the nearest Karo-Karampada Elephant Corridor is at a distance of 17.61 Kms. from the project site.** The nearest Sanctuary is Badrama Sanctuary which is about 85.2 Kms from the project.

## 2. vii) HUMAN WILDLIFE CONFLICT:

As per the record available in Bonai Forest Division 141 house damage cases have yet been recorded, 06 in 2018-19, 33 in 2019-20, 18 in 2019-20, 51 in 2021-22 & 33 in 2022-23.

So far human kill is concerned, 09 case in 2018-19 to 2022-23. So far human injury is concerned, no case has been reported.

As per the Divisional record found 391.601 acre of crops were damaged by the elephant during the period 2018-19 to 2022-23. In all the cases compensation has been paid to the victims.

## Details of Animal Depredation paid during the year 2018-19 to 2022-23 in Koira Range of Bonai Forest Division

### House damage by Elephants

| Sl. No. | Year | Name of the Division | Name of the Range | No. of Cases | Partily | Fully | Amount sanction | Amount Paid |
|---|---|---|---|---|---|---|---|---|
| 1 | 2018-19 | Bonai | Koira | 11 | 5 | 6 | 70000 | 70000 |
| 2 | 2019-20 | | | 75 | 42 | 33 | 414000 | 414000 |
| 3 | 2020-21 | | | 50 | 32 | 18 | 244000 | 244000 |
| 4 | 2021-22 | | | 85 | 34 | 51 | 578000 | 578000 |
| 5 | 2022-23 | | | 69 | 36 | 33 | 402000 | 402000 |

### Human Death by Wild Animal

| Sl. No. | Year | Name of the Division | Name of the Range | No. of Cases | Amount sanction | Amount Paid |
|---|---|---|---|---|---|---|
| 1 | 2018-19 | Bonai | Koira | 1 | 400000 | 400000 |
| 2 | 2019-20 | | | 1 | 400000 | 400000 |
| 3 | 2020-21 | | | 1 | 400000 | 400000 |
| 4 | 2021-22 | | | 4 | 1600000 | 1600000 |
| 5 | 2022-23 | | | 2 | 800000 | 800000 |

### Human Injury by Wild Animal

| Human Injury |
|---|
| - Nil - |

## Crop damage by Elephants

| Crop Damage | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sl. No. | Year | Name of the Division | Name of the Range | No. of Cases | Area Damage in Ac. | Amount sanction | Amount Paid |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 2018-19 | Bonai | Koira | 59 | 22.88 | 228800 | 228800 |
| 2 | 2019-20 | | | 177 | 65.51 | 657300 | 657300 |
| 3 | 2020-21 | | | - | - | - | - |
| 4 | 2021-22 | | | 243 | 109.09 | 1090900 | 1090900 |
| 5 | 2022-23 | | | 134 | 53.121 | 531210 | 531210 |

## Cattle kill by Wild Animal

| Cattle Kill |
|---|
| - Nil - |

## Detaits of Animal Depredation paid during the year 2014-15 to 2020-21 in Keonihar Forest Division

### HOUSE DAMAGED (2014 -15 TO 2020-2021)

| BEAT | VILLAGE | NO OF HOUSE DAMAGED |
|---|---|---|
| Nayakote | Sundra | 4 |
| | Kandakala | 2 |
| | Singhpur | 1 |
| Total | | 7 Nos. |

**CROP DAMAGED (2014 -15 TO 2020-2021)**

| CROP DAMAGED VILLAGE | NO. OF CROP DAMAGED |
|---|---|
| Bhejldihi | 1 |
| Kadakala | 15 |
| Nayakote | 2 |
| Panaguen | 3 |
| Sundra | 32 |
| Tala Kadakala | 15 |
| Talakadakala | 5 |
| Sundra | 6 |
| Upparkadakala | 4 |
| Singpur | 7 |
| Kandakala | 1 |
| Nayakote | 3 |
| Vegldihi | 6 |
| Luhakala | 1 |
| **Total** | **101** |

**HUMAN DEATH (LAST 5 YEARS) IN 10 KM BUFFER AREA**

| |
|---|
| **NIL** |

**ELEPHANT DEATH**
**( LAST 5 YEARS) IN 10 KM BUFFER AREA**

| |
|---|
| **NIL** |

## CHAPTER-3

# THE PROBABLE IMPACTS OF THE PROJECT ON FLORA & FAUNA

## A. IMPACT OF THE PROJECT ON THE ENVIRONMENT IN GENERAL:

Any project has its impacts on the biotic, physical and socio-economic environment. Some are beneficial to the society and some are not. After evaluating these impacts, all projects are implemented. This project is not left untouched in these aspects. When certain impacts are disasters, it necessitates to mitigate such problems with established technology and scientific study. Such negative impacts are discussed here to help in implementing the mitigative measures.

Before any attempt is made to reduce various stresses and to avoid/minimize or mitigate their adverse impacts, it is necessary to identify various factors that have negative influence on the biodiversity. These are specified below considering the terms of reference for the preparation of Site-Specific Wildlife Management Plan.

### I) Impact on soil

It is anticipated that the effect on soil quality may arise during expansion involving construction and operation. During Operation due to open yard storage of raw materials like iron ore, coal and limestone the run-off goes down stream polluting the natural drainage. As the project area has vegetation at sparse, some amount of soil erosion is inevitable from surface run-off, which will increase the sediment load of the streams. The earthwork and storage of constructions material may temporarily affect the topsoil in terms of erosion. Transport of construction material would lead to an increase in traffic flux. Further, dumping of solid wastes like charcoal dust, ESP dust, sludge from DRI/blast furnace, FES dust, BF slag, fly ash, etc. on land would also deteriorate soil quality, if appropriate control and mitigation measures will not be implemented. The top soil and other stored material may erode and thereby affect the soil of the periphery and introduce toxic materials to the soil If not properly stored and will affect to the wild lives like rodents and other burrowing animals present in that area.

### II) Geomorphic changes:

No major geomorphic changes will occur due to execution of this project except for minor levelling and little rise in the plinth area. Raw materials will temporarily increase elevation in storage area. The natural sheet flow will be obstructed due to the buildings but that shall be taken care by the provision of storm water drains.

### iii) Moisture loss

Moisture loss will be occurred in both the core and the ZoI of the project due to release of various gas with a very high temperature from the boiler of the block if adequate measures will not be taken. Operation of heavy vehicle for transportation and loss of vegetation due to the project are also cause moisture loss. Under such circumstances, re-establishment of vegetation is delayed and difficult but constant input of imported materials like fertilizers, organic manure, water and regular attention can escalates the cost of reforestation in such refractory area.

### iv) Loss of Vegetation

Deforestation without proper reclamation will have an ecological / biodiversity loss at the conceptual stage, if not followed up by a proper conservation management plan. Apart from the loss of forest in the mining, there is infrastructure development for mining, establishment of hutments, Kiosks and the subsequent population pressure certainly put a huge anthropogenic pressure on the flora on the locality directly and indirectly.

### v) Habitat loss

Habitat destruction, is a process, which alters or eliminates conditions needed for animals and plants to survive. Rendered functionally weak by mining activities, the ecosystems' ability to support species is reduced. Reduced carrying capacity of the habitat means decline in populations and sudden disappearance of species. Habitat loss is manifested in loss of food plants and failure of the plant in regenerating itself. So is the case with horizontal cover (loss of undergrowth) and vertical cover (canopy contiguity). Habitat loss impacts nitrogen, phosphorous, sulphur, carbon and hydrological cycles, which affects ecosystem values adversely and culminates in either emigration of species or outright extinction.

### vi) Impact on Air:

The mining area and as well as surroundings is affected by the following ways:

**Dust pollution**

Mining activity particularly blasting, transport mechanism and dumping generate considerable dust, which will settle on nearby vegetation or on the ground. While the former component will affect the net production of organic matter, the latter will be awaiting to be washed away during rains. Blow of dust, will definitely settle on the smaller animal fur, affects its respiration and push the animal to a zone of stress. The broad impacts of dust pollution are:

- Reduced photosynthesis leading to reduced growth rates of plants.
- Increased incidences of plant pests and diseases from both fungi and insectisides.
- Reduced seeding, less viable seeds and hence, lowered or absence of regeneration.

**Noise pollution**

Drilling - blasting, loading, dumping, transportation and working activities all will produce noise. One can well imagine the nature of stress from the fact that a mere whisper in tranquil forest is enough to alarm the approaching animal to water hole, who takes to flight at once. Small reptiles manage to adapt in such a noisy environment because their facility of escape by such noise is limited. This is one of the factors contributing to displacement of species, even large ones like deer and elephants. Adverse effects are.

- Hearing impairment.
- Signal masking i.e., inability to hear important environmental clues and alarm.
- Increased heart rate, respiration and stress reaction.
- Loss of fecundity or inability to litter or increase in abortion.
- Decline in bird population due to muffling of mating calls.

**Light pollution**

The animals are adapted to natural light. Depending on the intensity of light in which an animal is most active, it is either classified as diurnal, crepuscular or nocturnal. Animals are not accustomed and adapted to artificial light, which usually prevail in mining area in the night shift, from the tippers carrying ore after evening and other fixed lights. All animals in the forest area of either the lease or ZoI area will be affected by the incidence of light as artificial lights are very sensitive to the cornea. So, it causes flight of animal from the ZoI of the mining area. Animals are adapted to constant phase of light, when changes happen, they move to area of their choice. Sudden lighting, off and on after dusk by the moving vehicles is harmful. At times, animals will face accidental death, unable to escape and get distracted from their natural path will lead to depredation to the nearby villages or accidental fall in the deep mining pit. The above activities will increase the stress condition. Animals exposed to light exhibit erratic behaviour pattern (mauling by bear, causing injury by elephant), expressed in their deflected movement and aggressive behaviour.

## B. QUANTUM OF POLLUTANTS THAT MAY BE PRODUCED BY THE PROJECT AND EFFECT ON SOIL, WATER, AIR, VEGETATION AND ANIMALS.

Two types of generation and discharge of pollutants, viz., fugitive emissions and stack emissions, have been considered. The stack emissions comprise of the hot gases from the kilns, which contain particulate matters, SO2 and NOx in significant quantities having ground level concentration of SPM, SO2 and NOx. Whereas Fugitive emissions comprise mostly of raw material/ product dust generated from different material handling operations, e.g., transport, storage, processing, loading, unloading, etc. Appropriate measures have taken by the Project Proponent to minimize the effect of these pollutants to the environment and the wildlife. Similarly, as such the plant working has been planned on zero discharge basis therefore no pollution of any form is expected on account of industrial activity. If some impact on drainage is envisaged during construction and operation phase and appropriate measures are to be taken.

The core area slopes towards northeast. A pond will be constructed to keep water within the plant. The same pond shall serve as the collection point for the rainwater falling over the project area. Thus, the water collected in the pond will be used for operation of the plant and facilities. This can be considered as a minor positive impact on the drainage system, as the mechanism executed for water harvesting would restrict soil erosion due to restricted flow. Hence it may not affect significantly to the soil, water, air, vegetation or animals of the surrounding.

## C. DEGRADATION ANTICIPATED ON ACCOUNT OF THE PROJECT IMPLEMENTATION IN QUANTIFIED TERMS ON APPROPRIATE MODELS TO BE EXPLAINED. QUALITATIVE CHANGE IN THE WILDLIFE HABITAT PATTERN IN THE STUDY AREA DUE TO PROJECT IMPLEMENTATION SHOULD ALSO BE DETAILED IN THE PLAN.

Direct degradation is observed in the form of loss of forest growth in area of mining. This complete removal of forest growth displaced the wildlife existing in that area due to loss of abode, food, water and tranquility. The mine workers will collect fuel wood for their bonafied use from the ZoI which will cause degradation. The consequence of these stress on forest are discussed below:

**i) Habitat fragmentation:**

This is the result of clearance of native vegetation by any developmental related activities in the midst of hilly forested area. Habitats, once contiguous, become divided into separate fragments. After clearance, separate fragments tend to be small units or is-lands isolated spatially. Habitat fragmentation involves some habitat impairment of the island units as well. Fragmentation involves increase in edge habitats and decrease in interior habitats. Biodiversity of each of the fragments get reduced for the above reason. Habitat fragmentation are rarely representative samples of the initial landscape. Species like elephants, deer, move between the fragments and make use of both. Small species having no ability to move between fragments must make do with what is available in the single isolated habitat.

Habitat fragmentation leads to edge effect. Microclimate changes alter ecology of interior and exterior habitats. Species adapted to interior habitats are less likely to survive in an edge habitat of smaller units. Smaller units support smaller population with reduced carrying capacity. Small population face decreased heterozygosis, increase in inbreeding and possibly inbreeding depression. If there is no migration between populations and genetic exchange, genetic drift sets in. This means, directional selection for advantageous alleles can cause certain alleles to become fixed in a population, thereby decreasing variation. Such loss of diversity, however, will not affect elephants, as movement path of elephant changes with available alternatives. But, species with low cruising radius will be affected. But, species with low cruising radius will be affected. However, alternate corridors exist for elephants although it is difficult to conclusively say whether this is traditional or deflected route. Another dimension to fragmentation is the propensity of depredation.

**Loss of biodiversity**

Biodiversity is an important component for maintaining natural balance and sustainable ecosystems. Clearly, biodiversity loss is critical for survival of human and wildlife in many ways. Development activities such as industries can significantly alter the biodiversity of an area. Its biggest impact is due to felling of trees for industry purposes.

The forests are home to huge number of organisms. Felling of trees for industry purpose leads to loss of habitat of wildlife. This puts the survival of animal species at stake. The cutting down of trees itself is a bigger threat to number of plants, birds and animals living in the forests. Any change in the biodiversity will have an adverse impact on the ecology of the area leading to many changes in the habitat as in this case. However, the adjoining habitat is also having forest growth to which the wildlife living in this Project area can shift at their own accord and suitability.

**iii)Habitat destruction by illicit felling:**

The workers involved during construction phase are skilled and highly organized. They may not depend for fuel wood for their bonafied rather prefer to use cooking gas.

**Forest fire:**



Forest fire is very common to all the forests exist in ZoI. It affects both vegetation and soil. It is also helpful in maintaining diversity and stability of ecosystems. Effect of forest fire and prescribed fire on forest soil is very complex. With increase in industrial and human activities due to setting up of new units and movement of labour force, contractors, transporters and others near to forest areas may induce forest fire.

## D. NATURE OF THREATS TO THE FLORA AND FAUNA:

Besides, habitat loss, habitat fragmentation, fire etc., as narrated above, there are other threats also emerges due to degradation of forests and are mentioned below.

**I) Encroachment:**

Increase in human population occur due to implementation of development projects. This also results in development of town and human habitation near the Industrial area. This plant does not involve any forest land and the workers are mostly recruited from local villages dominated with ST Population unless skilled labourers are required.

**ii) Litter generation:**

Workers engaged in various operations of the Steel Plant, generate much litter in shape of polythene wrappers, carry bags, paper wrappers, leaf plates and left-over food. This is not only obtrusive to sight but can attract animals like Wild Pigs, Hyena, Wolf and Jackals due to different attracting smell of the leftover food particles in Polythene bags. Ingestion of indigestible polythene can lead to blockade of gut and eventual death of these animals. The workshop will produce mobile cans, plastic jars, spent mobile and grease.

The canteen and office will also produce various wastes. Litters thrown all over not only destroy aesthetic view but are injurious to plant and animal life in many other aspects.

**2. Probable increase in the vehicular traffic and its impact**

About 2500-3000 vehicles move in and out of the mining belt, creating traffic jams. This happens due to poor road surface, narrow mine roads, breakdown of vehicles and both to and for traffic of loaded vehicles going out and empty vehicles coming in. This, for sure, can prevent wild animals from their natural movement, confining them to small unfavourable patches of habitat. Such artificial confinement usually manifests in aggressiveness and deflected movement apart from physiological stress.

**F. Noise Pollution, Air and underground polfutions etc. and it's probable impact on flora and fauna:**

**Noise pollution:**

The sources of noise generation during operation phase are as follows: -

- Operation of the Kilns and furnaces,
- Material handling operations, crushers
- ID Fans, motors, pumps
- Trucks, dumpers, loaders, scrappers and earth-movers
- Operation of turbines, etc.

Operation of these equipment's will continuously generate noise, which will have adverse impact on the ambient noise levels. This is one of the factors contributing to displacement of species, even large ones like Deer and elephant if sufficient safety measures will not be taken. Adverse effects of noise are.

**i) Hearing Impairment:**

- Signal masking i.e., inability to hear important environmental clues and alarm, distress and mating calls of con specifics for survival.
- Increased heart beat respiration and stress reaction.
- Loss of fecundity or inability to litter or increase in abortion.
- Erosion of faculty to suckle young and successful rearing of the brood.
- Decline in bird population due to muffling of mating calls.

**ii) Light Pollution:**

All animals are adapted to rhythm of solar light and darkness and accordingly remain passive or active depending on their nature (diurnal, crepuscular or nocturnal). During construction phase, a number of lights will be illuminated in the Project area for the purpose of visibility and safety/ security of the work force especially during night hours. Besides frequent plying of trucks/ trailers and large number of vehicles, movements of supervising personnel will add up illumination in the area. Since birds and animals are sensitive to light in night time, the illumination due to above factors may affect their biological cycle. All animals present within the ZoI will be affected by the incidence of light as artificial lights are very sensitive to their cornea. Animals are adapted to constant phase of light, when changes happen, they move to area of their choice. Sudden lighting, off and on after dusk by the moving vehicles is harmful. At times, animals will face accidental death, unable to escape and get distracted from their natural path which will lead to depredation to the nearby villages. The above activities will increase the stress condition. Animals exposed to light exhibit erratic behaviour pattern, expressed in their deflected movement and aggressive behaviour.

# CHAPTER-4

# OBJECTIVE OF MANAGEMENT AND MITIGATION STRATEGIES

## A. OBJECTIVE OF MANAGEMENT:

The main objective of this plan is to reduce various stresses occurring due to implementation of this project in this particular locality having wildlife importance. The site-specific Wildlife Conservation Plan will suggest measures to mitigate such stress and if possible, how to avoid certain activities which could reduce the negative influence. Wildlife management consists of promoting welfare factors, arresting or reducing the impacts of decimating factors and neutralizing harmful effects of limiting factors that keep the animal population lower than the carrying capacity of the area. It also aims at management of human dimensions relating to regulation of habitat use, sufferance from animal damages, livelihood issues and taking people as partners in conservation management. Such concerns are reflected in the prescriptions. The management of the project's core area will aim for maintenance of habitat for smaller animals that used to live and share habitat with Project area. The management of ZoI will target optimization and maintenance of wildlife habitat and biodiversity, involving local people as far as practicable and aim to avoid / minimize or mitigate the adverse impacts of the project activity. Small animals & larger ones like deer and elephants make use of the area regularly, as the area is undisturbed. Large animals will be disturbed from the area once the Plant commences with full expansion. The displaced animals should not be left as refugee. Their rehabilitation would be the major objective of the plan. To fulfill all these requirements, the plan focused on improving forage and browse volume by increasing food plant diversity with vertical and horizontal cover. These will arrest habitat destruction and fragmentations and also prevent soil erosion and loss of biodiversity. Keeping natural water resource free from negative impact of the project activity will also be targeted.

Objective of management to mitigate the threats to the wildlife is covering the following aspects:

1. Conservation, Protection and Improvement of the flora and fauna in and around the Project area in a sustainable basis despite production of Steel and other ancillary activities. To conserve a viable population of Wildlife in general and the Pachyderm in particular in their natural habitat.
2. To conserve the natural biodiversity, aesthetic and geo-morphological value of the area through appropriate management of site, habitat and landscape.
3. To reduce the dependency of local people on the forest resources of the ZoI through culturally, socially, economically acceptable and ecologically sustainable and viable alternatives by undertaking eco-development programmes.

4. To reduce man-animal conflict by ensuring contiguity of habitat in the buffer zone by improving forest cover in long term basis.

## 8. STRATEGIES TO MITIGATE AND MINIMIZE ADVERSE IMPACTS:

### I). Strategies for Core Zone:

**I.1) Provision of Rescue Vehicle/RRT vehicle (inbuilt with gps tracker) for implementation in protection/monitoring activities through ground staff in Bonai Division:**

Most of the times the ground staff and para squad members are facing trouble with immediate reach to the sensitive points, where any rescue of the wildlife or any human being required due to several situations. To minimize the time lapses, it is proposed to implement a Rescue Vehicle with adequate facility of following amenities/facilities so that any medical requirement could be availed within a short lapse of time. The Rescue Vehicle proposed may be of TATA XENON YODHA (4WD) /FORCE MOTOR/ MAHINDRA along with following facilities should be provided and the entire setup should be at stationed at Divisional Level and whenever required it should move to the desired place with the team. The proposal should also include bearing the cost of POL & maintenance for 05 years and 10 nos. of anti-depredation squad unit at highly skilled labour rate as per approved rate for the particular year basis and contingencies like uniforms, monitoring kits, life insurance to the squad personnel etc.

The vehicle will be fitted with toeing type arrangements fitting with mega phone, GPS device and tracker, emergency light, emergency sticker, Unique pattern color code with bold letter RAPID RESPONSE SYSTEM or with a special name (RAKSHAK) Odia& English with Forest Department logo and toll free number fitted with LED screen of size 6' x 4'. The photo of the vehicle with color is enclosed herewith for reference. In addition, the following equipment will be fitted in the above mentioned vehicle.

**a) Multipurpose**

- Vehicle is fitted with metal hard top with back seat which allows carrying of manpower to conflict area or place of forest fire.
- With its detachable hard top allows it to carry trap cages for leopards / tigers and other small animals trapping nets and firefighting equipment etc.
- It can carry water tank to forest fire areas to douse the file.

**b) Customized Detachable steel cage**

**c) Foldable seats behind along with space to keep small cage**

**d) Search light**

- Vehicle is fitted with 6 high power light to enable to animal rescue, elephant driving, carrying, postmortem during night time.

**e) Winch**

- Vehicle is fitted with 6 tones capacity winch which will pull animal trapped in well, trench or in other difficult situation.
- Vehicle can pool itself out if it get stuck.

**f) Public Address System**

- It will be helpful in crowd management during animal rescue operation.

**g) Vehicle GPS tracker**

- It will allow management to track the vehicle and ensure vehicle is reaching the conflicting spot in time.

**h) Camouflage paint**

- Vehicle is painted in mix up green, brown and beige colour to mask their location identify and movement to avoid predator attack inside forest.

**i) Headlamps 5 nos. coleman CXO +150**

**j) Generator 1- Honda EP1000 iD 750VA**

**k) Power saw 1 – Stihl- Mode No.MS170**

**l) Jerry Can 2 nos. – 40 ltrs.**

**m) VHF Set 5 nos.- Omega A-36**

**I.2) Provision of High Mast Solar Light:**

It was evident that in the fringe villages, the main problem is man-animal conflict, particularly with the mega herbivore i.e., elephant. Elephants make their frequent depredation to the nearby villages located in the project area, especially from dusk to dawn. One of the causes of conflict occur in the wee hours when the whole area become darker, due to absence of a regular stretch of lighted areas around the villages, because of lack of electric supply. It results in direct confrontation between the people and the elephant, which usually hide itself in dark and bushy areas. Hence, taking into account the whole scenario of conflict, there is a provision to install high mast solar street lights, most preferably at strategic locations around the elephant affected village areas in Bonai Forest Division. As these lights can work even without electricity, it will help the villagers to get rid of elephant attack. The solar lights will be provided at the required strategic locations in and around of fringe villages of the project area considering the elephant movement.

**I.3) Provision of high-powered torches at Division Office, Bonai Forest Division**

In the wee hours the elephants mostly come out of the habitat and depredate the paddy area as well as storage place in villages. To trace out their presence in each village, it is proposed have sufficient number of high-powered torches, so that it will be delivered to the villagers as well as forest staffs in order to get proper coordination amongst themselves during tracing the elephant movement.

**I.4) Protection of forest and biodiversity from shifting cultivation:**

There is a urgent need to select village level volunteers through EDC/VFMC towards providing grass root level support in the field of forest protection and conservation from the shifting cultivation. They should be provided with proper training and motivation for which a massive awareness could be distributed towards the same through Engagement

of one team leader@Rs.60000/month and one expert@Rs.40000/month for resource exposure as well as community mobilisation through alternative livelihood opportunities. Necessary consultation fee and contingencies are also proposed to be borne by the user agency in the necessary time.

**I.5) Infrastructure support in Range Office, Barsuan Range, Bonai Forest Division:**

The User Agency will procure one computer with Printer (All in one) and deliver to Range Office, Barsuan Range of Bonai Forest Division along with its proper internet facility and necessary other facilities for office use.

**I.6) Provision of MTS at Division Office, Bonai Forest Division**

It is proposed to have MTS at Division Office, Bonai Forest Division (as per Government approved high skilled labour rate for the concerned financial year) in order to provide sufficient support to day-to-day monitoring status of elephant, fire, Mo sarkar cell, awareness campaigning, Divisional level compilation of data and other necessary activities.

**I.7) Provision of tall tree plantation (5,000 Nos.) as per demand/requirement in the field condition:**

The forest patches in Khajurdihi RF, Sarkunda RF, Bhabanipahar RF, Kathmal RF, Toda RF, Kathmal PRF, Bhabanipahar PRF, Nagaria PRF, Sarkunda PRF, Khandadhar PRF, Amrudi RF etc. areas are mostly prone to elephant movement and their regular habitat is concentrated at around these forest patches. In order to maximize the extent of wild habitat it is proposed to have tall tree plantation (5,000 nos.) as per the demand/requirement in the field.

**I.8) Legal support through engagement of legal experts and capacity building of frontline staff**

It is proposed to have one legal expert at Division level for necessary legal support and capacity building of frontline staff in the context of legal procedure, legal matters, liasioning with legal authorities etc.

**I.9) Installation and Commissioning of AI Based System for monitoring & protection of wildlife and subsequent reduction of Human-Elephant Conflict**

Design, Implement and Support 24x7 E-Surveillance System (Electronic-eye, e-Eye) for forest areas of the desired ranges, including areas for elephants straying in the vicinity of Range, besides monitoring any kind of unwanted intrusion and to keep check on wildlife crime.

The key objective of the system will be to provide accessibility to the remote areas using unmanned surveillance system. The system should be based on long-range thermal sensors to support seamless 24X7 surveillance and wireless technology to ensure minimal setup and interference in the Forest area i.e. no cables should be laid within the Forest boundaries.

The System should do the following:

i. System needs to be designed for protection of wildlife especially elephants.

ii. It has been observed that elephant herd moving across the forest boundaries are susceptible to the conflict situation. The system should enable reduction of such Human-elephant conflicts by generating appropriate alerts and warnings.

iii. All setups should be installed within forest boundaries and should be self-sufficient.

iv. Model needs to be designed so that the communication and information flow is multilevel, precise and faster.

v. The system should be capable of detection of forest fires.

vi. Self-intelligent AI/ML based system for tracking surveillance and alerting i.e. should keep on surfing and should zoom in case of tracking of animal/human/any other moving object/object with body heat.

vii. Identify the human and animal trafficking remotely and generate appropriate moderated alerts with geographical information. Alert should show both geo-co-ordinates and name of locations.

viii. System should support live surveillance and live combing.

ix. System should provide proper alert cycle and system monitoring to identify the system failures.

x. The system should be able to detect Human/cattle/vehicle detection and tracking within the restricted areas.

xi. Accidents and other such activities need to be detected, tracked and alerted through control and SMS/EMAIL on selected mobile numbers and on computer for persons having appropriate access permissions, besides control room.

xii. An Artificial Intelligence and Machine Learning based 24X7 support for the complete system. Please note that the system should not only do live monitoring but should have software capabilities like species identification (Elephant/Cattle/Human) and other forest management features, pertaining specifically to forest.

xiii. Poaching, trafficking, trend analysis and reporting should be integral part of the system.

xiv. Establish and operationalize Control Room at desired location(s).

xv. Proper Integration mechanism in the software should be provided to consume data from various sources like Drones, Direct and Indirect sightings, and any other viable source as identified by the Department and agreed by the Bidder.

xvi. The system should be capable of integrating images for elephant profiling and tagging. The ML Model needs to be designed in consideration with the above.

**Priority Segments**

| S.No | Division | Range | Priority Area Name | Total Area Desired for Monitoring |
|---|---|---|---|---|
| 1 | Bonai | Barsuan | Dengula Forest Quarter | 50-70 sqkms |
| 2 | Bonai | Barsuan | Barsuan Range Office | 50-70 sqkms |
| 3 | Bonai | Barsuan | Kula FG Quarter | 50-70 sqkms |
| 4 | Bonai | Barsuan | Tinko FG | 50-70 sqkms |

**Control Rooms**

| S. No | Division | Range | Control Room Location | GPS |
|---|---|---|---|---|
| 1 | Bonai | Barsuan | Tensa Watch Tower | 21°52'1.52"N 85° 9'50.56"E |

**Tentative Technical Specification for Important Items**

**Section I: Surveillance Section**

(I) Tower Systems: A Detailed design for the camera support structure is to be submitted along with the proposal. The design must necessarily encompass the following elements

a) Camera support structure of suitable height in multiple sections

b) Self-Standing support structure with capability to withstand 150 km winds

c) Animal Proofing the tower system to prevent animal caused damage

d) Mounting Arm for Camera systems on top of the tower

e) Provision for ducting network cables

f) Provision for mounting Access Point

g) Provision for ducting power cable

**Section II: Sensor Infra Structure**

Minimum Technical specifications for the following types of sensors are attached.

1. Pole mounted Day/Night Camera Systems

| THERMAL MODULESPECIFICATION | | | |
|---|---|---|---|
| ARRAYTYPE | 3-5r Microbolometer | SPECTRALBAND | 8- 14μm |
| ARRAYSIZE | 640x480 | PIXELPITCH | 17μm |
| FRAMERATE | ≥30frames/second | NETD | <50Mk(@25$^0$C,f/1) |
| ELECTRONICZOOM | 8 to 14μm | CALIBRATION | Temperature Based ONE POINT |
| CONTRAST/ BRIGHTNESS | Auto/Manual | NOISEREDUCTION MODE | ON/OFF |
| COLORPALETTES | 12 Numbers | QUALIFICATIONS | MIL-810F |

| | | | |
|---|---|---|---|
| Range(small elephant) | Min 700m recognition | PAN-WIDE-HPOV | Min720 |
| | | | |
| DAYMODULE | | | |
| SENSOR | 1/2.8-type Progressive Scan CMOS | SHUTTERSPEED | 1/25to1/150000sec |

| | | | |
|---|---|---|---|
| SENSOR FORMAT | Effective Pixel 1920X1080 (2.13 MP) | DAY/NIGHT | IR Cut Filter for day/night |
| NOISE REDUCTION | 3D DNR | CE FOG PENETRATION | On/Off |
| WIDE DYNAMIC RANGE | 130 Db | BACK LIGHT COMPENSATION | On/Off |
| LENS | 4.3mm to 129mm | AUTO-WHITE BALANCE | On/Off |
| OPTICAL ZOOM | 30x | FRAME-RATE | ≥ 50 fps |
| DIGITAL ZOOM | 12x | VIDEO COMPRESSION | Mainstream H.264/MJPEG |
| FIELD OF REGARD | Min 720 | Range (small elephant) | ≈ 2.5 km |
| TARGET TRACKINGFUNCTION | | | |
| MULTIPLE OBJECTDETECTION | AI Based Object Detection and Classification Up to 4 Objects | MOVING OBJECT DETECTION | Yes |
| | | | |
| GENERAL | | | |
| NETWORK CONNECTIVITY | Ethernet | COMMUNICATION | Ethernet |
| OPERATINGTEMP | 0 to+55$^0$C | STORAGE | -20$^0$to+70$^0$C |
| ENCRYPTION | SSL, AES, TLS | VIDEOSTREAMING | Dual Stream,H-264 |
| COMPLIANCE | ONVIF–Profile S | ELECTRICALPOWER | +12 VDC (Max 40W) |
| DUST/WATER PROTECTION | IP-66 | OVERALLWEIGHT | <12KG |
| | | | |

## Section IIX: Command Control

The Command and Control system is to be housed in the Command Designated Command and Control Room. All necessary and infrastructure required to house the C2 system are also a part of this contract. The bidders are to ensure that the C2 system must at the minimum include the following elements and capabilities.

### a. C2 Server and Applications

**Hardware**

A server class machine for performing functions mentioned hereunder would need to be provisioned. The Hardware specifications of the server is to cater for the software complexity of the offered solution with computational room to house additional applications in time to come. The system must also cater for a Storage device for a min of 90 days back up of event logs and designated clips.

**Software Applications**

The Application set that needs to be offered as a part of the solution is to include

I. GIS Based display system

II. Maps and Markings depicting the site layout

III. Vector layers for depiction various site facilities

Iv. Video Management System

v. Analytics applications

vi. Data Storage System

vii. Record and Replay system

### b. AI Application Suite

The Command and Control application is to be equipped with an Artificial Intelligence based Application software. The software must process detections from all cameras installed for the project in the reserve forest. Tha Artificial Intelligence based application suite is to perform the following applications

I. Target Detection (Elephants)

II. Target Tracking

III. Target Recognition

Iv. Alert Generation

**AI Model and Features**

i. CNN and Regression fused models for sparse and dense object detection.

ii. Detect and Recognize Images by highlighting bounding boxes and labels.

iii. Movement Detection for unrecognized objects.

iv. Multi Object detection on a Single frame.

v. Detect overlapped objects (Trees / Canopy) and non-overlapped objects (Elephant)

vi. Objects are visually tracked on the screen with motion filters and predictors.

vii. Visual Georeference based alerting system.

viii. Heat Signature motion detection and tracking.

ix. Recognition of objects in Thermal Vision during Night time.

| S. No | Parameter | | Value |
|---|---|---|---|
| 1 | RackMount Server | | |
| 2 | Processor | Type | Intel Xeon-Silver 4314 |
| | | Clockspeed(GHz) | At least 2.3GHz |
| | | Quantity | Two or more |
| 3 | Graphic Processor | Type | NVIDIA Tesla T4 |
| | | Memory | 16 GB GDDR6 with 320+ GB/s |
| | | Quantity | Two or more |
| 4 | Cores | Perprocessor | At least 16 for each CPU |
| | | Per GPU | Support at least 2,560 cuda cores |
| | | Per GPU | Support at least 320 Tensor cores |
| 5 | Memory | Slots | Minimum 32GB (1x32GB)RDIMM and 31 DIMM blanks |
| | | RAM | Should provide 256 GB of RAM 8x32GB(1x32GB) Dual Rankx4 DDR4-3200 |
| | | Protection | Industry standard memory protection. |
| 6 | Drive | Disk Drive | Up to 4 LFF SAS/SATA HDDs or SSDs Upto 10 SFF SAS/SATA HDDs or SATA/SAS/NVMe U.2 or U.3 SDDs |
| | | Capacity and I/O | Min 750 GB SSD drivers with Random Read IOPS (4KiB,Q=16)= 575,000 |
| | | | Max Random Read IOPS (4KiB)= 575,000 @Q16 Random Write IOPS (4KiB,Q=16)= 580,000 Max Random Write IOPS (4KiB)=580,000 @Q16 |
| 7 | OperatingSystem(OS) | | Should support at least the following industry standard server edition |
| | | | Ubuntu 20.04, Windows server |

**c. C2 Display System**

The C2 Display system must be an LED TV of size 55" or above. Display Unit Min 55" LED with Back-lit display to with minimum resolution of 1920 X 1080 and a wide viewing angle of minimum 178 deg.

**d. Record and Replay System**

The system must be equipped with a Record Replay system. The R and R system must be capable of receiving and recording Video streams and pictures and snapshots from the Operator work station.

**e. Alert Management System**

An artificial intelligence-based alert management system that autonomously generates and manages alerts is required to be provided as a part of the Command and Control system. A flasher beacon (on each track) implementation is also to be considered as a part of the solution.

**f. Live Management System**

The system shall be supplied with alarm and video management and video storage software.

I. The software shall be license free or cost included in the offer.

II. The upgrades for the software and firmware should be free till the product support life cycle.

III. No extra cost shall be demanded for annual renewal

NAS Storage Server with 90 Days Storage Backups (Minimum Requirement)

| **System** | |
|---|---|
| Main Processor | 64-bithigh-performance Intel processor |
| Controller | Single controller |
| Memory | 4GB by default |
| Operating System | Embedded LINUX |
| User Interface | Web |
| **Workingmode** | |
| Video Stream Mode | 320-channel (640Mbps) incoming and recording, 160-channel (320Mbps) forwarding, 32-channel (64Mbps) playback<br>Storage band width ≤2.7 Gbps |
| IP SAN Mode | Write-through:320Mbps;<br>Write-back:480Mbps |
| **Storage** | |
| HDD Amount | 48 HDDs, Up to 10TB capacity for each HDD<br>SATA HDD composite connection |
| Mini SAS | 1 mini SAS port, for storage extension |
| HDD Installation | Additional HDD bracket,<br>HDD hot-swap, HDD online replacement |

| | |
|---|---|
| HDD Mode | Single, RAID 0/1/5/6/10/50/60 (Enterprise-level HDDs are recommended), JBOD, hot spare |

It is proposed to have some flexibility for the selection of the site of implementation and approximate cost of the project with its annual maintenance is around Rs. 3.00crore which may be changed as per the prevailing rate during the implementation of project component.

**III Strategies to mitigate and minimize the adverse impact so observed in the Zone of Influence (ZoI):**

**FOR BONAI DIVISION**

**Protection & Enforcement Activities**

**II.1) Establishment of Camp shed cum Forest-Railway Control Room to support protection activities and elephant monitoring activities nearby railway track and surrounding areas(including water supply, solar light system, boundary fexility etc.)**

In suitable location of Barsuan Range parallel to Bimalagarh-Barsuan Railway Corridor under Barsuan Range, one Camp shed cum Forest-Railway control room need to be constructed. Also, this camp shed will provide accommodation to the anti-depredation squad or fire squad in need of the hour. This will also help in monitoring the protection activities by proper coordination amongst staffs of Forest and Railway Personnel as well as providing safe passage to elephant movement with a regular monitoring and control of passage of railways on the track.

**II.2) Anti-depredation/ Protection Squad:**

They will be engaged throughout the year to minimize depredation activities from wild animals especially from elephants. The trackers will be selected from local villages throughout the area well conversant with animal behaviors, particularly, elephants. The job of the trackers will be primarily to gather data on number of elephants, their location, their line of movement and the quantum and nature of depredation being done. Such data can be collected by pursuing elephants in morning hours along their spoors, when animals are on retreat to secluded spots (deep valleys, close to water or dense woods). Information obtained can be soon relayed to the Range officer, area Forester and concerned villagers. Regular tracking will help to map movement routes, identify intensity of depredation from which the nature of movement, whether benign or deliberate can be inferred. If the depredation is repetitive, a drive will be organized. This squad may also be engaged in the protection activities in order to assist the ground staffs. The overall aspect of protection from poaching, illegal conversion of woods, encroachments, wildlife trafficking etc. could be monitored on a regular basis. The safety

of people and animals are prime concern of this squad. They will be provided with hired vehicle, fuel, mobile recharge facilities, medical expenses, uniform etc.

**II.3) Improvement of Communication Network:**

The most difficult part of the surrounding zone of this project area is to establish a proper communication network amongst the staffs and other local inhabitants in most of times. To address any issues related to wildlife and forest matters we have to depend on our communication network on a prior basis for which the system of communication has to be improved. In this context, 05 VHF Main Station is to be established at strategic location of Range Headquarters so that the overall monitoring could be controlled in a continuous manner.

**II.4) Procurement of camping/anti depredation equipment's (Tents, sleeping bag, water bottle, all terrain shoes, haversack, torch etc.):**

Squad members will be provided with tents, sleeping bag, haversack, water bottle, notebook, pencil, Khukri, measuring tape etc. to support their day-to-day activities during patrolling time. Provision of such type of incentives will definitely encourage the squad teams towards delivering their overall duty with a proper dedication.

**Wildlife Habitat Management**

**II.5) Habitat enrichment with other ancillary activities:**

Most of the forest patches are now devoid of continuous vegetation patches, for which preferred food species by Elephants is in a scarce condition inside the forest areas. Similarly due to absence of sufficient food sources, movement of elephant is diverted towards fringe village areas which in turns lead to Human-Elephant Conflicts. Therefore, it is proposed to improve their natural habitats by providing better wildlife habitats and subsequently improving the palatability of other wildlife also. Area near to habitation is required to be avoided. Palatability of species by animals especially liked by elephant is to be given due importance. Most importantly priority should be given towards recent trend of movement in Sarkunda RF (21°49'55.17"N 85°09'40.96"E) and in case of special provision it may be changed to Nagarla PRF orSarkunda PRF or Amrudhi RF etc. areas upon suitability of condition at the time of implementation.

**Components**

(i) Invasive weed Species like *Lantana, Eupatorium*etc. need to eradicate at the proposed identified patch towards further supplement of food, space and cover to the existing wildlife.

(ii) Meadow/grassland to be developed at the cleared patch of weeds in order to restrict the competition amongst the natural source of forest flora and subsequent addition towards space/cover to the wildlife.

**Cost Norm for development of meadow @ 02 ha.**

**(@labour cost Rs.352/-per mandays)**

| Sl No. | Item of works | Man days | Amount (inRs.) | Materials cost (in Rs.) | Total Cost (inRs.) |
|---|---|---|---|---|---|
| | 1st Year Operation | | | | |
| 1 | Survey and Demarcation | 6 | 2112 | 0 | 2112 |
| 2 | Site clearance & weed eradication | - | - | 100000 | 100000 |
| 3 | Ploughing & Cross Ploughing by tractor/ Power Tiller with application of weedicide @ 50 kg per ha. | - | - | 60000 | 60000 |
| 4 | Cost of CDM for 200 cum @ Rs 1200/- including cost of transportation | - | - | 240000 | 240000 |
| 5 | Cost of spreading of SDM @ 0.5 MD per cum | 100 | 35200 | 0 | 35200 |
| 6 | Solar fencing-6 Strands with 45x45x5mm iron angle including energizer, battery in complete over 593 mtr. | - | - | 420000 | 420000 |
| 7 | cost of NB hybrid Napier Grass slip | - | - | 80000 | 80000 |
| 8 | Planting of Grass Slip | 600 | 211200 | 0 | 211200 |
| 9 | Provision of deep well with 8"dia -1 No. | - | - | 180000 | 180000 |
| 10 | Laying of HDPE pipeline with hydrant for sprinkler irrigation with all fittings | - | - | 200000 | 200000 |
| 11 | DG Set with 2HP motor for watering | - | - | 360000 | 360000 |
| 12 | POL and other lubricants for March | - | - | 18000 | 18000 |
| | Total:- | 706 | 248512 | 1658000 | 1906512 |
| | | | | 1% Labour Cess | 19065.12 |
| | G-Total:- | | | | 1925577.12 |
| | 2nd Year Operation | | | | |
| 1 | Maintenance of Fencing | - | - | 75000 | 75000 |
| 2 | Watch and ward including watering & Line Bonding | 1248 | 439296 | | 439296 |
| 3 | POL and Other Lubricants for 9 months except rainy season & 18000/- per month | | - | 162000 | 162000 |
| 4 | Casualty replacement of Grass Slip | | - | 50000 | 50000 |
| 5 | 1st Weeding @60 MD per ha | 120 | 42240 | | 42240 |
| 6 | 2nd weeding @50 MD per he | 100 | 35200 | | 35200 |
| | TOTAL:- | 1468 | 515736 | 287000 | 803736 |
| | | | | 1% Labour Cess | 8037.36 |
| | G-Total:- | | | | 811773.36 |

| 3rd Year Maintenance | | | | | |
|---|---|---|---|---|---|
| 1 | Maintenance of Fencing | - | - | 75000 | 75000 |
| 2 | Watch and ward including watering & Line Bonding | 1248 | 439296 | | 439296 |
| 3 | POL and Other Lubricants for 9 months except rainy season & 18000/- per month | | - | 162000 | 162000 |
| 4 | Casualty replacement of Grass Slip | | - | 50000 | 50000 |
| 5 | 1st Weeding @50 MD per ha | 100 | 35200 | | 35200 |
| 6 | 2nd weeding @40 MD per ha | 80 | 28160 | | 28160 |
| | **TOTAL:-** | **1428** | **502656** | **287000** | **789656** |
| | | | **1% Labour Cess** | | **7896.56** |
| | **G-Total:-** | | | | **797552.56** |

| 4th Year Maintenance | | | | | |
|---|---|---|---|---|---|
| 1 | Maintenance of Fencing | - | - | 75000 | 75000 |
| 2 | Watch and ward including watering & Line Bonding | 1248 | 439296 | | 439296 |
| 3 | POL and Other Lubricants for 9 months except rainy season & 18000/- per month | | - | 162000 | 162000 |
| 4 | Casualty replacement of Grass Slip | | - | 50000 | 50000 |
| | **TOTAL:-** | **1248** | **439296** | **287000** | **726296** |
| | | | **1% Labour Cess** | | **7262.96** |
| | **G-Total:-** | | | | **733558.96** |

**ABSTRACT**

| Sl No. | Item of works | Labour Cost (In Rs.) | Labour Cess 1% | Materials cost((in Rs.) | Total Cost (In Rs.) |
|---|---|---|---|---|---|
| 1 | 1st Year Planting | 248512 | 19065.12 | 1658000 | 1925577.12 |
| 2 | 2nd Year Maintenance | 516736 | 8037.36 | 287000 | 811773.36 |
| 3 | 3rd Year Maintenance | 502656 | 7896.56 | 287000 | 797552.56 |
| 4 | 4th Year Maintenance | 439296 | 7262.96 | 287000 | 733558.96 |
| | **TOTAL:-** | **1707200** | **42262** | **2519000** | **4268462** |

(iii) Most of the forest patches are now devoid of continuous bamboo patches, for which preferred food species by Elephants is in a scarce condition inside the forest areas. Similarly due to absence of sufficient food sources, movement of elephant is diverted towards fringe village areas which in turns lead to Human-Elephant Conflicts. Therefore it is proposed to improve their natural habitats by providing sufficient Bamboo Patches/Fruit Bearing Species/Fodder Plantation and subsequently improving the palatability of other wildlife also. Initiative should be taken through thronging of Seed balls of bamboo and othar fodder species inside the forest areas. Area near to habitation is required to be avoided. The seeds are to be collected and broadcasted in appropriate ratio. Palatability of species by animals especially liked by elephant is to be given due importance. Most importantly priority should be given towards recent trend of movement

in Sankunda PRF, Nagarla PRF or Amrudhi RF etc. areas upon suitability of condition at the time of implementation.

(iii) It is proposed to have a new water body for the proposed patch in addition to existing components towards providing a better source of water regime to wildlife.

(iv) With such components, it is also proposed to establish a protection camp (including water supply, solar light system, bedding facilities, communication facilities, boundary facility etc.) for regular monitoring, documentation and assessment of wildlife movement as well as its presence.

## Wildlife Monitoring

**II.6) Procurement and installment of early warning system (Aniders etc.) along with its maintenance in the sensitive locations to monitor and aware about the exact movement of elephants:**

It is proposed to have 10 nos. of early warning system (Aniders etc.) for monitoring as well as avoiding the probable negative impact of human-wildlife conflict situation in sensitive fringe villages. It will be also helpful in providing early warning towards early alert for the fringe villagers to avoid the probable damage at their end.

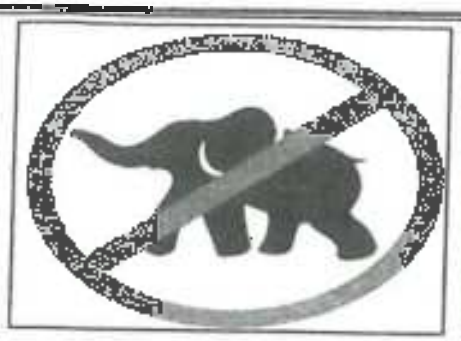
## Human Elephant Conflict Mitigation

**II.7) Deployment of GajaSaathi- A participatory approach:**

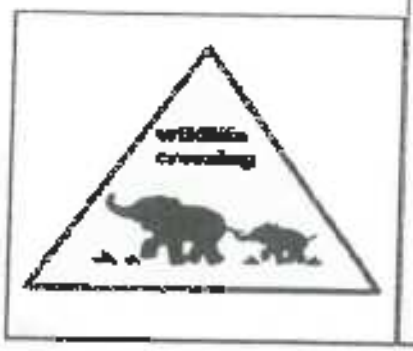
Bonal Forest Division is very much important in respect of Human- Elephant conflict due to frequent movement of elephant. It is proposed to deploy Gajasathi in 05 units (One VSS unit or village unit consisting of 05 members) @ Rs. 80000/unit to keep a watch on elephant movement and take appropriate steps to resolve Human- Wildlife Conflict

**II.8) Signage on both side of track/road:**

To promote coexistence with wildlife and to aware people, good quality sign boards with display of wildlife features should be placed along the Project premises, road etc. Fluorescent Sign Boards with good write ups about movement of wild animals will be provided on In order to make aware the passers-by about occurrence of accident if they confront with wildlife.









**II.9) Capacity Building training for Field Staff on Human Elephant Conflict management at Division Office:**

The filed staffs are the real grass root level workers who are always facing the challenges and different level of circumstances during Human Elephant Conflict. They are always in a touch with the local affected villagers and simultaneously leading the team towards solving the issues. In order to provide a high level of motivation and confidence, it is proposed to provide sufficient amount of capacity building training to the suitable candidates form the conflict areas. Sharing the experiences along with different level of discussions will also provide a better solution towards mitigating these issues and subsequently these staffs will also be motivated towards delivering their duty.

**II.10) Health Monitoring of Wildlife/Immunization of cattle**

There are many villages / habitations either inside the forests or very close to forests. Their cattle are used to graze in the forests and probable carrier of contagious diseases (viral, fungal). Their immunization will go a long way in preventing spread of disease to wild animals mostly herbivorous. It is proposed to conduct house to house cattle/ goat immunization program for these villages in consultation with Animal Husbandry Department every year for 05 years. The continuous immunization program will also regulate the health status of wildlife and their ecosystem which subsequently provide their better span of life.

**Public Awareness and Livelihood Generation Activity through community mobilization**

**II.11) Training and awareness to EDC/VFMC, In Schools, Village level Volunteers for Wild Life Conservation & Protection**

There is a urgent need to select village level volunteers through EDC/VFMC towards providing grass root level support in the field of wildlife conservation and protection. There should be efforts to find out the local indigenous people who will be the true solution finder during managing conflict situations with wildlife and other protection activities inside forest. They should be provided with proper training and motivation for which a massive awareness could be distributed towards wildlife conservation and protection. In this initiative schools/colleges should be taken as a base unit to provide all kind of training activities so that we could reach each individual very easily and subsequently a better understanding could be generated between the village level people and other field staffs.

# CHAPTER-4(A)
## ANIMAL PASSAGE PLAN

This is *not a linear Project*. Therefore, natural protection from experience of the wild lifers who are dealing with their natural phenomenon is being practiced as mentioned in *Mitigative Measures* of Chapter-IV.

# CHAPTER-5

## FINANCIAL IMPLICATIONS AND MONITORING

**A.** Total financial implication of Management Intervention and cash flow statement for 10 years (year wise) is given here. Also monitoring, evaluation and interim review provision shall be mentioned.

**Table 5.1: Financial provision of works borne by Use Agency/Project Proponent**

| Sl. No. | Management Interventions | Area in ha./Unit in no./RKM | Total Amount (Rs. in Lac.) |
|---|---|---|---|
| 1 | Provision of Rescue Vehicle / RRT vehicle (inbuilt with gps tracker) for implementation in protection / monitoring activities through ground staff in Bonai Division along with anti depredation equipment and (i) remuneration of driver (as per Government approved high skilled labour rate for the concerned financial year) and provision of POL, maintenance etc. (ii) Provision of 10 nos. of highly skilled squad personnel (iii) Provision of contingencies like uniforms, monitoring kits, life / health insurance to the squad personnel etc. (iv) Purchase of equipment to support HEC mitigation | 01 No. | To be Borne by User Agency |
| 2 | Provision of installation and maintenance of high mast solar light system at various locations of elephant movement areas. | 10 Nos. | |
| 3 | Provision of high powered torches at Division Office, Bonai Forest Division for regular tracing of movement of elephants in different Range and subsequent distribution at community level | 50 Nos. | |
| 4 | Protection of forest and biodiversity from shifting cultivation and forest fire through, (i) Engagement of one team leader@Rs.60000/month and one expert @ Rs.40000/ month for resource exposure as well as community mobilization through alternative livelihood opportunities (ii) Contingencies and consultation fee regarding engagement of the team (fuel, materials, computers etc.) | LS | |
| 5 | Infrastructure Support- One computer with printer (All in One) in Range Office, Barsuan Range along with proper internet connectivity facility and other supporting facilities | LS | |
| 6 | Provision of MTS at Division Office, Bonai Forest Division by remuneration (as per Government approved high skilled labour rate for the concerned financial year) for five years to monitor and maintain database regarding elephant movement pattern, distribution pattern, fire monitoring, wildlife depredation activities etc. | 02 Nos. | |
| 7 | Provision of tall tree plantation (5,000 Nos. preferably fruit bearing species) as per demand/requirement in the field condition along roadside, fringe village areas etc. | LS | |

| | | | |
|---|---|---|---|
| 8 | Legal support through engagement of legal experts and capacity building of frontline staff | LS | |
| 9. | Installation and Commissioning of AI Based System for monitoring & protection of wildlife and subsequent reduction of Human-Elephant Conflict along with provision of annual maintenance | LS | |

## Table 5.2: Financial provision of works in Zone of Influence

## Implemented by Bonal Forest Division

| Sl. No. | Management Interventions | Area in ha./Unit in no./RKM | Unit cost (Rs. in Lac.) | Total Amount (Rs. in Lac.) |
|---|---|---|---|---|
| 1 | **Protection & Enforcement Activities** | | | |
| | (a) Establishment of Camp shed cum Forest-Railway Control Room to support protection activities and elephant monitoring activities nearby railway track and surrounding areas(including water supply, solar light system, boundary facility etc.) | 1 No. | 40.00 | 40.00 |
| | (b)(1) Engagement of 10 Squad members for assisting staff in protection, wildlife monitoring and anti-depredation activities (@Rs.352.00 per Mandays)- x 10 members x 12 months x 05 years | 10 Nos. | 63.00 | 64.00 |
| | (b)(2) Hired Vehicle Rs. 31,000/- x 12 months x 05 years = Rs. 18.60 Lakhs | 01 No | 18.60 | 18.60 |
| | (b)(3) POL for vehicle Rs. 15000/- x 12 months x 05 years = Rs. 09.00 Lakhs | LS | 9.00 | 9.00 |
| | (c) Provision of VHF Main station and maintenance up to 05 years | 5 Nos. | 12.00 | 60.00 |
| | (d) Procurement of camping/anti depredation equipments (Tents, sleeping bag, water bottle, all terrain shoes, carry bag, GPS device, torch etc.) | 20 Nos. | 0.30 | 6.00 |
| 2 | **Wildlife Habitat Management** | | | |
| | (a) Habitat enrichment along with other ancillary activities in Sarkunda RF of Barsuan Range | | | |
| | (i) Eradication of invasive weeds @ 10,560/per ha. | 10 ha. | 0.11 | 1.10 |
| | (ii) Development of meadow/grassland | 04 ha. | 85.37 | 85.37 |
| | (iii) Habitat enrichment with plantation of Fruit bearing species/Fodder Plantation | 05 ha. | 11.25 | 11.25 |
| | (iv) Establishment of protection camp (including water supply, solar light system, bedding facilities, communication facilities, boundary facility etc.) | 1 No. | 20.00 | 20.00 |
| | (v) Provision for creation of water body | 1 No. | 10.00 | 10.00 |

| | | | | |
|---|---|---|---|---|
| 3 | **Wildlife Monitoring** | | | |
| | (a) Procurement and installment of early warning system (Anders etc.) along with its maintenance in the sensitive locations to monitor and aware about the exact movement of elephants | 10 Nos. | 1.00 | 10.00 |
| 4 | **Human Elephant Conflict Mitigation** | | | |
| | (a) Deployment of GajaSaathi - A participatory approach (05 units of 05 members each@Rs.80000/unit/year) | 05 Nos. | 0.80 | 20.00 |
| | (b) Signage on both side of track/road/railway | | | |
| | (b)(1) Signage with speed limit | 40 Nos. | 0.30 | 12.00 |
| | (b)(2) Signage with awareness and warning for wildlife | 40 Nos. | 0.30 | 12.00 |
| | (c) Capacity Building training for Field Staff on Elephant Human Conflict management at Division Office | 05 Nos. | 2.00 | 10.00 |
| | (d) Immunization camp of domestic cattle : Provision of two immunization camps per year for the domestic cattle in the surrounding areas including the cost of medicine, organizing charges etc. | 10 Nos. | 0.40 | 4.00 |
| 5 | **Public Awareness and Livelihood Generation Activity through community mobilization** | | | |
| | (a) Training and awareness to EDC/VFMC, In Schools, Village level Volunteers (IEC materials) for Wild Life Conservation & Protection | LS | 20.00 | 20.00 |
| | **Total** | | | 413.32 |
| | **20% Escalation** | | | 82.66 |
| | **Grand Total** | | | 495.98 |

Principal Chief Conservator of Forests
(Wildlife) & Chief Wildlife Warden
Odisha, Bhubaneswar

## Annual Work Programme:

**Details of the flow of funds for different years of the plan for ZoI are given below (Rs. In Lac)**

| Sl. No. | Management Interventions | Area in ha./Unit in no./RKM | Total Amount (Rs. in Lac.) | Year wise Financial Target (Rs. In Lac.) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| 1 | **Protection & Enforcement Activities** | | | | | | | |
| | (a) Establishment of Campshed cum Forest-Railway Control Room to support protection activities and elephant monitoring activities nearby railway track and surrounding areas(including water supply, solar light system, boundary facility etc.) | 1 No. | 40.00 | 40.00 | - | - | - | - |
| | (b)(1) Engagement of 10 Squad members for assisting staff in protection, wildlife monitoring and anti-depredation activities (@Rs.352.00 per Manday)- x 10 members x 12 months x 05 years | 10 Nos. | 64.00 | 12.80 | 12.80 | 12.80 | 12.80 | 12.80 |
| | (b)(2) Hired Vehicle Rs. 31,000/- x 12 months x 05 years = Rs. 18.60 Lakhs | 01 No | 18.60 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 |
| | (b)(3) POL for vehicle Rs. 15000/- x 12 months x 05 years = Rs. 09.00 Lakhs | LS | 9.00 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 |
| | (c) Provision of VHF Main station and maintenance upto 05 years | 5 Nos. | 60.00 | 60.00 | - | - | - | - |
| | (d) Procurement of camping/anti depredation equipments (Tents, sleeping bag, water bottle, all terrain shoes, carry bag, GPS device, torch etc.) | 20 Nos. | 6.00 | 2.00 | 2.00 | 2.00 | - | - |
| 2 | **Wildlife Habitat Management** | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (a) Habitat enrichment along with other ancillary activities in Sarkunda RF of Barsuan Range | | | | | | | |
| | (i) Eradication of invesive weeds @ 10,560/per ha. | 10 ha. | 1.10 | 1.10 | - | - | - | - |
| | (ii) Development of meadow/grassland | 04 ha. | 85.37 | 38.52 | 16.23 | 15.95 | 14.67 | - |
| | (iii) Habitat enrichment with plantation of Fruit bearing species/Fodder Plantation | 05 ha. | 11.25 | 8.00 | 1.625 | 1.25 | 0.375 | - |
| | (iv) Establishment of protection camp (including water supply, solar light system, bedding facilities, communication facilities, boundary facility etc.) | 1 No. | 20.00 | 20.00 | - | - | - | - |
| | (v) Provision for creation of water body | 1 No. | 10.00 | 10.00 | - | - | - | - |
| 3 | **Wildlife Monitoring** | | | | | | | |
| | (a) Procurement and instalment of early warning system (Anklers etc.) along with its maintenance in the sensitive locations to monitor and aware about the exact movement of elephants | 10 Nos. | 10.00 | 5.00 | 5.00 | - | - | - |
| 4 | **Human Elephant Conflict Mitigation** | | | | | | | |
| | (a) Deployment of GajaSaathi - A participatory approach (05 units of 05 members each@Rs.80000/unit/year) | 05 Nos. | 20.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| | (b) Signage on both side of track/road/railway | | | | | | | |
| | (b)(1) Signage with speed limit | 40 Nos. | 12.00 | 4.00 | 4.00 | 4.00 | - | - |
| | (b)(2) Signage with awareness and warning for wildlife | 40 Nos. | 12.00 | 4.00 | 4.00 | 4.00 | - | - |
| | (c) Capacity Building training for Field Staff on Elephant Human Conflict management at Division Office | 05 Nos. | 10.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| | (d) Immunization camp of domestic cattle : Provision of two immunization camps per year for the domestic cattle in the surrounding areas including the cost of medicine, organizing charges etc. | 10 Nos. | 4.00 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | **Public Awareness and Livelihood Generation Activity through community mobilization** | | | | | | | |
| | (a) Training and awareness to EDC/VFMC, in Schools, Village level Volunteers (IEC materials) for Wild Life Conservation & Protection | LS | 20.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| | **Total** | | 413.32 | 221.74 | 61.98 | 56.32 | 44.17 | 29.12 |
| | **20% Escalation** | | 82.66 | 44.35 | 12.40 | 11.26 | 8.83 | 5.82 |
| | **Grand Total** | | 495.98 | 266.09 | 74.37 | 67.58 | 53.00 | 34.94 |

Annexure-I

# Keonjhar Forest Division

## To be borne by the User Agency

| Sl No. | Management Intervention | Amount in Lakh |
|---|---|---|
| 1. | Elephant proof Trench in Kadakala village over 2 Km. | To be borne by the user agency |

Divisional Forest Officer,
Keonjhar Division

Annexure-II

**Strategies to mitigate and minimize adverse impact in project impact area coming within Keonjhar Division with financial implications and monitoring.**

**Implemented by Keonjhar Forest Division**

| To be borne by Forest Department | | | | |
|---|---|---|---|---|
| Sl. No. | Management interventions | Area in ha./Unit in no./RKM | Unit cost (Rs. in lakh) | Total Amount (Rs. in lakh) |
| 1 | **Protection & Enforcement Activities** | | | |
| | Deployment of Gaja Saathi - A participatory approach (Tiriba, Sudumba, Murusuan, Kadakala, Kaijoda villages) (5 units of 05 members for 5 years each @Rs.75,250/unit/ throughout the year ~ 12 months) (75,250 X 5 X 5)=18,81,250 or 18,81,300.00 | 5 | - | 18.813 |
| 2 | **Human Elephant Conflict Mitigation** | | | |
| | Solar Street Lights(Barefoot solar repair technician) (6 solar lights in one village) | 30 | 0.25 | 7.50 |
| 3 | **Public Awareness and Livelihood Generation Activity through community mobilization** | | | |
| | (a) Grain Bin | 100 | 0.05 | 5.00 |
| | (b) EPA and Skill Training in Kaigoda and Kadakala villages (Vermicompost, convince tribes not to do podu cultivation and do livelihood convergence with the help of P-NGO like promoting mango plantation ) | | 25.00 | 25.00 |
| | **Total** | | | 56.313 |
| | **20% Escalation** | | | 12.2626 |
| | **Grand Total** | | | 67.5756 |

28/11/23

**Divisional Forest Officer,**
**Keonjhar Division.**

28/11

Principal Chief Conservator of Forests
(Wildlife) & Chief Wildlife Warden
Odisha, Bhubaneswar

Annexure-II

## Annual work programme (Details of flora and fauna for different year of the plan)

| Sl. No. | Management Interventions | Area in ha./Unit in no./ RKM | Total Amount (Rs. in lakh) | 1st year | 2nd year | 3rd year | 4th year | 5th year |
|---|---|---|---|---|---|---|---|---|
| 1 | Protection & Enforcement Activities | | | | | | | |
| | Deployment of Gaja Saathi - A participatory approach (Tiribo, Sudamba, Murusuan, Kadakala, Kaljoda villages) (5 units of 05 members for 5 years each @Rs.75,250/unit/ throughout the year = 12 months) (75,250 X 5 X 5)=18,81,250 or 18,81,300.00 | 5 | 18.813 | 3.7626 | 3.7626 | 3.7626 | 3.7626 | 3.7626 |
| 2 | Human Elephant Conflict Mitigation | | | | | | | |
| | Solar Street Lights(Barefoot solar repair technician) (6 solar lights in one village) | 30 | 7.5 | 7.5 | 0 | 0 | 0 | 0 |
| 3 | Public Awareness and Livelihood Generation Activity through community mobilization | | | | | | | |
| | (a) Grain Bin | 100 | 5.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | (b) EPA and Skill Training in Kaigoda and Kadakala villages (Vermicompost, convince tribes not to do podu cultivation and do livelihood convergence with the help of P-NGO like promoting mango plantation ) | | 25.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| | Total | | | | | | | 56.313 |
| | 20% Escalation | | | | | | | 11.2626 |
| | Grand Total | | | | | | | 67.5756 |

Divisional Forest Officer,
Keonjhar Division.

**B. Location of the proposed interventions**

Location of the above mentioned interventions have been decided by DFO, Bonai Division according to availability of space and requirement.

**C. Monitoring Committee**

There shall be a monitoring committee for proper implementation, planning, site selection providing guidance and review of the activities/ interventions. The committee will be headed by the DFO, Bonai Forest Division and DFO, Keonjhar Forest Division with representative of the project proponent, Range Officers, Foresters as members.

**D. Plan period**

The plan is for a period of 5 years.

**E. Cumulative total of Interventions for both project Area and Zone of Influence:**

The total cost of the conservation plan is **563.5556** Lakhs (**Rs. 495.98 Lakhs for Bonai Forest Division and Rs. 67.5756 Lakhs for Keonjhar Forest Division**) including **cost escalation @20%. The entire amount will be deposited by the User Agency in CAMPA.**

# ABSTRACT OF COST

| Division | Core | Buffer | Total Amount (in lakhs) |
|---|---|---|---|
| Bonai | | 495.98 | 495.98 |
| Keonjhar | | 67.5756 | 67.5756 |
| **Total Amount in Lakh(s)** | | **563.5556** | **563.5556** |

Principal Chief Conservator of Forests
(Wildlife) & Chief Wildlife Warden
Odisha, Bhubaneswar

## CHAPTER- 6

## ANNEXURE AND MAPS

a) Composite map showing Range and Beat present within 10 KM impact area under Bonai & Keonjhar Forest Division **(PLATE-I)**
b) Map showing the distance of project area from the National parks/ Sanctuaries/ Biosphere Reserve/ Elephant/ Tiger Reserve and their corridors **(PLATE-II)**
c) Map showing Mines present within 10 KM Impact Area of the Project under Bonai Forest Division **(PLATE-III)**
d) Composite map showing Crop and House damaged report of last three years within 10 KM Impact Area of the Project. **(PLATE-IV)**
e) Composite map showing Human and Elephant death of last 5 years within the Impact Area of the Project under Bonai and Keonjhar Forest Division. **(PLATE-V)**
f) List of authenticate Flora and Fauna. **(ANNEXURE-1)**

## Annexure-I

## LIST OF FLORA AND FAUNA WITHIN THE CORE ZONE AND BUFFER ZONE OF THE RAIKELA, BAHAMBA & TENSA IRON & MANGANESE ORE MINES OF SRI CHANDI PRASAD SHARMA

### LIST OF FLORA IN THE CORE ZONE

#### TREES

| Sl.No. | Local Name | Scientific Name | Family |
|---|---|---|---|
| 1 | Amba | *Mangifera indica* | Anacardiaceae |
| 2 | Amla | *Phyllanthus emblica* | Euphorbiaceae |
| 3 | Asan | *Terminalia tomentosa* | Combretaceae |
| 4 | Arjuna | *Terminalia arjuna* | Combretaceae |
| 5 | Bahada | *Terminalia bellirica* | Combretaceae |
| 6 | Bara | *Ficus benghalensis* | Moraceae |
| 7 | Bel | *Aegle marmelos* | Rutaceae |
| 8 | Bhalia | *Semecarpus anacardium* | Anacardiaceae |
| 9 | Char | *Buchananialanzan* | Anacardiaceae |
| 11 | Dhaura | *Anogeissus latifolia* | Combretaceae |
| 12 | Dimiri | *Ficus hispida* | Moraceae |
| 13 | Gambhari | *Gmelina arborea* | Verbenaceae |
| 14 | Gurudu | *Gardenia gummifera* | Rubiaceae |
| 15 | Harida | *Terminalia chebula* | Combretaceae |
| 16 | Hinjal | *Barringtonia acutangula* | Lecythidaceae |
| 17 | Jamun | *Syzygiumcumini* | Mytaceae |
| 18 | Jari | *Ficus religiosa* | Moraceae |
| 19 | Kadamba | *Neolamarckiacadamba* | Rubiaceae |
| 20 | Khakada | *Casearia elliptica* | Flacourtiaceae |
| 21 | Karada | *Cleistanthuscollinus* | Euphorbiaceae |
| 22 | Kasi | *Bridelia retusa* | Euphorbiaceae |
| 23 | Kendu | *Diospyros melanoxylon* | Ebenaceae |
| 24 | Kumbhi | *Careya arborea* | Barringtoniaceae |
| 25 | Kurei | *Holarrhenaantidysenterica* | Apocynaceae |
| 26 | Kurum | *Adina cordifolia* | Rubiaceae |
| 27 | Kusum | *Schleicheraoleosa* | Sapindaceae |
| 28 | Mankad kendu | *Diospyros montana* | Ebenaceae |
| 29 | Mahul | *Madhuca indica* | Sapotaceae |
| 30 | Neem | *Azadirachta indica* | Meliaceae |
| 31 | Palas | *Butea monosperma* | Fabaceae |
| 32 | Panasa | *Artocarpus heterophyllus* | Moraceae |
| 33 | Patuli | *Lagerstroemia speciosa* | Lythraceae |
| 34 | Patuli | *Sterospermumchelonoides* | Bignoniaceae |
| 35 | Poijamu | *Syzygiumoperculatum* | Myrtaceae |
| 36 | Rai | *Dillenlapentagyna* | Dilleniaceae |
| 37 | Rohini | *Soymidafebrifuga* | Meliaceae |
| 38 | Sal | *Shorearobusta* | Dipterocarpaceae |
| 39 | Salapa | *Caryotaurens* | Palmaceae |
| 40 | Sidha | *Lagerstroemia parviflora* | Lythraceae |
| 41 | Semul | *Bombax ceiba* | Bombacaceae |
| 42 | Siris | *Albizzia lebbek* | Mimosaceae |
| 42 | Sisso | *Dalbergia sisso* | Fabaceae |
| 44 | Sunari | *Cassia fistula* | Fabaceae |
| 45 | Tentuli | *Tamarindus indica* | Fabaceae |

| SHRUBS | | | |
|---|---|---|---|
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Arakha | *Calotropis procera* | Asclepiadaceae |
| 2. | Amari | *Ipomea fistulosa* | Convolvulaceae |
| 3. | Basanga | *Adhatodavasica* | Acanthaceae |
| 4. | Gila | *Caesalpinia decapetala* | Ceasalpiniaceae |
| 5. | Girili | *Indigofera pulchella* | Fabaceae |
| 6. | Karabira | Nerium indicum | Apocynaceae |
| 7. | Kanteikoli | Ziziphus oenoplia | Rhamnaceae |
| 8. | Ranidantakatthi | Flemingiachappar | Facaceae |
| 9. | Siju | Euphorbia nivulia | Euphorbiaceae |
| CLIMBERS | | | |
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Atundi | *Combretum decandrum* | Combretaceae |
| 2. | Asadhua | *Capparis zeylanica* | Caparidaceae |
| 3. | Anantamuli | *Hemidesmus indicus* | Asclepiadaceae |
| 4. | Arsi/Gila | *Entada scandens* | Mimosaceae |
| 5. | Dantari | *Acacia pennata* | Mimosaceae |
| 6. | Desi alu | *Dioscoreaalata* | Dioscoreaceae |
| 7. | Gudmari | *Gymnemasylvestre* | Asclepiadaceae |
| 8. | Kaincha | *Abrusprecatorius* | Fabaceae |
| 9. | Kankada | *Momordica dioica* | Cucurbitaceae |
| 10. | Muturi | *Smilax macrophylla* | Liliaceae |
| 11. | Satabari | *Asparagus racemosus* | Liliaceae |
| 12. | Siali | *Bauhinia vahlii* | Caesalpiniaceae |
| GRASSES & HERBS | | | |
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Bena | *Vitiveriazizanoides* | Gramineae |
| 2. | Broom | *Thysalolaena maxima* | Gramineae |
| 3. | Duba | *Cynodondactylon* | Gramineae |
| 4. | Sabai | *Pollinidium angustifolium* | Gramineae |
| 5. | Sinkuia | *Hetropogoncontortus* | Gramineae |
| 6. | Anantamula | *Hemidesmus indicus* | Asclepidaceae |
| 7. | Ada (Ambakasi) | *Curcuma amada* | Zingiberaceae |
| 8. | Apamaranga | *Achyranthes aspera* | Amarantaceae |
| 9. | Bhuinimba | *Andrographis paniculata* | Acanthaceae |
| 10. | Bhumgaraj | *Wedeliacalendulacea* | Compositae |
| 11. | Ghikuari | *Aloe vera* | Liliaceae |
| 12. | Patalgaruda | *Rauwolfia serpentina* | Apocynaceae |
| 13. | Palua | *Curcuma aromatica* | Zingiberaceae |
| 14. | Saptaphenl | *Opuntia dillenii* | Cactaceae |

**LIST OF FAUNA WITHIN CORE ZONE:**

| Sl.No. | English Name | Scientific Name | Amended as on 20.12.2022 |
|---|---|---|---|
| MAMMALS | | | |
| 1. | Elephant | *Elephas maximas* | I |
| 2. | Pangolin | *Manis crassicaudata* | I |
| 3. | Wild cat | *Felis chaus affinis* | I |
| 4. | Wild boar | *Sus crefacristatus* | I |
| 5. | Jackal | *Canis latranus* | I |
| 6. | Sloth bear | *Melursus ursinus* | I |
| 7. | Squirrel | *Funambuluspenanti* | II |
| 8. | Porcupine | *Hystrixleucura* | I |
| 9. | Fox | *Vulpes bengalensis* | I |
| 10. | Barking deer | *Cervulus muntjac* | II |

| | | | |
|---|---|---|---|
| 11. | Civet | *Vivericula indica* | I |
| 12. | Hare | *Lepus ruficaudatus* | II |
| 13. | Black faced monkey | *Semnopithecus entellus* | IV |
| | **REPTILES (LIZARD / SNAKES)** | | |
| **Sl.No.** | **English Name** | **Scientific Name** | **Amended as on 20.12.2022** |
| 1. | Indian Python | *Python molurus* | I |
| 2. | MonocellateCobra | *Najanaja* | I |
| 3. | Monitor lizard | *Varanus bengalensis* | I |
| 4. | Banded krait | *Bungarus fasciatus* | IV |
| 5. | Common krait | *Bungarus caeruleus* | IV |
| 6. | House gecko | *Hemidactylus flaviviridis* | I |
| 7. | Garden lizard | *Calotes versicolor* | II |
| 8. | Indian Chameleon | *Chamaeleozeylanicus* | I |
| 9. | Painted Krait | *Bungarus caeruleus* | IV |
| | **AMPHIBIANS** | | |
| **Sl.No.** | **English Name** | **Scientific Name** | **Amended as on 20.12.2022** |
| 1. | Paddy field frog | *Rana limnocharis* | II |
| 2. | Indian bull frog | *Rana tigrina* | II |
| 3. | Tree frog | *Racophorusleucoomystax* | II |
| | **BIRDS** | | |
| **Sl.No.** | **English Name** | **Scientific Name** | **Amended as on 20.12.2022** |
| 1. | Common Myna | *Acridotheres tristis* | II |
| 2. | Weaver Bird | *Ploceusphillipinus* | II |
| 3. | Jungle Fowl | *Gallus gallus* | I |
| 4. | Blue jay bird | *Coracasbengalensis* | II |
| 5. | Swifty | *Micropusaffinis* | II |
| 6. | House Sparrow | *Passer domesticus* | II |
| 7. | Cuckoo | *Cuculuscaronus* | II |
| 8. | King crow | *Dicrurusmaococerus* | II |
| 9. | Kingfisher | *Carylerudis* | II |
| 10. | Owl | *Athena brama* | II |
| 11. | Pigeon | *Columba livia* | II |
| 12. | Dove | *Streptopelichin opensis* | II |
| 13. | Cattel egret | *Bubulcus ibis coromandus* | II |
| 14. | Little egret | *Egrettagarzetta* | II |
| 15. | Rose ringed Parakeet | *Psittaculakrameri* | II |
| 16. | Red vented Bulbul | *Pycnonotuscafer* | II |
| 17. | Tailor bird | *Orthotomussutorious* | II |
| 18. | Magpie robin | *Copsychussaularis* | II |
| 19. | Jungle bush Quail | *Perdicula asiatica* | II |

LIST OF FLORA IN BUFFER ZONE

| LIST OF FLORA IN THE ZoI | | | |
|---|---|---|---|
| TREES | | | |
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Amba | *Mangifera indica* | Anacardiaceae |
| 2. | Ambada | *Spondiasbinnata* | Anacardiaceae |
| 3. | Amla | *Phyllanthus emblica* | Euphorbiaceae |
| 4. | Asan | *Terminalia tomentosa* | Combretaceae |
| 5. | Arjuna | *Terminalia arjuna* | Combretaceae |
| 6. | Achu | *Morindaflinctoria* | Rubiaceae |
| 7. | Asoka | *Saraca indica* | Fabaceae |
| 8. | Aswasth | *Ficus religiosa* | Moraceae |
| 9. | Babul | *Acacia nilotica* | Fabaceae |
| 10. | Bada hatikana | *Litsea nitida* | Lauraceae |
| 11. | Baghamari | *Bauhinia retusa* | Fabaceae |
| 12. | Bahada | *Terminalia bellirica* | Combretaceae |
| 13. | Bandhan | *Ooleniaoojeinensis* | Fabaceae |
| 14. | Barbakulla / Dhoben | *Dalbergia paniculata* | Fabaceae |
| 15. | Bara | *Ficus benghalensis* | Moraceae |
| 16. | Barkoli | *Ziziphus mauritiana* | Rhamnaceae |
| 17. | Baruna | *Crateva religiosa* | Capparaceae |
| 18. | Bel | *Aegle marmelos* | Rutaceae |
| 19. | Bhalia | *Semecarpus anacardium* | Anacardiaceae |
| 20. | Bheru | *Chloroxylon swietiana* | Meliaceae |
| 21. | Bija / Piasal | *Pterocarpus marsupium* | Fabaceae |
| 22. | Champa | *Michaliachampaka* | Magnoliaceae |
| 23. | Char | *Buchananialanzan* | Anacardiaceae |
| 24. | Chauli | *Elaeodendron glaucum* | Celastraceae |
| 25. | Chhatian | *Alstoniascholaris* | Apocynaceae |
| 26. | Chhuipatali | *Streospermum angustifolium* | Bignoniaceae |
| 27. | Charaiguri | *Vitex leucoxylon* | Verbenaceae |
| 28. | Damkurdu | *Gardenia latifolia* | Rubiaceae |
| 29. | Dhauranjo | *Holoptelia integrifolia* | Ulmaceae |
| 30. | Dhaman | *Grewia tiliaefolia* | Tiliaceae |
| 31. | Dhaura | *Anogeissus latifolia* | Combretaceae |
| 32. | Dimiri | *Ficus hispida* | Moraceae |
| 33. | Gambhari | *Gmelina arborea* | Verbenaceae |
| 34. | Ghantal | *Ziziphus glaberrima* | Rhamnaceae |
| 35. | Ghoralanjia | *Albizzia chinensis* | Fabaceae |
| 36. | Girdhini | *Sterculia urens* | Sterculiaceae |
| 37. | Gurudu | *Gardenia gummifera* | Rubiaceae |
| 38. | Harida | *Terminalia chebula* | Combretaceae |
| 39. | Hinjal | *Barringtonia acutangula* | Lecythidaceae |
| 40. | Jamun | *Syzygiumcumini* | Myrtaceae |
| 41. | Jari | *Ficus retusa* | Moraceae |
| 42. | Kadamba | *Neolamarckiacadamba* | Rubiaceae |
| 43. | Kaitho | *Limoniaacidissima* | Rutaceae |
| 44. | Kangada | *Xyliaxylocarpa* | Fabaceae |
| 45. | Khakada | *Casearia elliptica* | Flacourtiaceae |
| 46. | Karada | *Cleistanthuscollinus* | Euphorbiaceae |
| 47. | Karanja | *Pongamia pinnata* | Fabaceae |
| 48. | Kasi | *Bridelia retusa* | Euphorbiaceae |
| 49. | Kendu | *Diospyros melanoxylon* | Ebenaceae |
| 50. | Kodala | *Sterculia villosa* | Sterculiaceae |
| 51. | Kochila | *Strychnosnux-vomica* | Loganiaceae |
| 52. | Kumbhi | *Careya arborea* | Barringtoniaceae |

| | | | |
|---|---|---|---|
| 53. | Kurei | *Holarrhenaantidysenterica* | Apocynaceae |
| 54. | Kurum | *Adina cordifolia* | Rubiaceae |
| 55. | Kusum | *Schleicheraoleosa* | Sapindaceae |
| 56. | Limbur Mol | *Bursera serrata* | Burseraceae |
| 57. | Lodha | *Symplocusracemosa* | Symplocaceae |
| 58. | Manda | *Macaranga peltata* | Euphorbiaceae |
| 59. | Mol | *Lanneacoromandelica* | Anacardiaceae |
| 60. | Mahalimba | *Ailanthus excelsa* | Simarubaceae |
| 61. | Mankarkendu | *Diospyros embryopteris* | Ebenaceae |
| 62. | Maranga | *Albizzia procera* | Mimosaceae |
| 63. | Mahul | *Madhuca indica* | Sapotaceae |
| 64. | Mundi | *Mitragynaparvifolia* | Rubiaceae |
| 65. | Muchukunda | *Pterospermumaceriifolium* | Sterculiaceae |
| 66. | Neem | *Azadirachta indica* | Meliaceae |
| 67. | Palas | *Butea monosperma* | Fabaceae |
| 68. | Paldhua | *Erythrina indica* | Fabaceae |
| 69. | Panas | *Artocarpus integrifolia* | Moraceae |
| 70. | Panipatuli | *Lagerstroemia speciosa* | Lythraceae |
| 71. | Patuli | *Sterospermumchelonoides* | Bignoniaceae |
| 72. | Rai | *Dilleniapentagyna* | Dilleniaceae |
| 73. | Ritha | *Sapindusemarginatus* | Sapindaceae |
| 74. | Rohini | *Soymidafebrifuga* | Meliaceae |
| 75. | Sahada | *Streblus asper* | Moraceae |
| 76. | Sal | *Shorearobusta* | Dipterocarpaceae |
| 77. | Salai | *Boswellia serrata* | Burseraceae |
| 78. | Salapa | *Caryotaurens* | Palmaceae |
| 79. | Sidha | *Lagerstroemia parviflora* | Lythraceae |
| 80. | Silver Oak | *Grevillea robusta* | Proteaceae |
| 81. | Semul | *Bombax ceiba* | Bombacaceae |
| 82. | Sirls | *Albizzia lebbek* | Mimosaceae |
| 83. | Sisso (pahadi) | *Dalbergia latifolia* | Fabaceae |
| 84. | Sisso | *Dalbergia sisso* | Fabaceae |
| 85. | Sunari | *Cassia fistula* | Fabaceae |
| 86. | Tal | *Borassus flabellifer* | Palmaceae |
| 87. | Tentuli | *Tamarindus indica* | Fabaceae |
| 88. | Tilai | *Wendlandia tinctoria* | Rubiaceae |

**SHRUBS**

| Sl.No. | Local Name | Scientific Name | Family |
|---|---|---|---|
| 1. | Agnijhal | *Vernonia aspera* | Asteraceae |
| 2. | Ankhukoli | *Carissa spinarum* | Apocynaceae |
| 3. | Arakha | *Calotropis procera* | Asclepiadaceae |
| 4. | Arguna | *Cycas circinalis* | Cycadaceae |
| 5. | Ata | *Anona squamosa* | Annonaceae |
| 6. | Bankulthia | *Atylosiascarabaeoides* | Fabaceae |
| 7. | Badichang | *Symphoremapolyandrum* | Verbenaceae |
| 8. | Bankhajuri | *Phoenix acaulis* | Arecaceae |
| 9. | Basanga | *Adhatodazeylanica* | Acanthaceae |
| 10. | Dhatki | *Woodfordiafruticosa* | Lythraceae |
| 11. | Girelphooi | *Indigofera cassioides* | Fabaceae |
| 12. | Gurudu | *Gardenia gummifera* | Rubiaceae |
| 13. | Kurei | *Holarrhenapubescens* | Apocynaceae |
| 14. | Nirgundi | *Vitex negundo* | Verbenaceae |
| 15. | Ranikathi | *Flemingiachappar* | Fabaceae |
| 16. | Sigini | *Euphorbia royleana* | Euphorbiaceae |
| 17. | Muturi | *Smilax macrophylla* | Smilaceae |
| 18. | Satabari | *Asparagus racemosus* | Liliaceae |
| 19. | Slali | *Bauhinia vahlii* | Caesalpiniaceae |

| SHRUBS | | | |
|---|---|---|---|
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Arakha | *Calotropis procera* | Asclepiadaceae |
| 2. | Amari | *Ipomea fistulosa* | Convolvulaceae |
| 3. | Basange | *Adhatodavasica* | Acanthaceae |
| 4. | Gila | *Caesalpinia decapetala* | Ceasalpiniaceae |
| 5. | Girli | *Indigofera pulchella* | Fabaceae |
| 6. | Karabira | Nerium indicum | Apocynaceae |
| 7. | Kanteikoli | Ziziphus oenoplia | Rhamnaceae |
| 8. | Ranidantakathi | Flemingiachappar | Facaceae |
| 9. | Siju | Euphorbia nivulia | Euphorbiaceae |
| **CLIMBERS** | | | |
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Atundi | *Combretum decandrum* | Combretaceae |
| 2. | Asadhua | *Capparis zeylanica* | Caparidaceae |
| 3. | Anantamul | *Hemidesmus indicus* | Asclepiadaceae |
| 4. | Arsi/Gila | *Entada scandens* | Mimosaceae |
| 5. | Dantari | *Acacia pennata* | Mimosaceae |
| 6. | Desi alu | *Dioscoreaalata* | Dioscoreaceae |
| 7. | Gudmari | *Gymnemasylvestre* | Asclepiadaceae |
| 8. | Kaincha | *Abrusprecatorius* | Fabaceae |
| 9. | Kankada | *Momordica dioica* | Cucurbitaceae |
| 10. | Muturi | *Smilax macrophylla* | Liliaceae |
| 11. | Satabari | *Asparagus racemosus* | Liliaceae |
| 12. | Siali | *Bauhinia vahlii* | Caesalpiniaceae |
| **GRASSES & HERBS** | | | |
| Sl.No. | Local Name | Scientific Name | Family |
| 1. | Bena | *Vitiveriazizanoides* | Gramineae |
| 2. | Broom | *Thysafolaena maxima* | Gramineae |
| 3. | Duba | *Cynodondactylon* | Gramineae |
| 4. | Sabai | *Pollinidium angustifolium* | Gramineae |
| 5. | Sinkula | *Hetropogoncontortus* | Gramineae |
| 6. | Anantamula | *Hemidesmus indicus* | Asclepidaceae |
| 7. | Ada (Ambakasi) | *Curcuma amada* | Zingiberaceae |
| 8. | Apamaranga | *Achyranthes aspera* | Amarantaceae |
| 9. | Bhuinimba | *Andrographis paniculata* | Acanthaceae |
| 10. | Bhumgaraj | *Wedeliacalendulacea* | Compositae |
| 11. | Ghikuari | *Aloe vera* | Liliaceae |
| 12. | Patalgaruda | *Rauwolfia serpentina* | Apocynaceae |
| 13. | Palua | *Curcuma aromatica* | Zingiberaceae |
| 14. | Saptapheni | *Opuntia dillenii* | Cactaceae |

## LIST OF FAUNA WITHIN BUFFER ZONE:

| Sl.No. | English Name | Scientific Name | Amended as on 20.12.2022 |
|---|---|---|---|
| | **MAMMALS** | | |
| 1. | Elephant | *Elephas maximas* | I |
| 2. | Pangolin | *Manis crassicaudata* | I |
| 3. | Wild cat | *Felis chaus affinis* | I |
| 4. | Wild boar | *Sus crefacristatus* | I |
| 5. | Jackal | *Canis latranus* | I |
| 6. | Black bear | *Selenarctos tibetana* | I |
| 7. | Squirrel | *Funambuluspenanti* | II |
| 8. | Porcupine | *Hystrixleucura* | I |
| 9. | Fox | *Vulpes bengalensis* | I |
| 10. | Barking deer | *Cervulus muntjac* | II |
| 11. | Civet | *Vivericula indica* | I |
| 12. | Hare | *Lepus ruficaudatus* | II |
| 13. | Black faced monkey | *Semnopithecusentellus* | IV |
| | **REPTILES (LIZARD / SNAKES)** | | |
| **Sl.No.** | **English Name** | **Scientific Name** | **Amended as on 20.12.2022** |
| 1. | Indian Python | *Python molurus* | I |
| 2. | MonocellateCobra | *Najanaja* | I |
| 3. | Monitor lizard | *Varanus bengalensis* | I |
| 4. | Banded krait | *Bungarus fasciatus* | IV |
| 5. | Common krait | *Bungarus caeruleus* | IV |
| 6. | House gecko | *Hemidactylus flaviviridis* | I |
| 7. | Garden lizard | *Calotes versicolor* | II |
| 8. | Indian Chameleon | *Chamaeleozeylanicus* | I |
| 9. | Painted Krait | *Bungarus caeruleus* | IV |
| | **AMPHIBIANS** | | |
| **Sl.No.** | **English Name** | **Scientific Name** | **Amended as on 20.12.2022** |
| 1. | Paddy field frog | *Rana limnocharis* | II |
| 2. | Indian bull frog | *Rana tigrina* | II |
| 3. | Tree frog | *Racophorusleucomystax* | II |
| | **BIRDS** | | |
| **Sl.No.** | **English Name** | **Scientific Name** | **Amended as on 20.12.2022** |
| 1. | Common Myna | *Acridotheres tristis* | II |
| 2. | Weaver Bird | *Ploceusphillipinus* | II |
| 3. | Jungle Fowl | *Gallus gallus* | I |
| 4. | Blue jay bird | *Coracesbengalensis* | II |
| 5. | Swifty | *Micropusaffinis* | II |
| 6. | House Sparrow | *Passer domesticus* | II |
| 7. | Cuckoo | *Cuculuscaronus* | II |
| 8. | King crow | *Dicrurusmaococerus* | II |
| 9. | Kingfisher | *Carylerydis* | II |
| 10. | Owl | *Athena brama* | II |
| 11. | Pigeon | *Columba livia* | II |
| 12. | Dove | *Streptopelichinopensis* | II |
| 13. | Cattel egret | *Bubulcus ibiscoromandus* | II |
| 14. | Little egret | *Egrettagarzetta* | II |
| 15. | Rose ringed Parakeet | *Psittaculakrameri* | II |
| 16. | Red vented Bulbul | *Pycnonotuscafer* | II |
| 17. | Tailor bird | *Orthotomussutorious* | II |
| 18. | Magpie robin | *Copsychussaularis* | II |
| 19. | Jungle bush Quail | *Perdicula asiatica* | II |

ANNEXURE -12

...of Forest Rights Act ...

...Proposal ... submitted to the Sub-Divisional ... for ... of ... Manganese Mines project of C.P.Sharma ... Tehsil. The concerned ... of all consultations and meetings held at the ... scope of Palli Sabha Resolution ... 07.05.2010 of village **Raikela**, dt. 10.05.2010 of village **Bahamba and dt.** 11.05.2010 ... Tensa and enquiry report of Revenue Department.

2. It is certified that the proposals for such diversion has been placed before the Palli Sabha of forest dwellers under the Chairmanship of ward member of village **Raikela, Bahamba** and Tensa of **Dangula G.P** and in presence of more than 50% of members of Palli Sabha and members of Village Forest Committee where the details of the projects and its implication have been explained to them in vernacular and English language. It is further ascertained that no eligible forest dwellers was found under Forest Right Act, 2006.

3. It is certified that discussions and decisions on such proposals had taken place only when there was quorum of minimum **50%** of the members of the Palli Sabha present.

4. It is certified on the basis of the verification report and Palli Sabha Resolution **dt. 07.05.2010** of village **Raikela, dt. 10.05.2010** of village **Bahamba and dt. 11.05.2010** of village **Tensa** that no such primitive Tribal groups and pre-agricultural communities were available on forest land **proposed** for **diversion** and whose forest rights are required to be specifically safeguarded as per section 3(1)(e) of the Forest Rights Act, 2006.

5 It is certified on the basis of the verification report and Palli Sabha Resolution **dt. 07.05.2010**, dt. 10.05.2010 and **dt. 11.05.2010** of village **Raikela, Bahamba and Tensa** that no such facilities managed by Government requiring diversion of Forest land u/s 3(2) of the Forest Rights Act, 2006 exist over the forest land proposed for diversion.

COLLECTOR, SUNDARGARH
& CHAIRMAN, DLC

CHANDI PRASAD SHARMA
P.A. HOLDER

M/s. Chandi Prasad Sharma
P.A. Holder

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The [illegible]

Sub: Submission of report regarding diversion of forest land for non-forest use over an area of 13.031 Hects. in village Raikela, 36.656 Hects. in Bahamba and 0.685 in Tensa total diversion of forest land 50.372 Hects. of Raikela Tensa, Bahamba Iron & Mn mines of C.P.Sharma

Ref: Your office letter no 1060 Date 09.04.10 and letter no. 1068 dt 28.04.10 of B.D.O., Koira.

Sir,

With reference to the letter on the subject cited above, I am herewith submitting the detail report in the following paras given below for taking further action at your end.

1. The proposal for diversion of forest land for non-forest use has been placed in the agenda Pallisabha which was separately convened in 3 villages on 7.5.2010 in village Raikela. The meeting was presided over by Sri **Pratap Mahakul, Ward Member of Village Raikela** on dated 10.5.2010 in village Bahamba which was presided over by Smt. Nirash Naik, Ward Member of Bahamba village and on 11.5.2010 in village Tensa which was presided over by Smt. Jamauna Godsara of village Tensa of Dengula G.P. All the members of forest committee applicants and villagers, who are eligible under S.T. and O.T.F.D. (R.F.R.s Act-2006) are present in the meeting. The details of the project i.e. carrying out mining operation by way of diversion of forest land for non-forest use and its implication have been thoroughly discussed and explained to them in the local language. The above Pallisabha was held in presence of Sarbpach and Executive Officer of Dengula G.P. There are total 664 voters in the Revenue Village Raikela out of which 388 persons are present and 61 voters in Bahamba, out of which 38 were present, and 2310 voters in village Tensa out of which 1625 persons are present in those pallisabha. Therefore, more than 50% voters are present and approved the resolutions.
2. All the formalities has been maintained as per instruction given vide your office letter no 1160 dated 09.04.10 and documents are attached in Annexure-A. i.e. the proceedings of the Pallisabha has been recorded in the Pallisabha Register for the village with more than 50% signatory, the Sarpanch of Dengula G.P. has attested the proceeding copy and B.D.O. Koira has countersigned on it. **B.D.O., Koira has certified that more than 50% voters** have been **attended the above pallisabha** as well as a copy of the exact translations of the proceedings of the pallisabha in English language has been attached in Annexure A

CHANDI PRASAD SHARMA

P.A. HOLDER

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[illegible]

3. As per the report submitted by FRO (Deputed to attend the Gram Sabha) vide his letter No. [illegible] dated 16.02.2015 in village Rukeli, Bisrajora and Tensa [illegible] nos. applications received by the FRC of the above said village for pre-existing as per pattas/dkh, revolution the land excluded by mentioned in the application does not cover the area applied for diversion proposal (Plot wise) of 50.372 Hects. and also there is neither individual nor communities rights of any person lies over the proposed diversion plots and the area exclusively (50.372 Hects) lies within the ML area of Rukela, Balumba & Tensa Iron Ore Mines of C.P. Sharma .
4. It is also ascertained that there is no primitive tribal group for pre-agricultural communities living over the applied area for diversion as per pallisabha resolution, hence, special safeguards as required under clauses(s) of sub-section-1 of Section -3 need not required in this case.
5. Lastly, the pallisabha has consented and certified that there are no such amenities / facilities managed by Govt. which are mentioned in Clauses (a to n) of sub-section-2 of Section-3 over the proposed diversion plots. Keeping in view the above cited lines a certificate regarding the required purpose may be issued as the pallisabha has consented the diversion proposal with proper quorum.

This is for favour of your kind information and necessary action.

Yours faithfully.

Encl: Annexure-A
Pallisabha Resolution Copy
English Version of Pallisabha Proceedings.

Tahasildar, Kolra.

CHANDI PRASAD SHARMA
P.A. HOLDER

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M/s. Chandi Prasad Sharma
P.A. Holder

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma, A. HOLDER

P.A. Holder

[illegible] Village Bahamba.

In the [illegible] forest land diversion was held about the [illegible] Mr. [illegible] Manager of Chandi Prasad Sharma

Chandi Prasad Sharma, Mines in Village Bahamba under [illegible] Dengula Panchayat have applied to the ministry of environment and forest at [illegible] for grant of diversion of 36.656hectres of forest land for non forest use. In this context all the rules & procedures under scheduled tribes and other traditional forest dwellers under forest right Act2006 have been complied with through our Pallisabha.

Having understood the consequence of use of forest land in Bahamba Iron Mines by Chandi Sharma and being satisfied with various steps taken by the management for socio-economic [illegible] we unanimously give our consent through our Palli sabha for use of 36.656 hectres of forest land for mining work by the management of Chandi Sharma Iron Mines.

Second Proposal :- a the proposed diverston area of 36.656hectres forest land no scheduled tribe nor any other traditional forest dweller is undertaking cultivation nor there are any houses and they are not taking up other traditional activities till 10.05.2010. In this forest land no forest right have been granted to any scheduled tribe or forest dwellers individually or on community basis No body has any possession over the above land.

Hence the proposal for diversion of above 36.656hectress of forest land was unanimously agreed upon for non-forest use.

Then the meeting was concluded with vote of thanks to the chair.

| | | | |
|---|---|---|---|
| Sd- | Sd- | Sd- | |
| Bocraial Mohanta | Chakradhar Dehury | Nirasa Naik | |
| Executive Office | Sarpanch | President | |
| Dengula G.P. | Dengula G.P. | Wordmember | Bahamba |

Signatures of villagers

It is hereby certified that there are 61no. of voters in village Bahamba out of which 58 members were present in the Palli Sabha which is more than 50%.

Sd-
Executive Officer
Dengula G.P.

Above Palli Sabha was held in my presence under the Chairmanship of Smt. Nirasa Naik, ward member

Sd
Sarpanch
Dengula G.P.

Ms. Chandi Prasad Sharma

P.A. Holder

CHANDI PRASAD SHARMA

P.A. HOLDER

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Sd/-
[illegible]
[illegible]
[illegible]

Sd/-
Chhotu Ram Dhurvey
Sarpanch
Pargadih

Sd/-
Pratap Mandal
President
Worldwonder Kalkeri

Signatures of villagers

[illegible] Pargadih [illegible] Village Kalkeri out of which [illegible]

Sd/-
Executive Officer
Nagar Panchayat
[illegible] Pratap

Sd/-
[illegible]
CHANDRESWAR SHARMA
[illegible]
P.A. HOLDER

M.L. Chand Prasad Sharma
[illegible]
P.A. Holder

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Banpanch
Jengula G.P

Executive
Dengul

M/s. Chandi Prasad Sharma

CHANDI PRASAD SHARMA

P.A. Holder

P. A. HOLDER

Executive Officer
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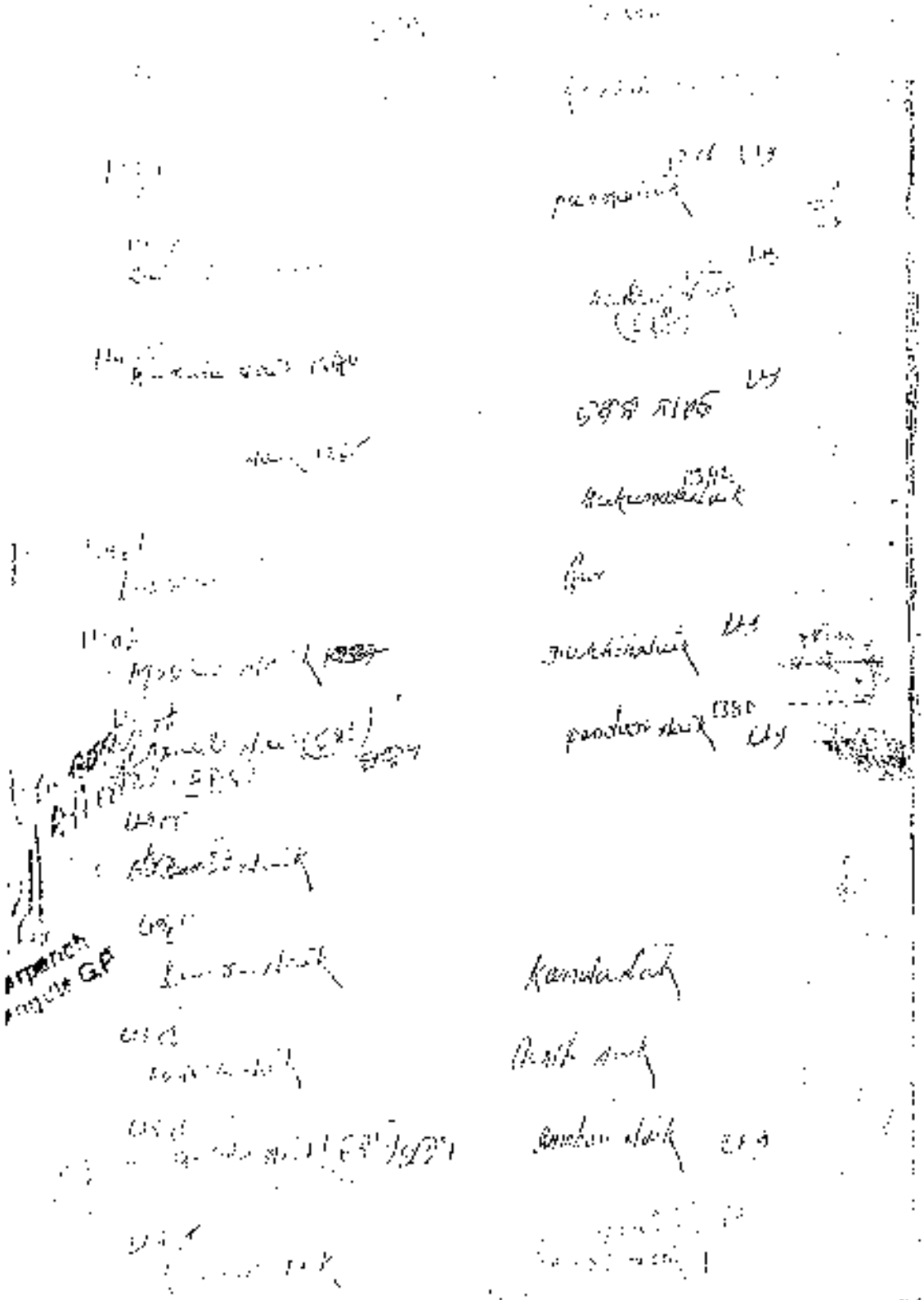
Secretary
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CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P. A. HOLDER

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CHANDI PRASAD SHARMA

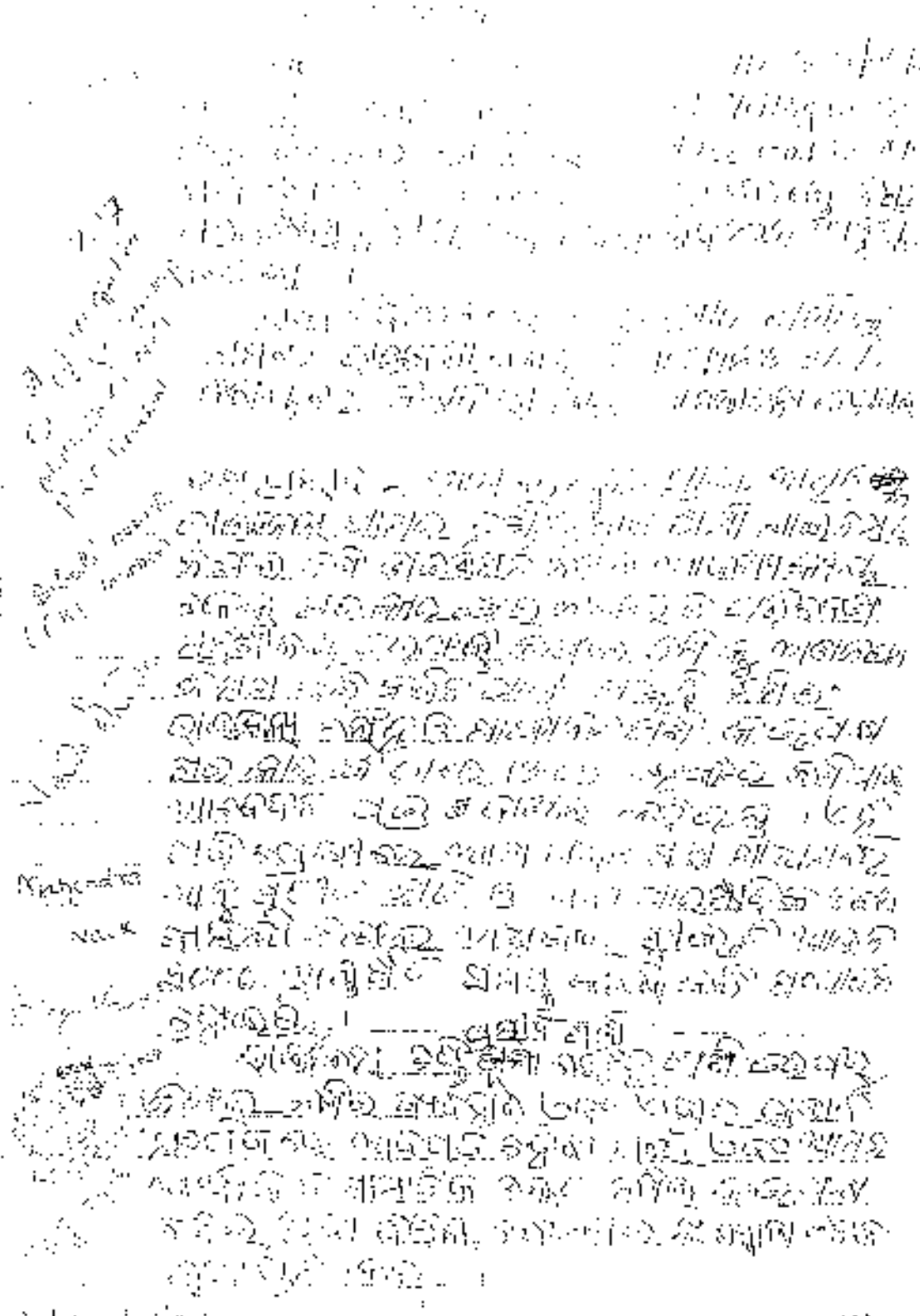
M/s. Chandi Prasad Sharma

P. A. HOLDER

P.A. Holder

M/s. Chandi Prasad Sharma CHANDI PRASAD SHARMA

P.A. Holder P.A. HOLDER

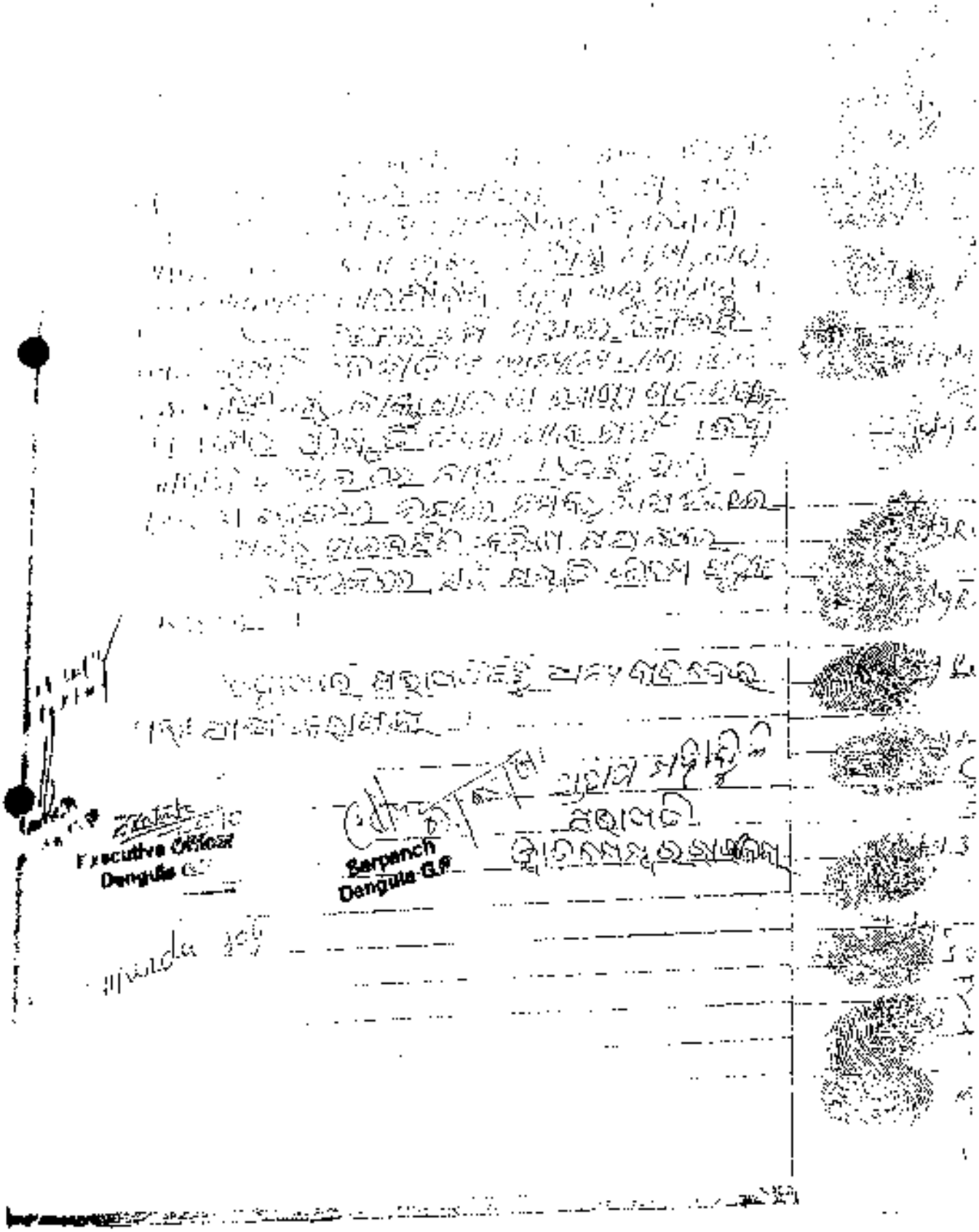


Mrs. Chandi Prasad Sharma

P.A. Holder

CHANDI PRASAD SHARMA

P.A. HOLDER




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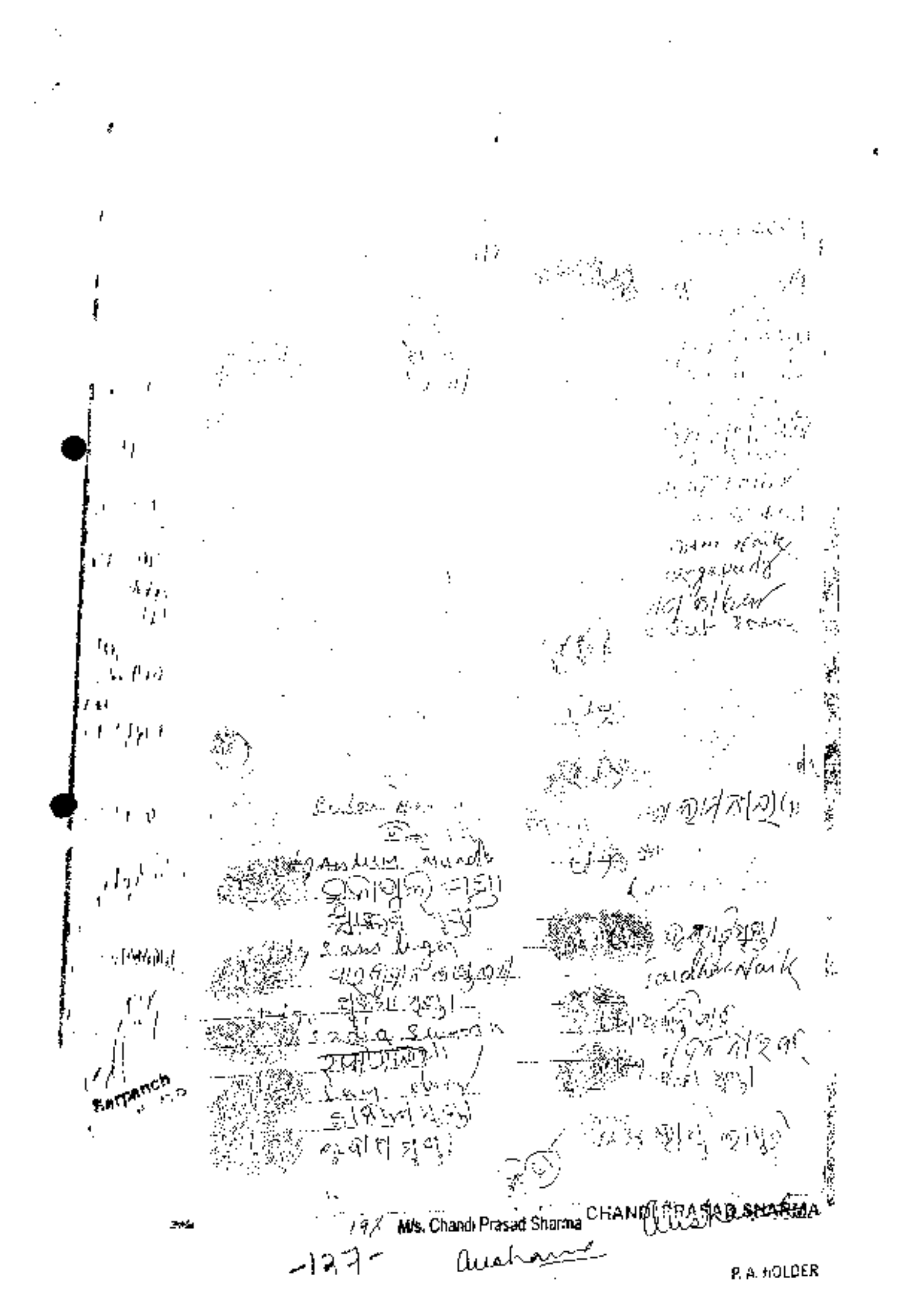
CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

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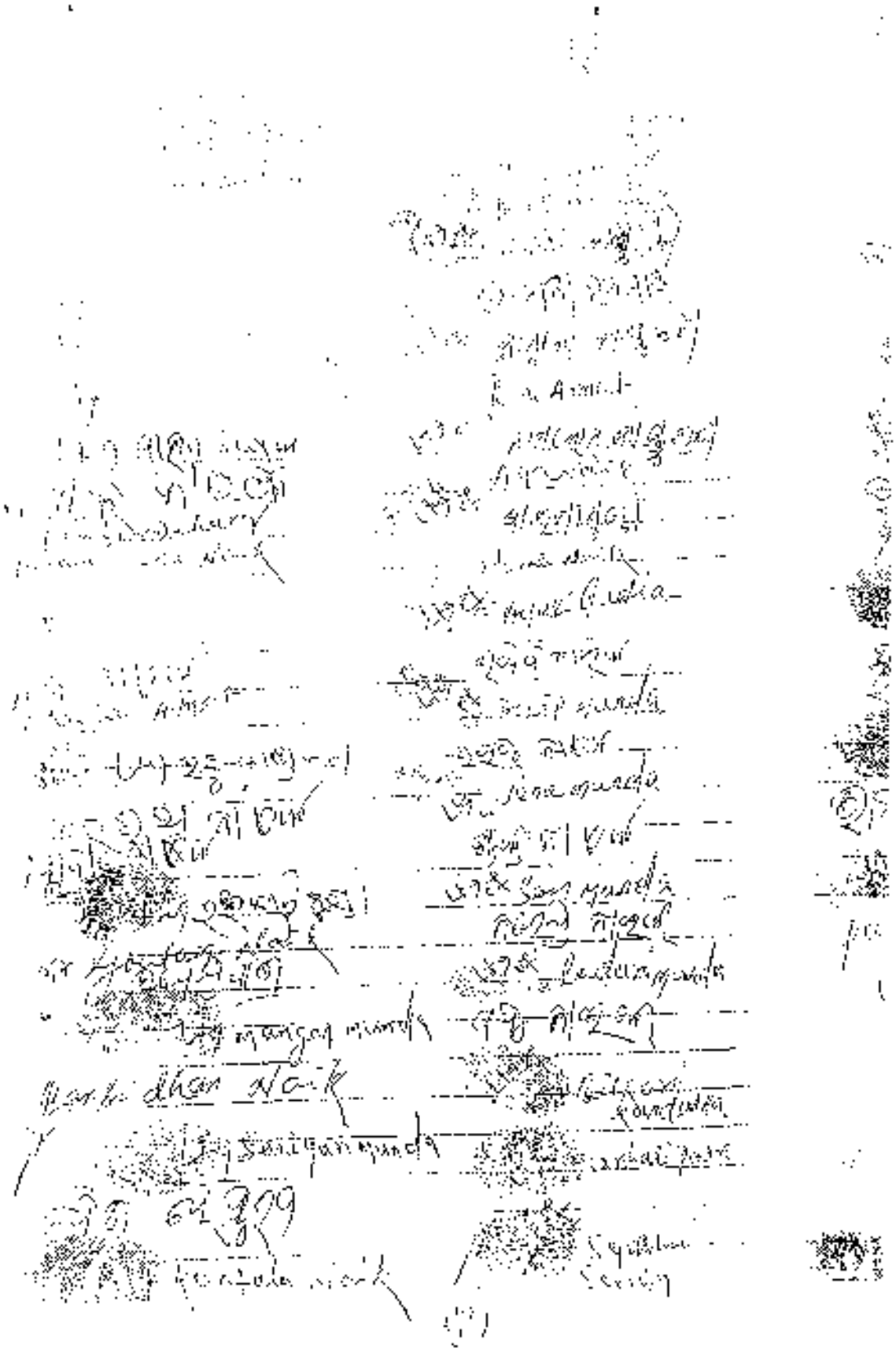
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M/s. Chandi Prasad Sharma CHANDI PRASAD SHARMA

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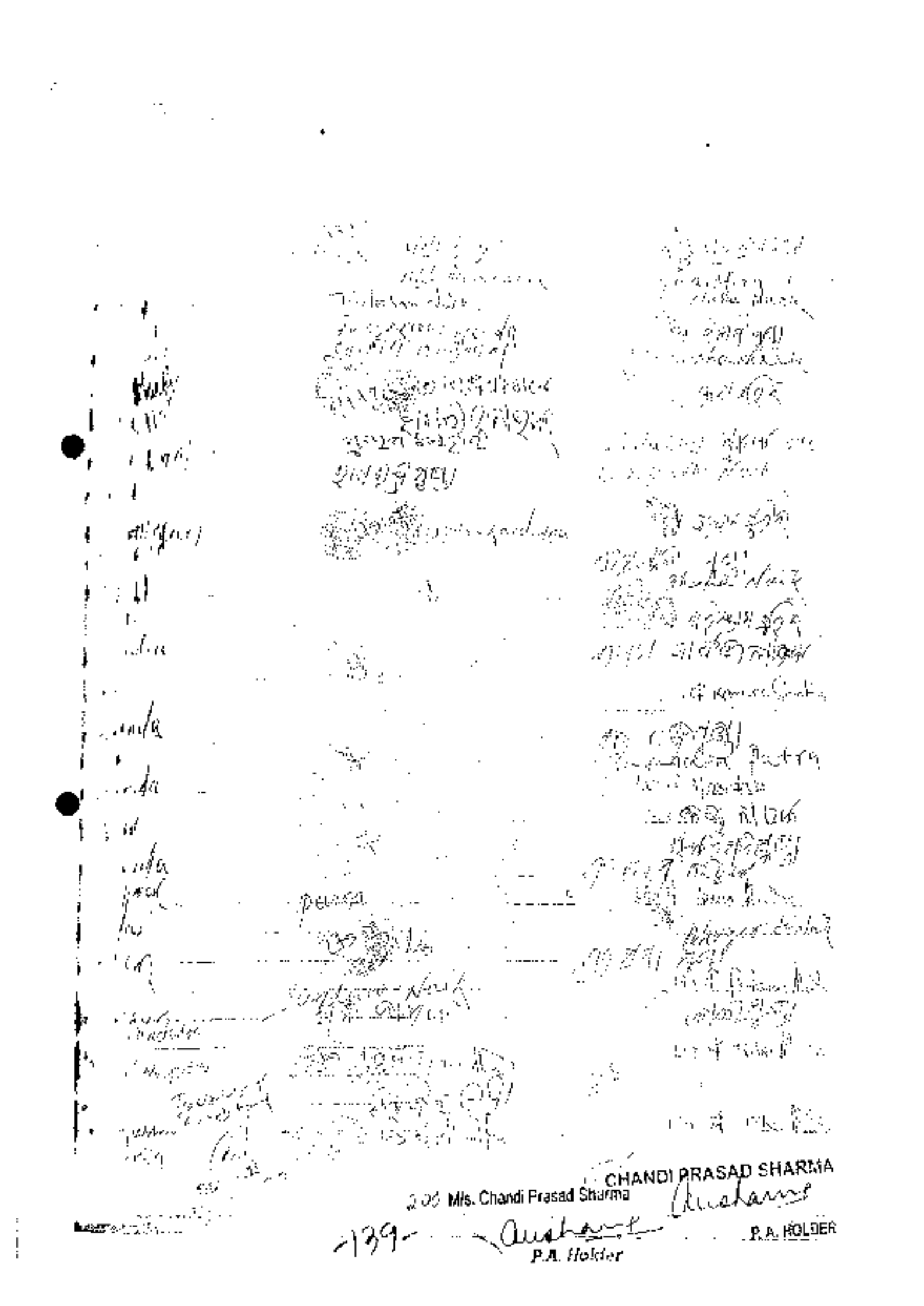
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M/s. Chandi Prasad Sharma

CHANDI PRASAD SHARMA

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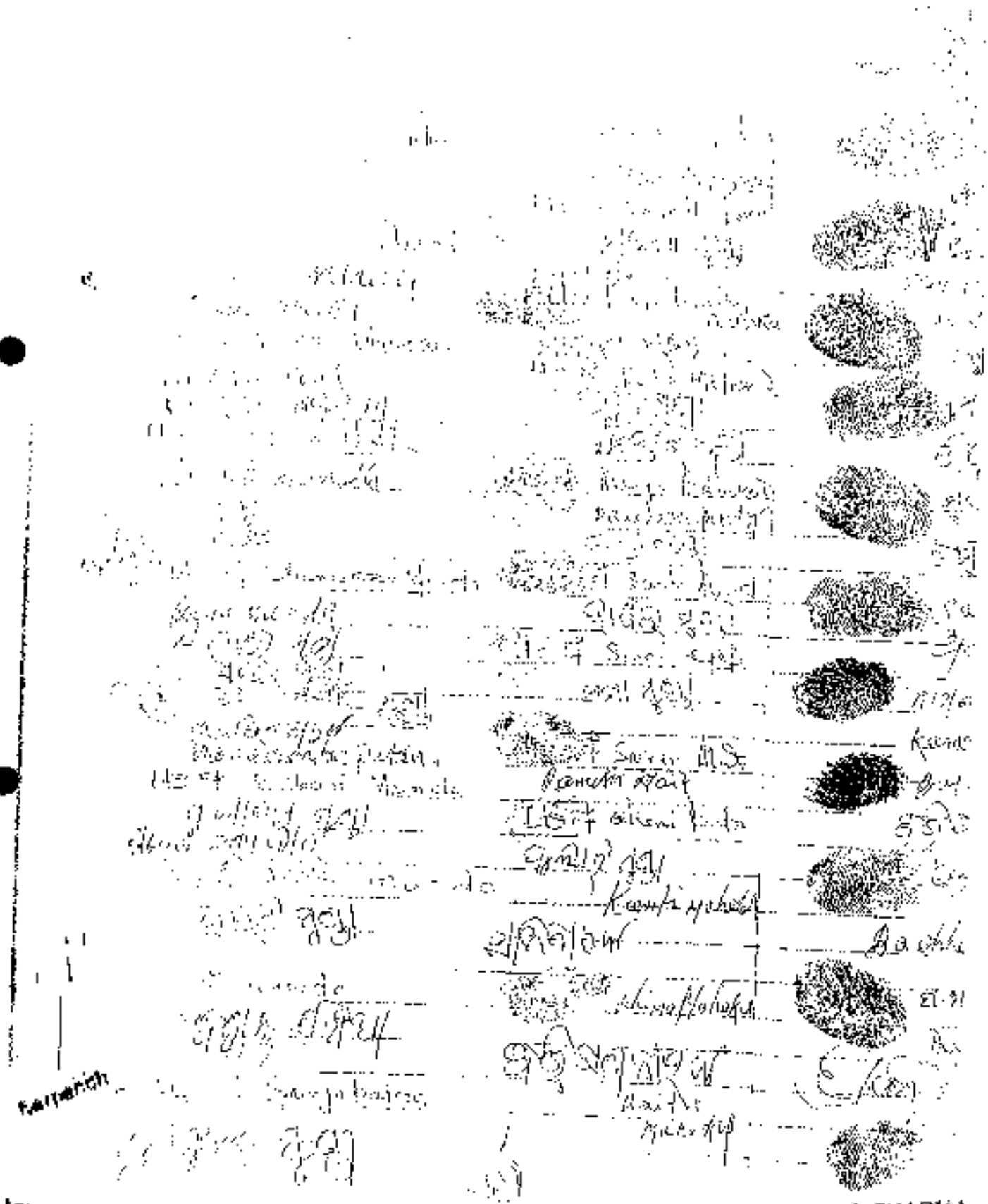
CHANDI PRASAD SHARMA

For M/s. Chandi Prasad Sharma

P.A. HOLDER

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P.A. Holder

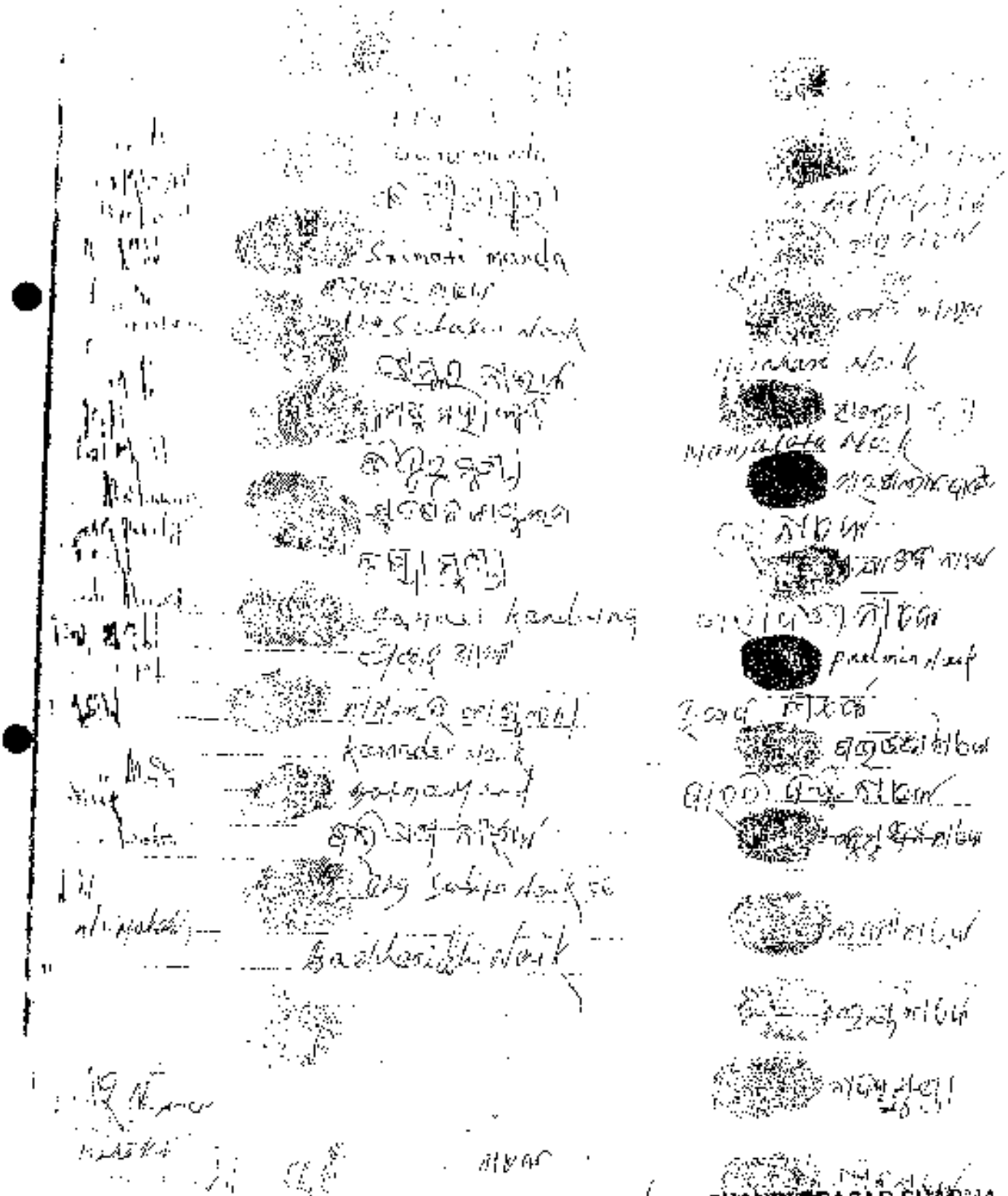


CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

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P.A. Holder

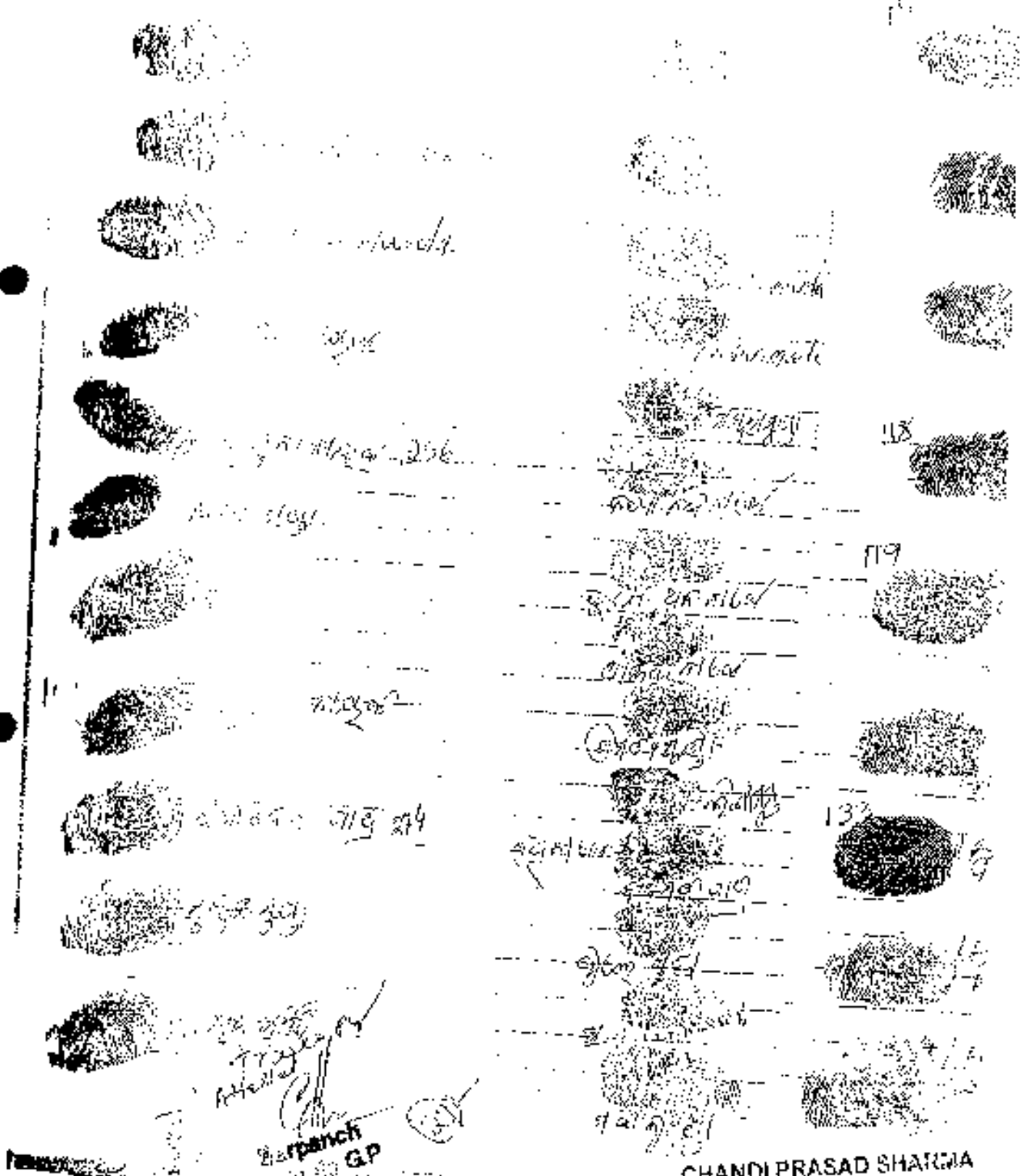


CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

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P.A. Holder



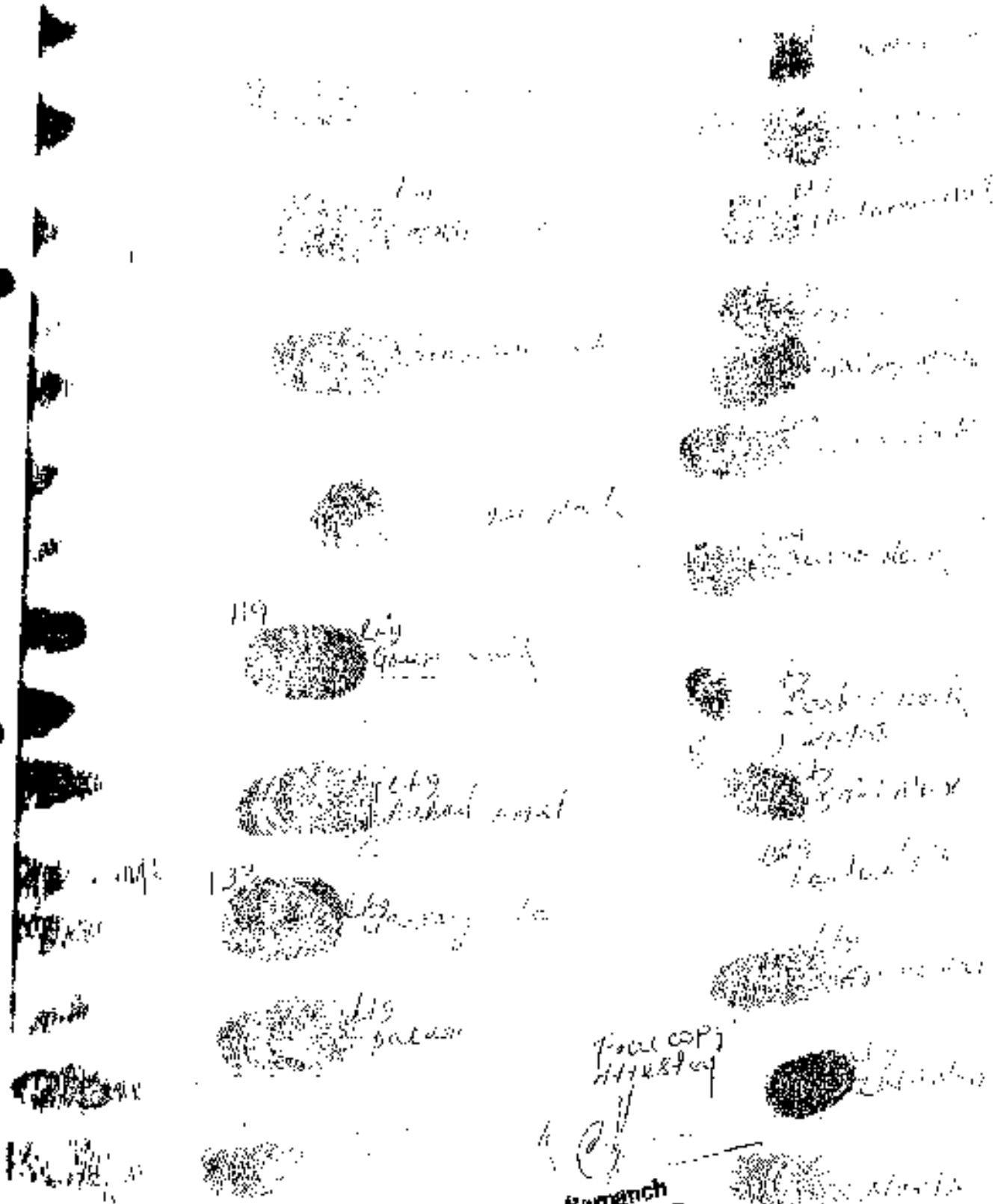
Sarpanch G.P

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. HOLDER

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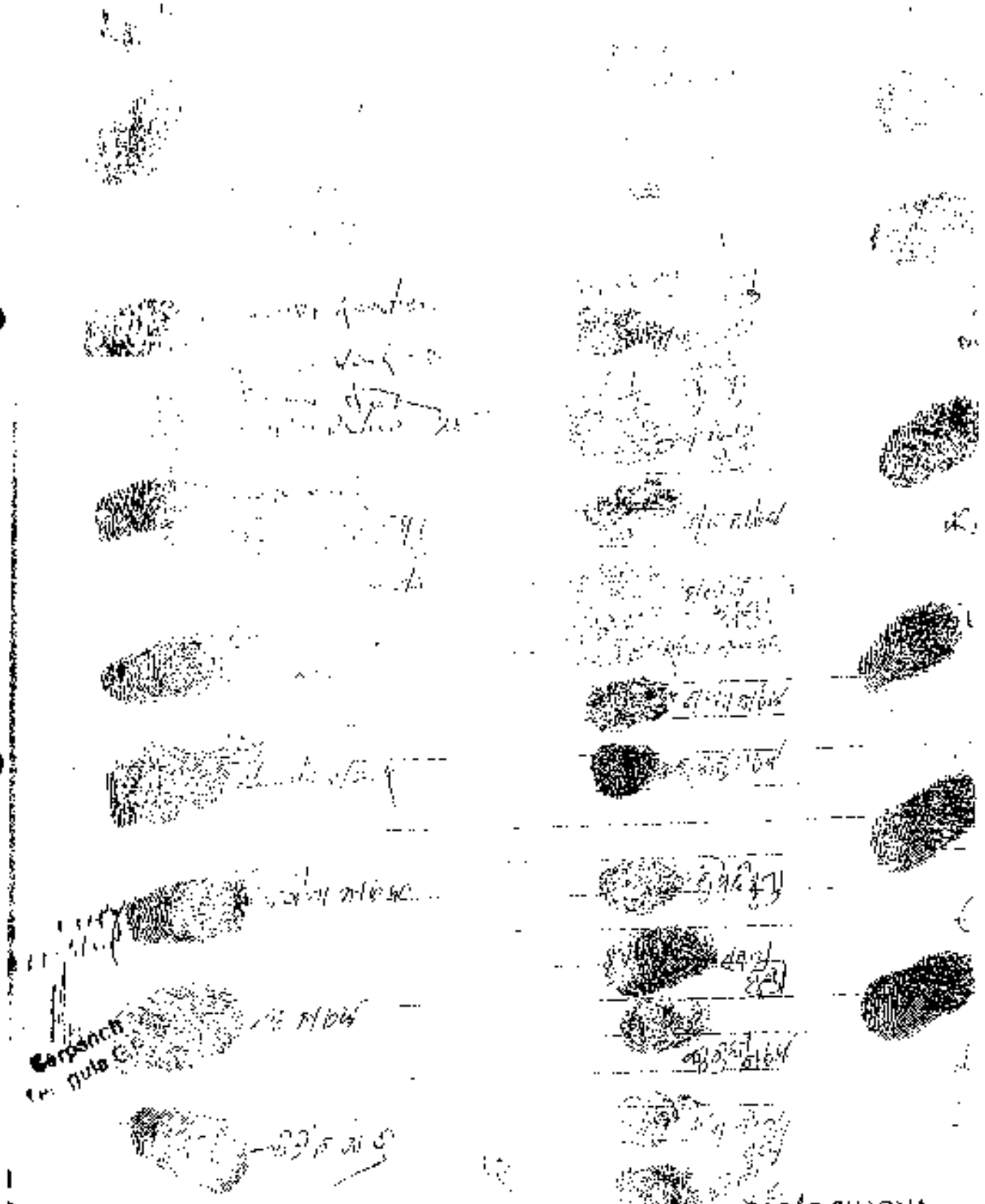
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Sarpanch
CHANDI PRASAD SHARMA

Mrs. Chandi Prasad Sharma

P.A. HOLDER

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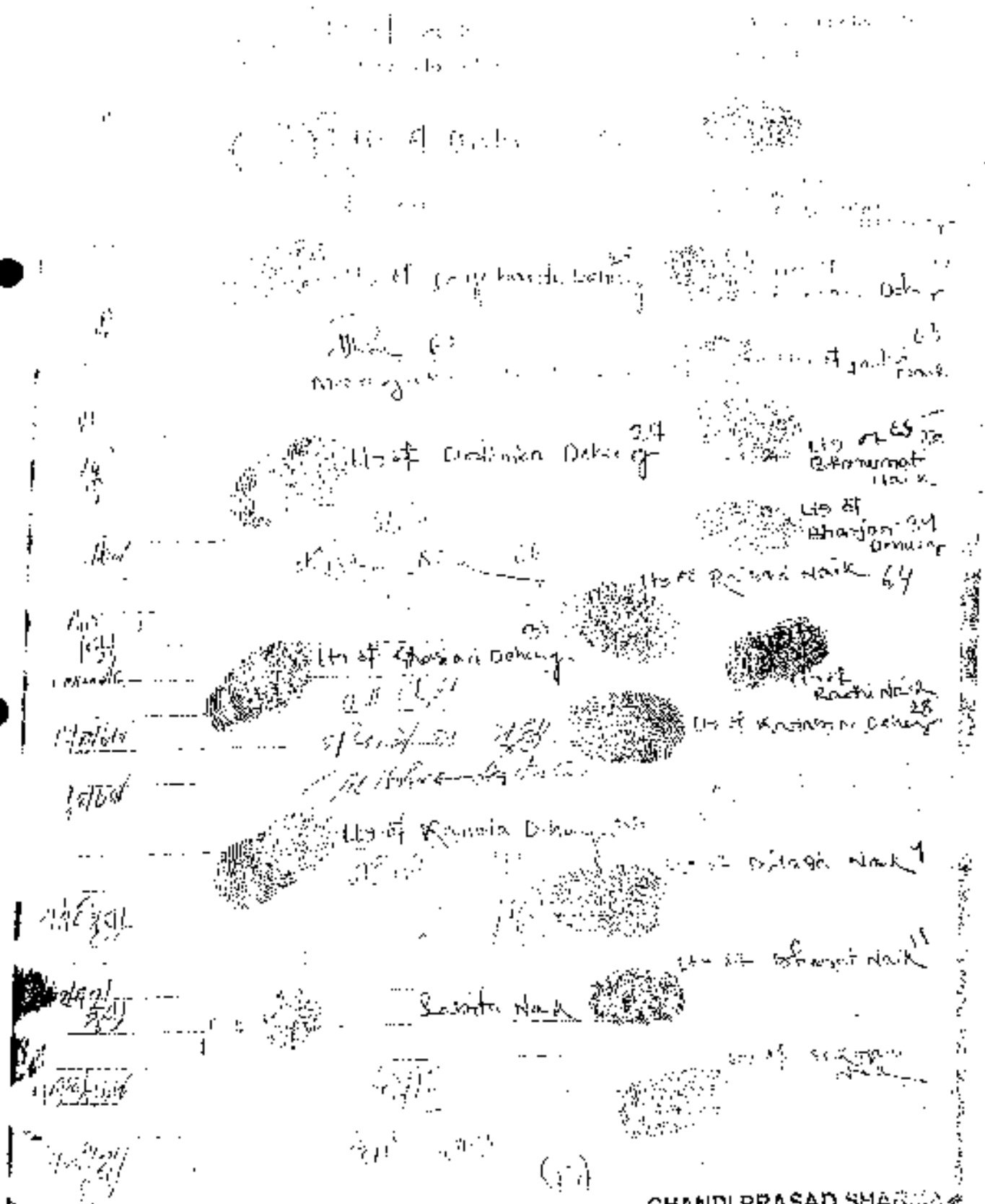


CHANDI PRASAD SHARMA

For M/s. Chandi Prasad Sharma

P.A. HOLDER

P.A. Holder



M/s. Chandi Prasad Sharma

P.A. Holder

CHANDI PRASAD SHARMA

P. A. HOLDER

Executive Officer
Dangoli G.P

Sarpanch
Dangoli G.P

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. Holder

P.A. HOLDER

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. HOLDER

P.A. Holder

Executive Officer
Dangwas G.P

Sarpanch
Dangwas G.P

Sarpanch
Dangwas G.P

CHANDI PRASAD SHARMA

Ms. Chandi Prasad Sharma

P.A. Holder

Salma Murmu

Jewel Murmu

Chalat Nag

Radha mani Samal

Urmila Parida

Anupam Murmu

Suchitrekha Parida

Sulochana Baria

Sujata Nayak

Budhiram Murmu

Mangra Murmu

Manoj Mahanty

Jema Mandi

Pabitra Sardar

Rasmita Rekha Parida

Dasarath Nayak

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. HOLDER

M/s. Chandi Prasad Sharma

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P. A. HOLDER

M/s. Chandi Prasad Sharma

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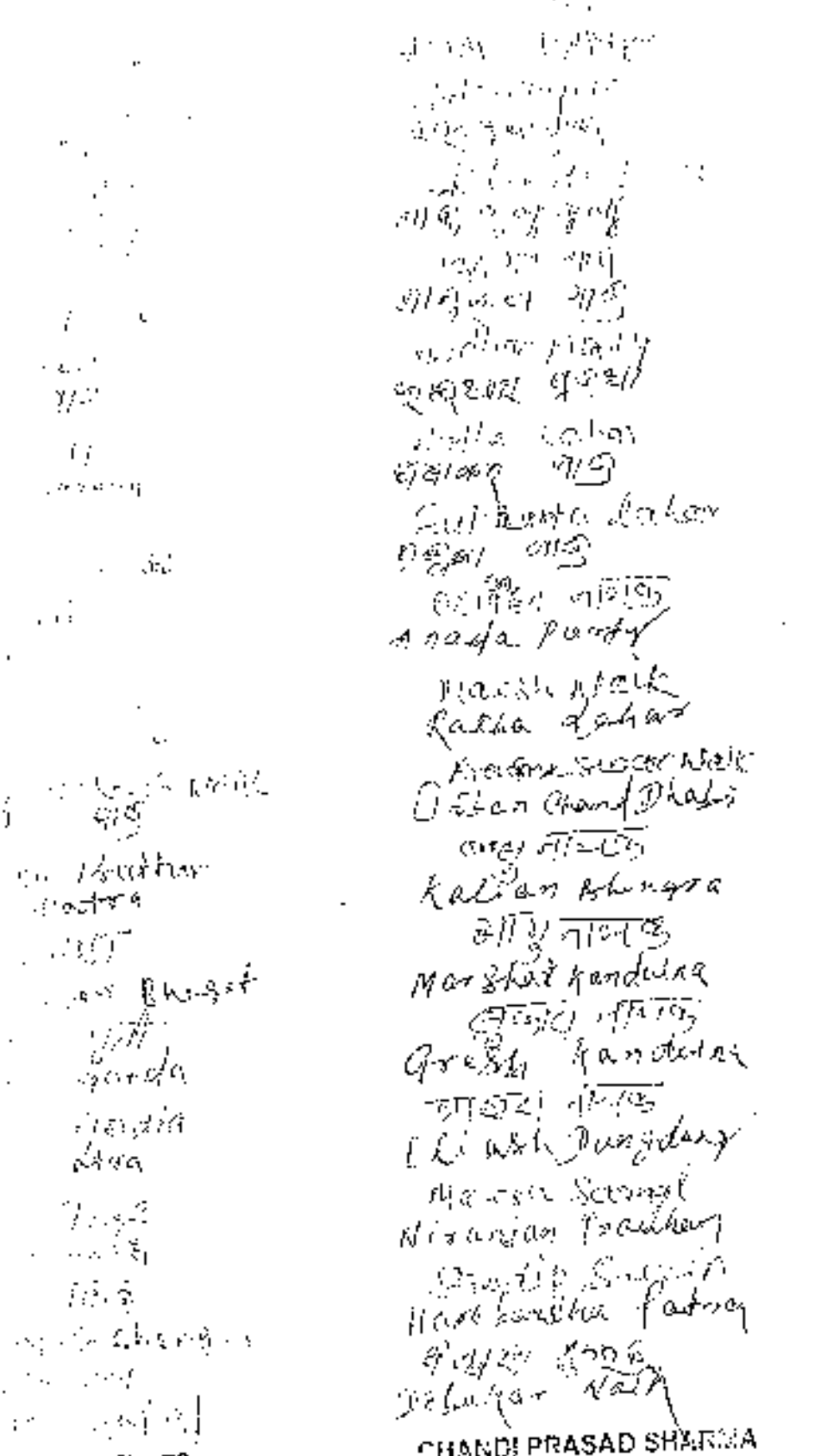
M/s. Chandi Prasad Sharma

PARTNER/PROPRIETOR

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. HOLDER



Ms. Chandi Prasad Sharma

P.A. Holder

CHANDI PRASAD SHARMA

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M/s. Chandi Prasad Sharma

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M/s. Chandi Prasad Sharma CHANDI PRASAD SHARMA

P.A. Holder P.A. HOLDER

M/s. Chandi Prasad Sharma

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CHANDI PRASAD SHARMA

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M/s. Chandi Prasad Sharma

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CHANDI PRASAD SHARMA

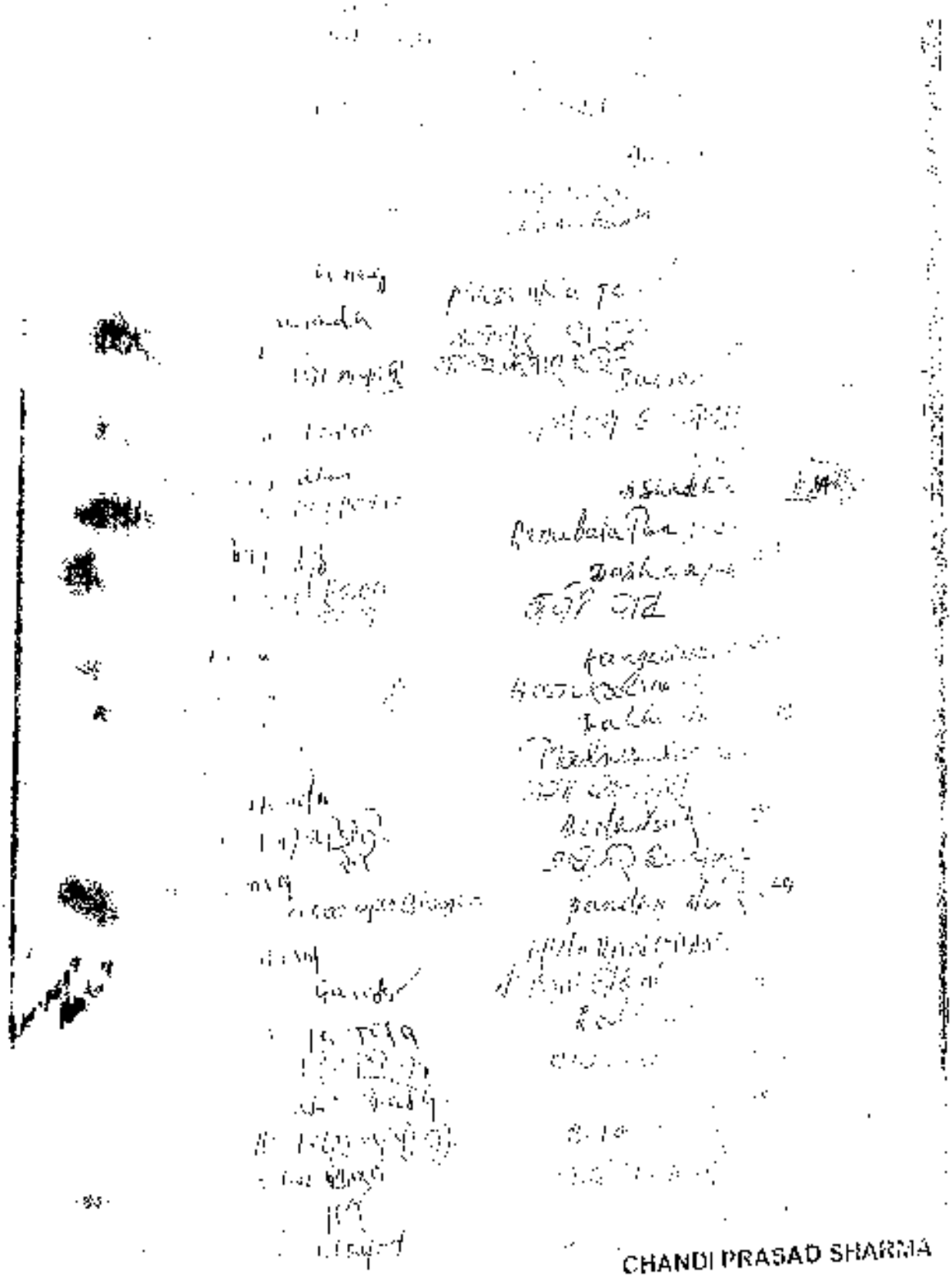
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CHANDI PRASAD SHARMA

Mrs. Chandi Prasad Sharma

P.A. HOLDER

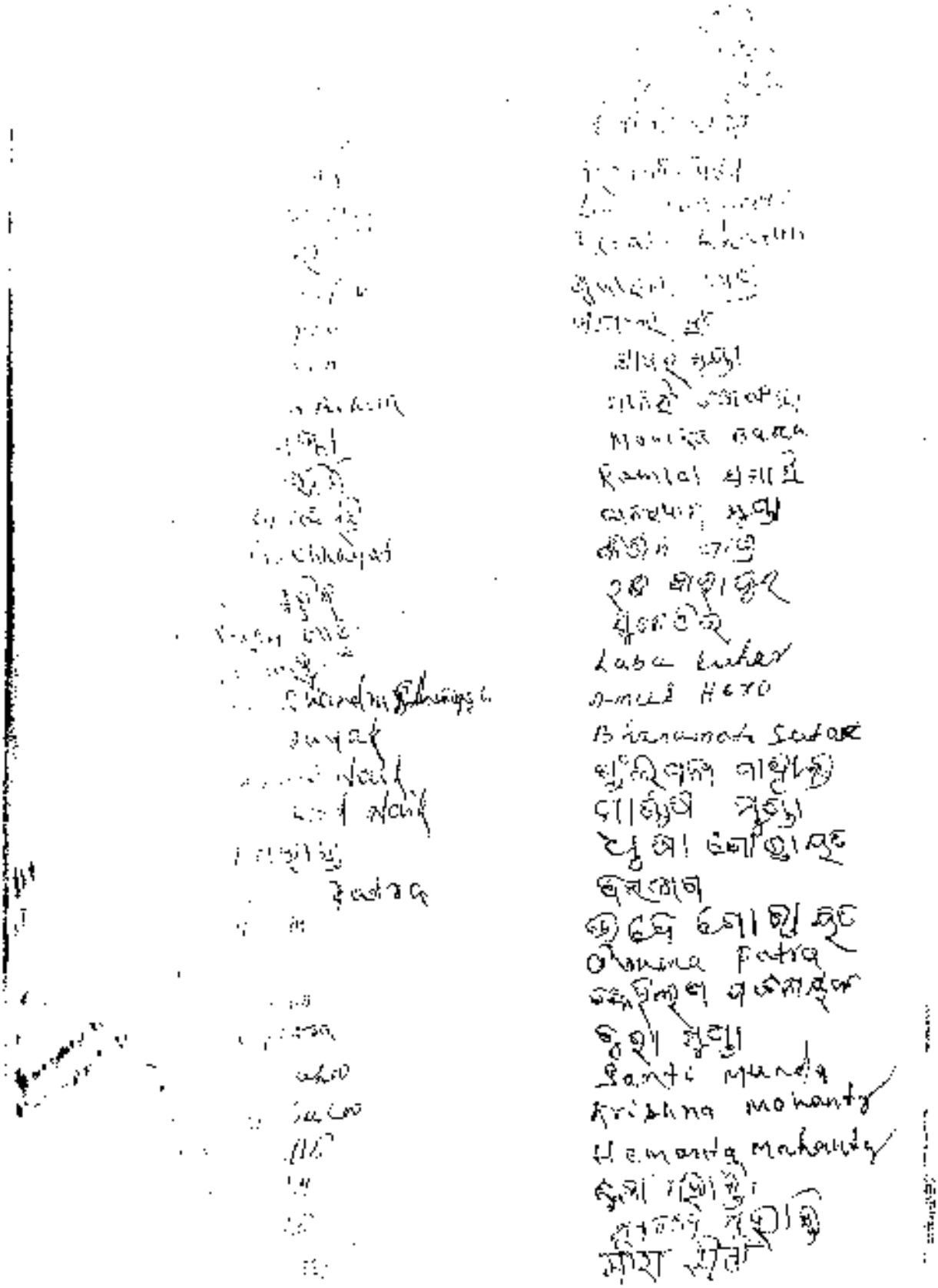
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CHANDI PRASAD SHARMA

P.A. HOLDER

M/s. Chandi Prasad Sharma



M/s. Chandi Prasad Sharma

P.A. Holder

CHANDI PRASAD SHARMA

P.A. HOLDER

Bar Bench
Calcutta G.P

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. Holder

P.A. Holder

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Sarpanch
Dangwas G.P.

M/s. Chandi Prasad Sharma

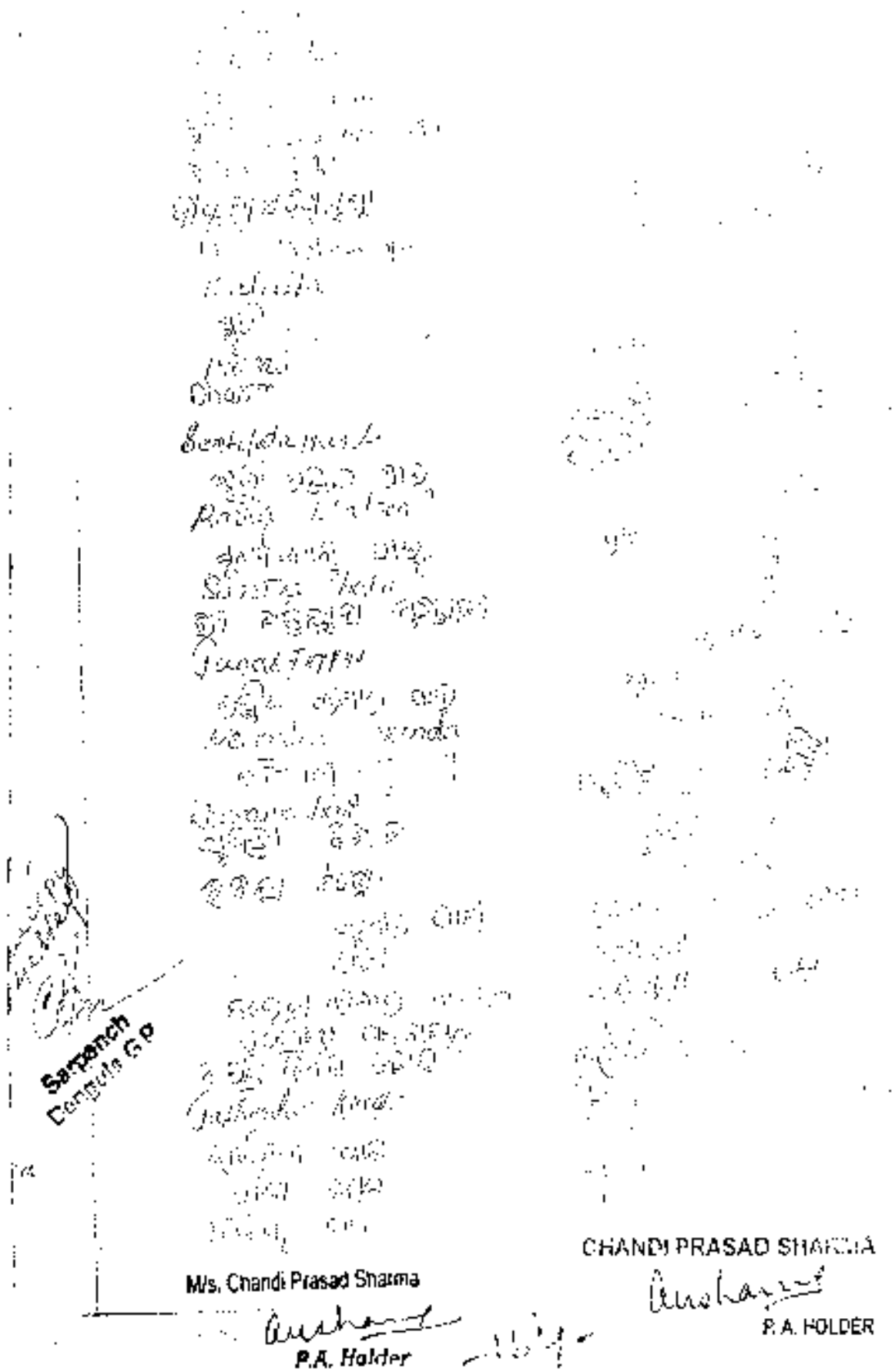
P.A. Holder

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CHANDI PRASAD SHARMA

P.A. HOLDER


Sarpanch
Gangala G P
M/s. Chandi Prasad Sharma
P.A. Holder
CHANDI PRASAD SHARMA
P. A. HOLDER

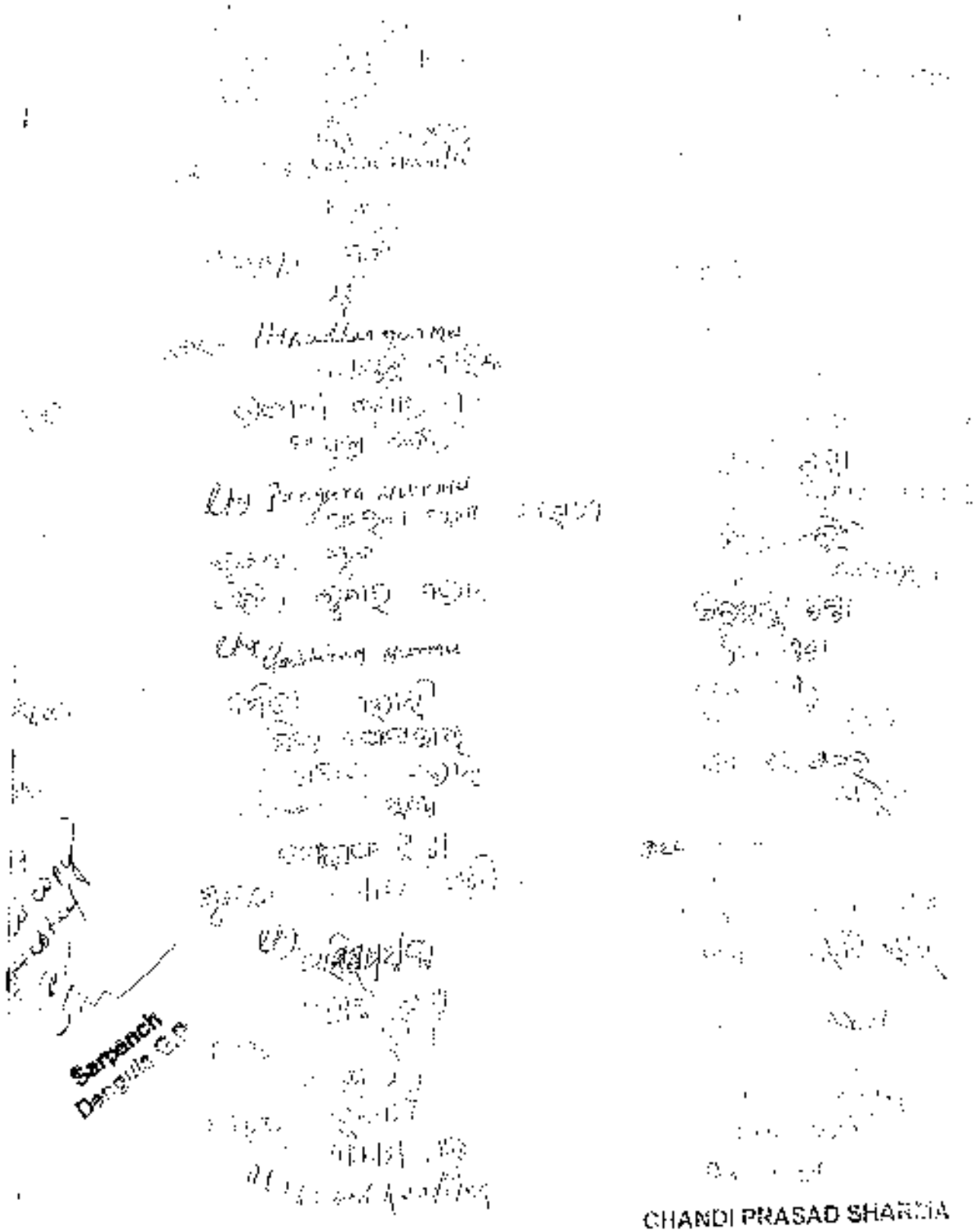
Sarpanch
Dempura G.P

M/s. Chandi Prasad Sharma

P.A. Holder

CHANDI PRASAD SHARMA

P. A. HOLDER

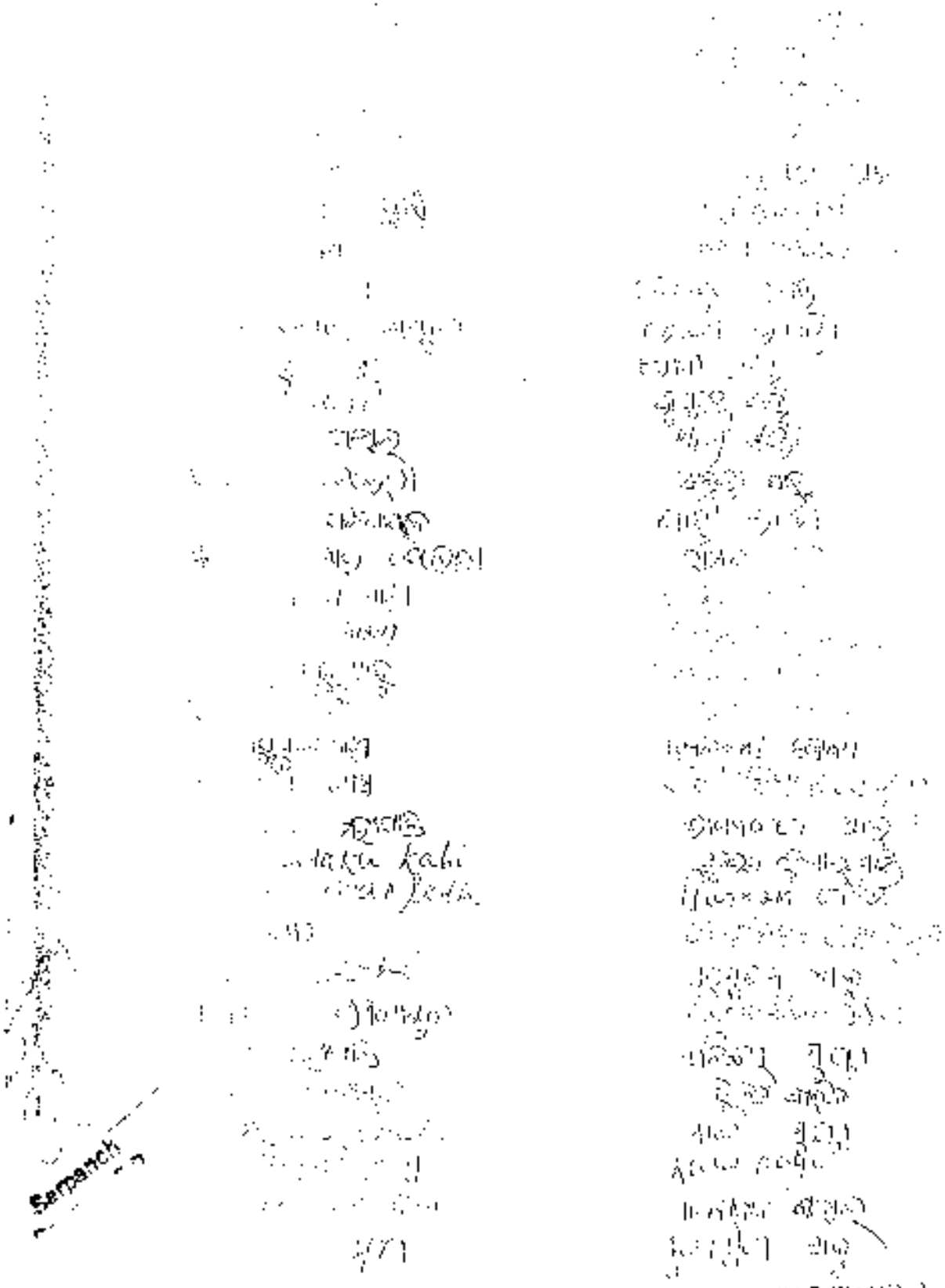


CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A. Holder

P.A. HOLDER



M/s. Chandi Prasad Sharma

CHANDI PRASAD SHARMA

P.A. Holder

P.A. HOLDER




M/s. Chandi Prasad Sharma

P.A. Holder



CHANDI PRASAD SHARMA

P.A. HOLDER

Sarpanch
Dangula G

CHANDI PRASAD SHARMA

M/s. Chandi Prasad Sharma

P.A HOLDER

Sarpanch
Dangute C.V

M/s. Chandi Prasad Sharma

CHANDI PRASAD SHARMA

HOLDER

Sarpanch
Dehgaon G.P

M/s. Chandi Prasad Sharma

CHANDI PRASAD SHARMA

P. A. HOLDER

CHANDI PRASAD SHARMA

P.A. HOLDER

M/s. Chandi Prasad Sharma

P.A. Holder

ANNEXURE - 19

# ସମନ୍ୱିତ ଆଦିବାସୀ ଉନ୍ନୟନ ସଂସ୍ଥା, ସୁନ୍ଦରଗଡ଼

## INTEGRATED TRIBAL DEVELOPMENT AGENCY, SUNDARGARH

Tel.No. - 06622-273057, Fax – 273057, e-mail- itdasng@nic.in

No. 1300 /ITDA Date: 3/5/23

To

The Divisional Forest Officer,
Bonai Forest Division, Bonai.

Sub: Diversion proposal of forest land measuring 16.98 ha. (Safety Zone) for iron and manganese ore mining of M/s CP Sharma in village- Tensa, Bahamba & Raikela under Koira Tahasil.

Sir,

With reference to the letter on the subject cited above, I am to furnish herewith the certificates regarding compliance of Scheduled Tribes and other traditional forest dwellers (Recognition of Forest Right) Act,2006 in respect of Diversion proposal of forest land measuring 16.98 ha. (Safety Zone) for iron and manganese ore mining of M/s CP Sharma in village- Tensa, Bahamba & Raikela under Koira Tahasil for taking further course of action at this end.

Enclosure:-

1. FRA Certificate in Form No. II along with land schedule.
2. Gram Sabha Resolutions of village Bahamba, Raikela & Tensa.
3. English version of Gram Sabha Resolutions.
4. Report of Tahasildar, Koida
5. SDLC Proceedings.
6. DLC Proceedings.

Yours faithfully,

**Project Administrator,**
**ITDA, Sundargarh.**

**Memo No.** 1301 **/ITDA Date:** 3/5/23

Copy submitted to the Additional District Magistrate, Sundargarh for favour of kind information.

**Project Administrator,**
**ITDA, Sundargarh.**

**Memo No.** 1302 **/ITDA Date:** 3/5/23

Copy to M/s CP Sharma for information and necessary action.

**Project Administrator,**
**ITDA, Sundargarh.**

Form-II

(For projects other than linear projects and Plantations)

[Rule 6 (3) (c) of Forest (Conservation) Rules 2003 as amended up to date]

Government of Odisha

**OFFICE OF THE DISTRICT COLLECTOR, SUNDARGARH**

No. 1216 / ITDA(FRA) Dated. 25/3/23

**TO WHOM SOEVER IT MAY CONCERN**

In compliance of the Rule 6 (3) (c) of Forest (Conservation) Rules 2003 [as amended vide the Forest (Conservation) second Amendment Rules 2014; Forest (Conservation) second Amendment Rules 2014; and Forest (Conservation) Amendment Rules 2016] it is certified that **16.98 Hectares (safety zone)** of forest land proposed to be diverted in favour of **M/s CP Sharma for iron and manganese ore mining purpose** in the district falls within the jurisdiction of **village Tensa, Bahamba & Raikela** under **Koira Tahasil**. It is further certified that:

(a) the complete process of recognition and vesting of forest rights under the FRA,2006 has been carried out for the entire **16.98 Hectares (safety zone)** of forest land proposed for diversion. A copy of records of all consultations and meetings of the Forest Rights Committee (s), Gram Sabha (s), Sub-Division Level Committee (s) and the District Level Committee are enclosed as **Annexure-I** to **Annexure-III**.

(b) the proposal for such diversion (with full details of the project and its implications, vernacular/ local language) have been placed before each concerned Gram Sabha or forest-dwellers, who are eligible under the FRA, 2006

(c) each of the concerned Gram Sabha (s), has certified that all formalities/ process under the FRA have been carried out and that they have given their consent to the proposed diversion and the compensation and ameliorative measures, if any, having understood the purpose and details of proposed diversion. Copies of certificate issued by the Gram Sabha Resolution of **village Tensa, Bahamba & Raikela** village is enclosed as **Annexure-I**.

(d) the discussion and decisions on such proposals had taken pace only when there was a quorum of minimum 50% of the members of Gram Sabhas present;

(e) the diversion of forest land for facilities managed by the Government as required under Section 3 (2) of the FRA have been completed and the Gram Sabhas have given their consent to it;

(f) the rights of Primitive Tribal Groups and Pre Agricultural Communities, where applicable have been specifically safeguarded as per Section 3 (1) of the FRA,2006.

Encl: As above.

23/3/23

(Dr. Gavali Parag Harshad, IAS)
COLLECTOR,
SUNDARGARH

COLLECTOR
SUNDARGARH

## LAND SCHEDULED OF PROPOSED LAND, VILLAGE- BAHAMBA

| Sl. No. | Khata No. | Plot No. | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 25 (AAA) | 84/p | Pahada | 0.187 |
| 2 | 25 (AAA) | 85/p | Pahada | 1.453 |
| 3 | 25 (AAA) | 86/p | Pahada | 0.034 |
| 4 | 25 (AAA) | 114/p | Pahada | 0.551 |
| 5 | 25 (AAA) | 120/p | Pahada | 1.356 |
| 6 | 25 (AAA) | 120/p | Pahada | 0.009 |
| 7 | 25 (AAA) | 121 | Pahada | 2.379 |
| 8 | 25 (AAA) | 122/p | Pahada | 0.206 |
| 9 | 23 (RAKHIT) | 123/p | Jungle | 0.252 |
| | | | Total | 6.427 |

## LAND SCHEDULED OF PROPOSED LAND, VILLAGE- RAIKELA

| Sl. No. | Khata No. | Plot No. | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 66 (AAA) | 600/P | Pahada | 3.473 |
| 2 | 66 (AAA) | 601/P | Pahada | 1.190 |
| 3 | 66 (AAA) | 601/P | Pahada | 0.075 |
| 4 | 66 (AAA) | 608/P | Pahada | 0.482 |
| 5 | 66 (AAA) | 609/P | Pahada | 3.949 |
| 6 | 66 (AAA) | 602/P | Pahada | 0.167 |
| | | | Total | 9.336 |

## LAND SCHEDULED OF PROPOSED LAND, VILLAGE- TENSA

| Sl. No. | Khata No. | Plot No | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 2 (RAKHIT) | 194/P | Jungle | 0.131 |
| 2 | 2 (RAKHIT) | 194/217/P | Jungle | 0.628 |
| 3 | 2 (RAKHIT) | 173/218/P | Jungle | 0.441 |
| 4 | 2 (RAKHIT) | 192/P | Jungle | 0.017 |
| | | | Total | 1.217 |

Project Administrator
ITDA, Sundergarh

COLLECTOR,
SUNDARGARH

COLLECTOR
SUNDARGARH

# Pallisabha Meeting

Place- Raikela. Dated- 10.06.2013

Today on 10.06.2013 at 11 A.M. a Pallisabha Meeting was held under the Chairmanship of Smt. Saraswati Dehury Ward Member regarding diversion of forest land for non forest use in village- Raikela.

In the meeting thread bare discussion was held about the Raikela Iron & Mn. Mines of Chandi Prasad Sharma.

First Proposal:- Chandi Prasad Sharma, Mines in village Raikela under our Dengula Gram Panchayat have applied to the Ministry of Environment & Forest of Govt. of India for grant of diversion of 21.541 Hects. for mining land, out of which 13.660 Hects is diversion area & safety zone 7.881 Hects. for non-forest use. In this context all the rules/procedures under Scheduled Tribes and Other Traditional forest dwellers under Forest Rights Act 2006 have been complied with through our Pallisabha.

Having understood the consequence of use of forest land in Raikela Iron & Mn. Mines by Chandi Prasad Sharma and being satisfied with various steps taken by the management for socio-economic improvement. We unanimously give our consent through our Pallisabha for use of 21.541 Hects. Of forest land for mining work by the management of Chandi Prasad Sharma Iron & Mn. Ore Mines.

Second Proposal:- In the proposal diversion area of 21.541 Hects. Forest lands no schedule tribe nor any other traditional forest dwellers is undertaking cultivation nor there are any houses and they are not taking up other traditional activities till 10.06.2013. In this forest land no forest right have been granted to any scheduled tribe or forest dwellers individually or on community basis. Nobody has any possession over the above land.

Hence the proposal for diversion of above 21.541 hects. Of forest land was unanimously agreed upon for non-forest use.

Then the meeting was concluded with vote of thanks to the chair.

Sd- Saraswati Dehuri
( President )

Signatures of villagers.

It is hereby certify that there are no 637 of voters in village Raikela out of which 378 members were present in the Pallisabha which is more than 50%.

Sd- Jiwan Mukut Toppo
Sarpanch (Dengula G. P. )

Sd-
Executive Officer
Dendula G.P.

Above Pallisabha was held in my presence under the Chairmanship of Smt Saraswati Dehury Ward member of Raikela.

Sd-
Sarpanch
Dengula G.P.

# Pallisabha Meeting

## Place- Dahamba. Dated-11.06.2013

Today on 11.06.2013 at 11 AM a Pallisabha Meeting was held under the Chairmanship of Sri Magu Naik Ward Member regarding diversion of forest land for non-forest use in village- Dahamba.

In the meeting thread bare discussion was held about the proposal of Mn. Mines of Chandi Prasad Sharma.

First Proposal:- Chandi Prasad Sharma, Mines of village Dahamba under Dengula Gram Panchayat have applied to the Ministry of Environment & Forest of Govt. of India for grant of diversion of 43.201 Hects. of land out of which 35.569Hects is diversion area & safety zone 7.632 Hects. for mining use. In this context all the rules/procedures under Scheduled Tribes & Other Traditional Forest Dwellers under Forest Rights Act, 2006 have been explained with us through our Pallisabha.

Having understood the consequence of use of forest land in Dahamba area & Mn. Mines by Chandi Prasad Sharma and being satisfied with various steps taken by the management for socio-economic improvement. We unanimously give our consent through our Pallisabha for use of 43.201 Hects. Of forest land for mining work by the management of Chandi Prasad Sharma Iron & Mn. Ore Mines.

Second Proposal: - In the proposal diversion area of 43.201 Hects. forest lands no schedule tribe nor any other traditional forest dweller is undertaking cultivation nor there are any houses and they are not taking up other traditional activities till 11.06.2013. In this forest land no forest right have been granted to any scheduled tribe or forest dwellers individually or on community basis. Nobody has any possession over the above land.

Hence the proposal for diversion of above 43.201 hects. Of forest land was unanimously agreed upon for non-forest use.

Then the meeting was concluded with vote of thanks to the chair.

Sd- Magu Naik
(President)

Signatures of villagers.

It is hereby certify that there are no 63 . of voters in village Dahamba out of which 57 members were present in the Pallisabha which is more than 50%.

Sd- Biwan Mukut Topno
Sarpanch (Dengula G. P. )

Sd-
Executive Officer
Dengula G.P.

Above Pallisabha was held in my presence under the Chairmanship of Sri Magu Naik Ward member of Dahamba.

Sd-
Sarpanch
Dengula G.P.

SARPANCH
DENGULA GP

# Pallisabha Meeting

**Place- Tensa. Dated:-07.07.2013**

Today on 07.07.2013 at 2 P.M. a Pallisabha Meeting was held under the Chairmanship of Sri Manoj Kumar Behura Ward Member regarding diversion of forest land for non-forest use in village- Tensa.

In the meeting thread bare discussion was held about the Tensa Iron & Mn. Mines of Chandi Prasad Sharma.

First Proposal:- Chandi Prasad Sharma, Minos in village Tensa under our Dengula Gram Panchayat have applied to the Ministry of Environment & Forest of Govt. of India for grant of diversion of 2.610 Hects. Out of which 1.073 Hects is forest land & safety zone 1.537 Hects. for non-forest use . In this context all the rules/procedures under Scheduled Tribes and Other Traditional forest Dwellers under Forest Rights Act 2006 have been complied with through our Pallisabha.

Having understood the consequence of use of forest land in Tensa Iron & Mn. Mines by Chandi Prasad Sharma and being satisfied with various steps taken by the management for socio-economic improvement. We unanimously give our consent through our Pallisabha for use of 2.610 Hects. Of forest land for mining work by the management of Chandi Prasad Sharma Iron & Mn. Ore Mines.

Second Proposal: - In the proposal diversion area of 2.610 Hects. Forest lands no schedule tribe nor any other traditional forest dweller is undertaking cultivation nor there are any houses and they are not taking up other traditional activities till 07.07.2013. In this forest land no forest right have been granted to any scheduled tribe or forest dwellers individually or on community basis. Nobody has any possession over the above land.

Hence the proposal for diversion of above 2.610 hects. Of forest land was unanimously agreed upon for non-forest use.

Then the meeting was concluded with vote of thanks to the chair.

Sd- Manoj Behura
(President)

Signatures of villagers.

It is hereby certify that there are no 2400 of voters in village Tensa out of which 1248 members were present in the Pallisabha which is more than 50%.

Sd- Jivan Mukut Topno
Sarpanch Dendula G.P.

Sd-
Executive Officer
Dendula G.P.

Above Pallisabha was held in my presence under the Chairmanship of Sri Manoj Kumar Behura Word member of Tensa.

Sd-
Sarpanch
Dengula G.P.

SARPANCH
DENGULA GP

ଶ୍ରୀଯୁକ୍ତ ଗୌରିକ

ସ୍ଥାନ:- ଭାଗ୍ୟଚକ୍ରପୁର ତା ୨୦/୦୫/୩୦୮୩

ବିଷୟ: ୧୯୮୫-୭୯ ମସିହାର ଦ୍ୱିତୀୟ ଶ୍ରେଣୀର ଛାତ୍ରଛାତ୍ରୀଙ୍କ ପାଇଁ ଅଙ୍କଶାସ୍ତ୍ର ପରୀକ୍ଷାର ଫଳାଫଳ ପ୍ରସଙ୍ଗରେ ।

ମହାଶୟ,

ଆପଣଙ୍କ ଅବଗତି ନିମନ୍ତେ ଜଣାଇବାକୁ ଆଜ୍ଞା ହେଉଛି ଯେ ଆମ ବିଦ୍ୟାଳୟର ଦ୍ୱିତୀୟ ଶ୍ରେଣୀର ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କର ଅଙ୍କଶାସ୍ତ୍ର ପରୀକ୍ଷା ଗତ ୧୫/୦୫/୩୦୮୩ ତାରିଖରେ ଅନୁଷ୍ଠିତ ହୋଇଥିଲା । ଏହି ପରୀକ୍ଷାରେ ମୋଟ ୪୨ ଜଣ ଛାତ୍ରଛାତ୍ରୀ ଉପସ୍ଥିତ ରହିଥିଲେ । ସେମାନଙ୍କ ମଧ୍ୟରୁ ୩୮ ଜଣ ଉତ୍ତୀର୍ଣ୍ଣ ହୋଇଛନ୍ତି ଏବଂ ୪ ଜଣ ଅନୁତ୍ତୀର୍ଣ୍ଣ ହୋଇଛନ୍ତି ।

ଉତ୍ତୀର୍ଣ୍ଣ ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କ ମଧ୍ୟରୁ ୧୫ ଜଣ ପ୍ରଥମ ଶ୍ରେଣୀରେ ଉତ୍ତୀର୍ଣ୍ଣ ହୋଇଛନ୍ତି । ଏମାନଙ୍କ ମଧ୍ୟରୁ ୫ ଜଣ ଛାତ୍ରୀ ଏବଂ ୧୦ ଜଣ ଛାତ୍ର । ଏମାନଙ୍କ ମଧ୍ୟରୁ ସୁଜାତା ମହାନ୍ତି ଏବଂ ରାଜୁ ପଟ୍ଟନାୟକ ଯଥାକ୍ରମେ ପ୍ରଥମ ଓ ଦ୍ୱିତୀୟ ସ୍ଥାନ ଅଧିକାର କରିଛନ୍ତି । ଉଭୟଙ୍କୁ ୧୦୦ ରୁ ୯୭ ନମ୍ବର ମିଳିଛି ।

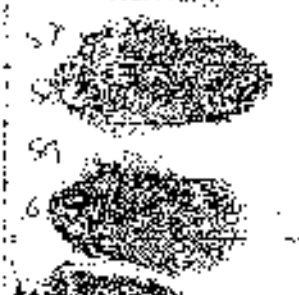
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ଅନୁତ୍ତୀର୍ଣ୍ଣ ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କ ମଧ୍ୟରୁ ୩ ଜଣ ଛାତ୍ର ଏବଂ ୧ ଜଣ ଛାତ୍ରୀ । ଏମାନଙ୍କ ମଧ୍ୟରୁ ୨ ଜଣ ଅଙ୍କରେ ଶୂନ୍ୟ ପାଇଛନ୍ତି । ଏମାନଙ୍କୁ ପୁନର୍ବାର ଅଙ୍କଶାସ୍ତ୍ର ପଢ଼ିବାକୁ ପଡ଼ିବ ।

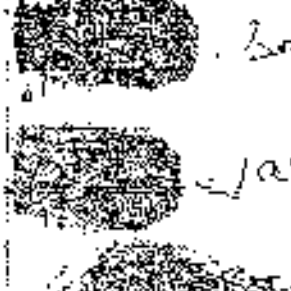
ଏହି ପରୀକ୍ଷାରେ ଉପସ୍ଥିତ ରହିଥିବା ୪୨ ଜଣ ଛାତ୍ରଛାତ୍ରୀଙ୍କ ମଧ୍ୟରୁ ୩୮ ଜଣ ଉତ୍ତୀର୍ଣ୍ଣ ହୋଇଛନ୍ତି । ଏ



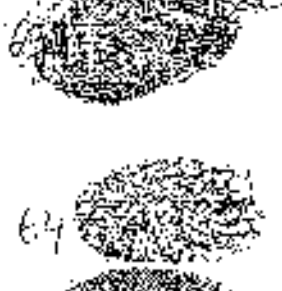
Leena Bella Naik (L.T)



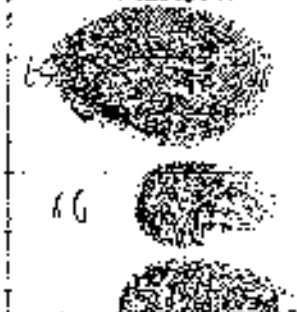
Sumati Naik (L.T)



Jabani Naik (L.T)



Lagumi Naik (L.T)



Sella Naik (L.T)

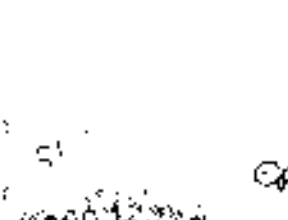


Sevanti Naik (L.T)



Jasoda Naik (L.T)





Rajani Naik (L.T)



Nilotama Naik (L.T)



Laxmi Naik (L.T)



Hema Naik (L.T)



Dhiro Naik (L.T)



Sella Chandra Naik (L.T)



Kusala Naik (L.T)



Sella Naik (L.T)

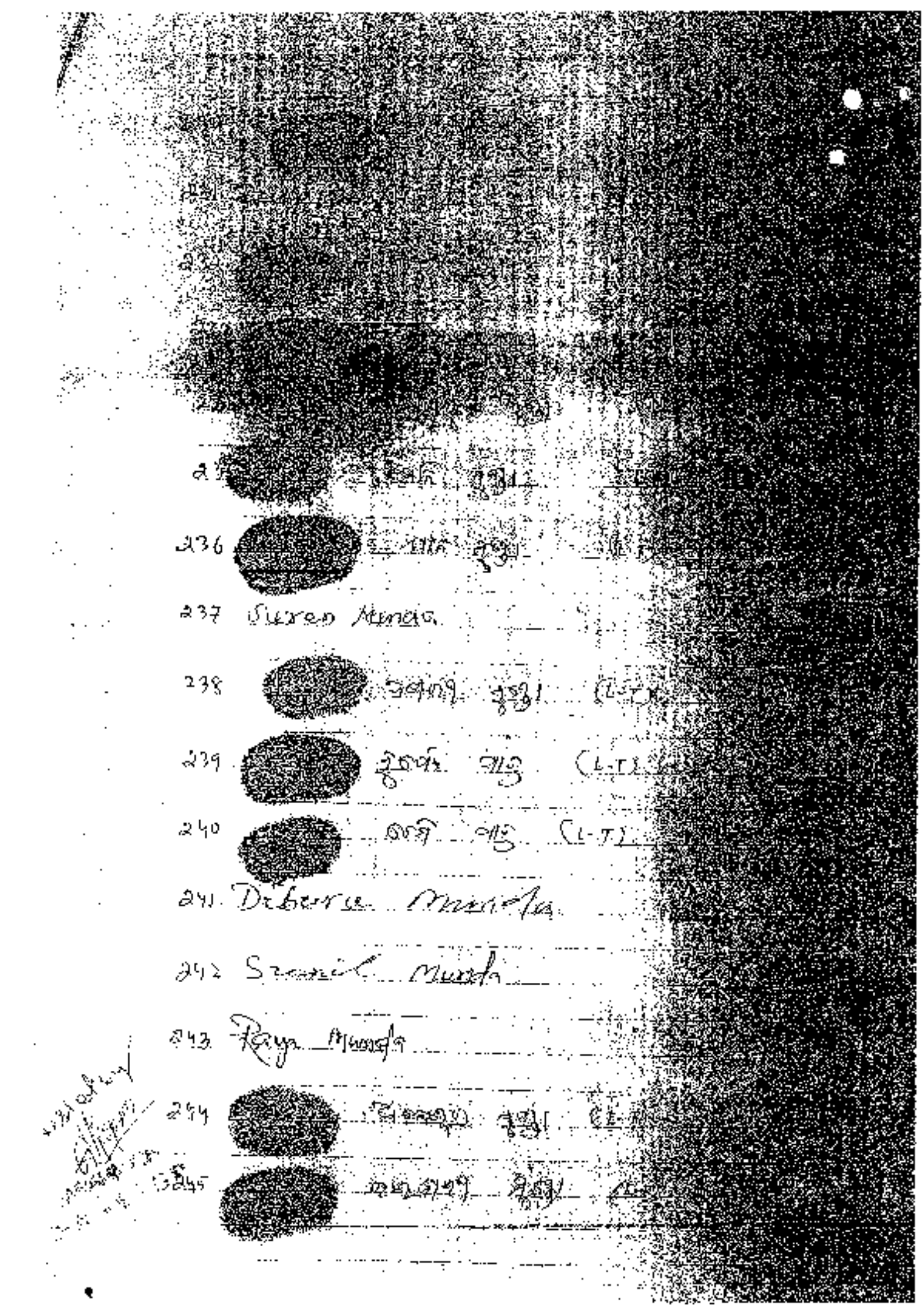
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83 [illegible]
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85 Shiba Naik
86 Madhusudan [illegible]
87 Deepak Kr Naik
88 Rama Kara Naik (L.T)
89 Bhanjan Naik
90 Nilambari Naik
91 Bhaskara Naik
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101 Jagadhar Naik
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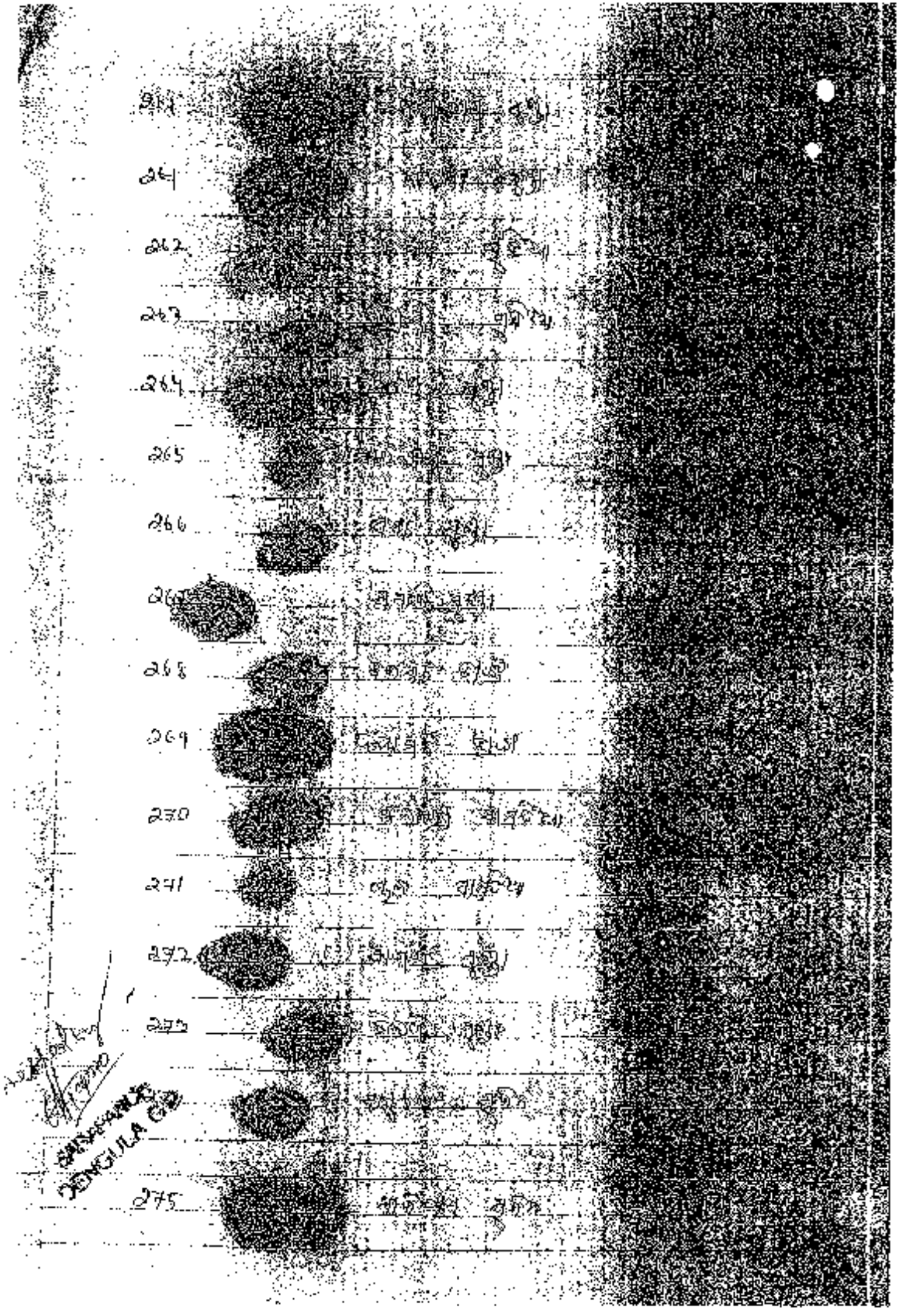
[redacted] Lochan Naik (L.T.)
105 Ramesh Arnat
106 Budhi Munda
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[redacted] Nayak (L.T.)
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113 Ramesh [redacted] Naik
114 [redacted]
115 [redacted]
116 Sushil Debnary
117 [redacted]
116 Pratulla Naik
119 Lachhman Naik
120 [redacted]
121 Kali Naik
122 [redacted]
[redacted] (L.T.)
124 Shrilochan Naik 'B'
[redacted] Bankidhar Naik (L.T.)
126 Manoranjinda Naik
127 Prema Debnary
128 Ghanashyam Naik
129 [redacted]
130 Narsingh Naik
131 [redacted]
132 [redacted]
133 [redacted]
134 Laxmidhar Naik
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| (۱-۲) | ۲ | ۵۶۹۱۳ | ۵۱۸۵۳ |
| (۱-۳) | ۳ | ۵۶۹۱۴ | ۵۱۸۵۴ |
| (۱-۴) | ۴ | ۵۶۹۱۵ | ۵۱۸۵۵ |
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| (۱-۷) | ۷ | ۵۶۹۱۸ | ۵۱۸۵۸ |
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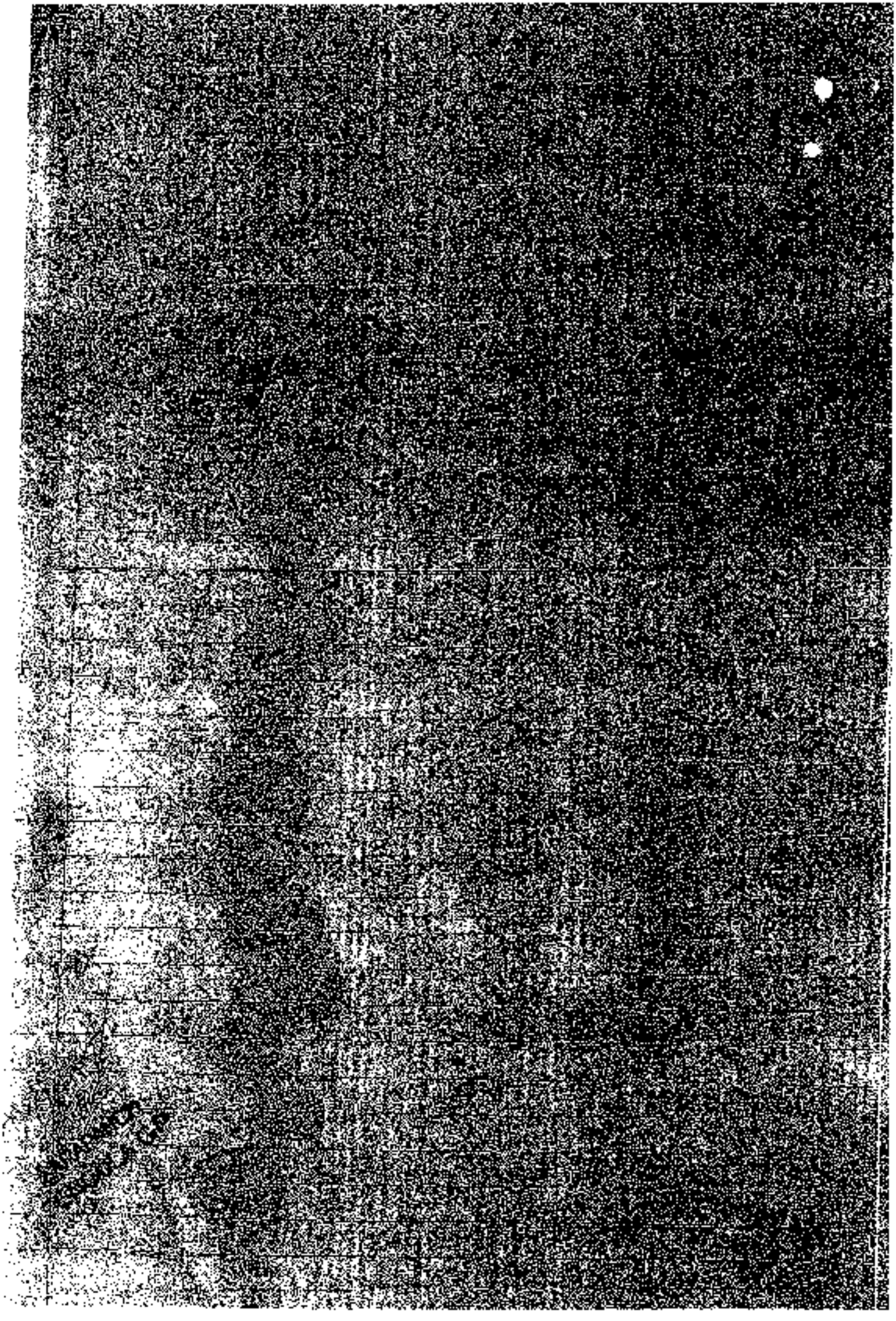
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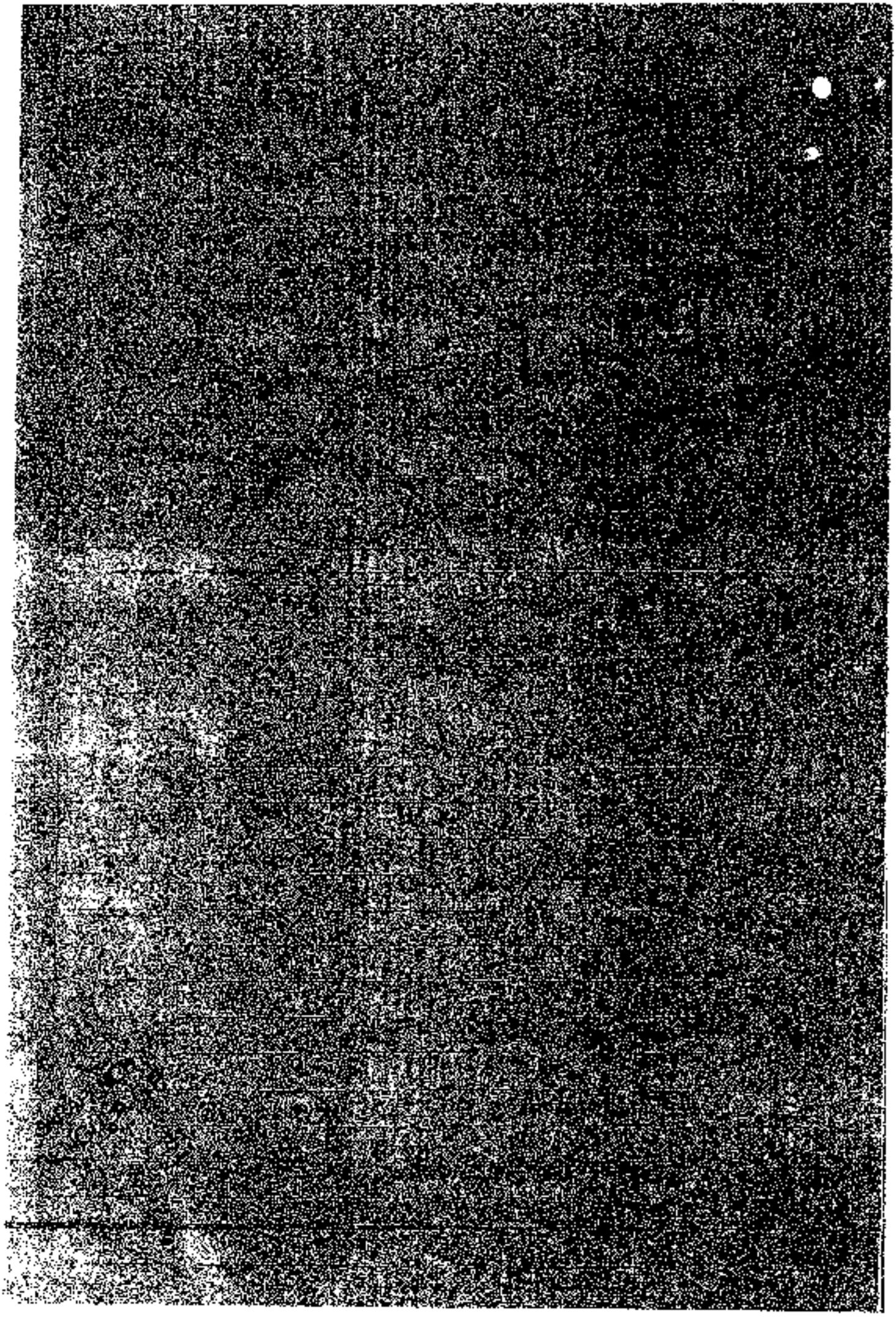
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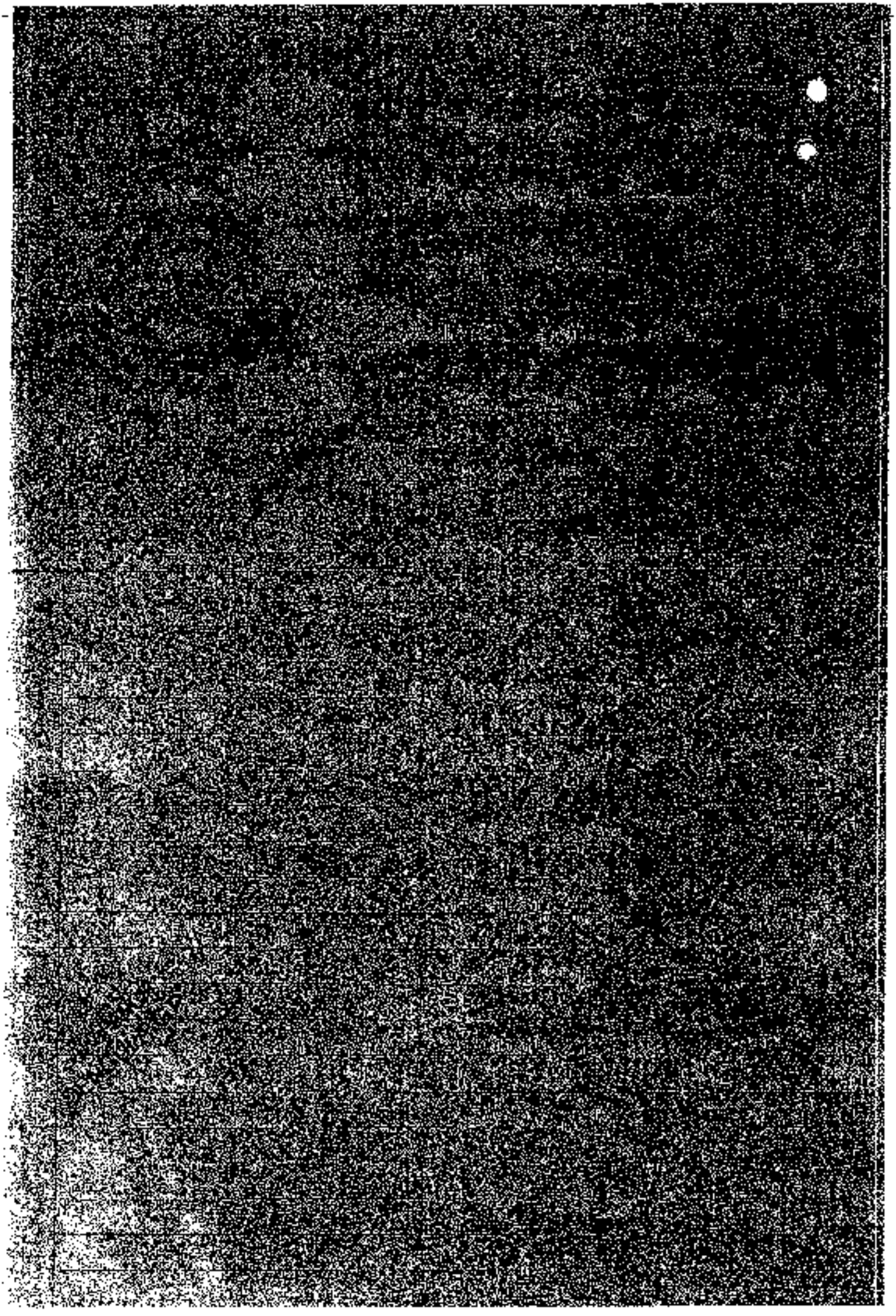
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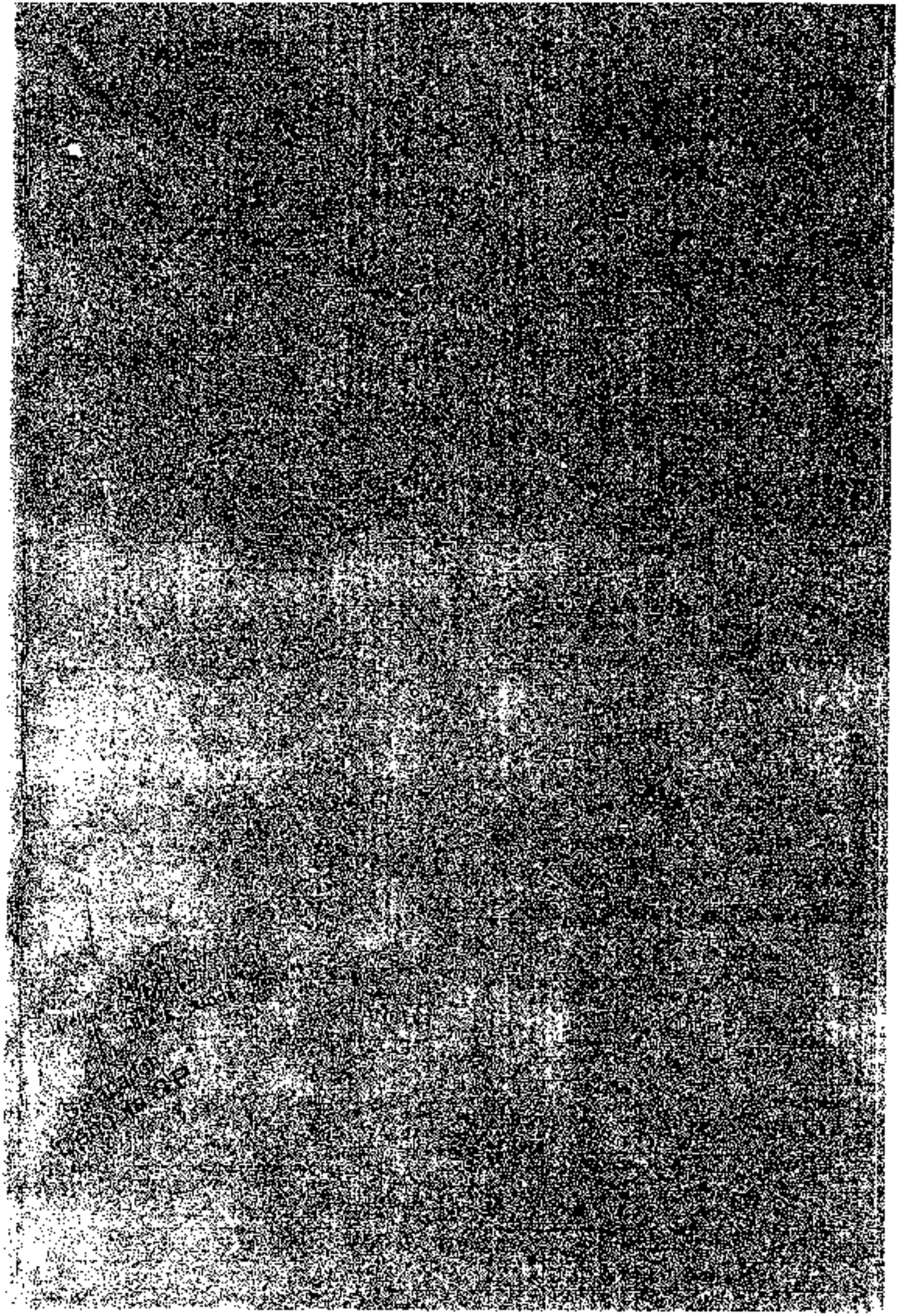
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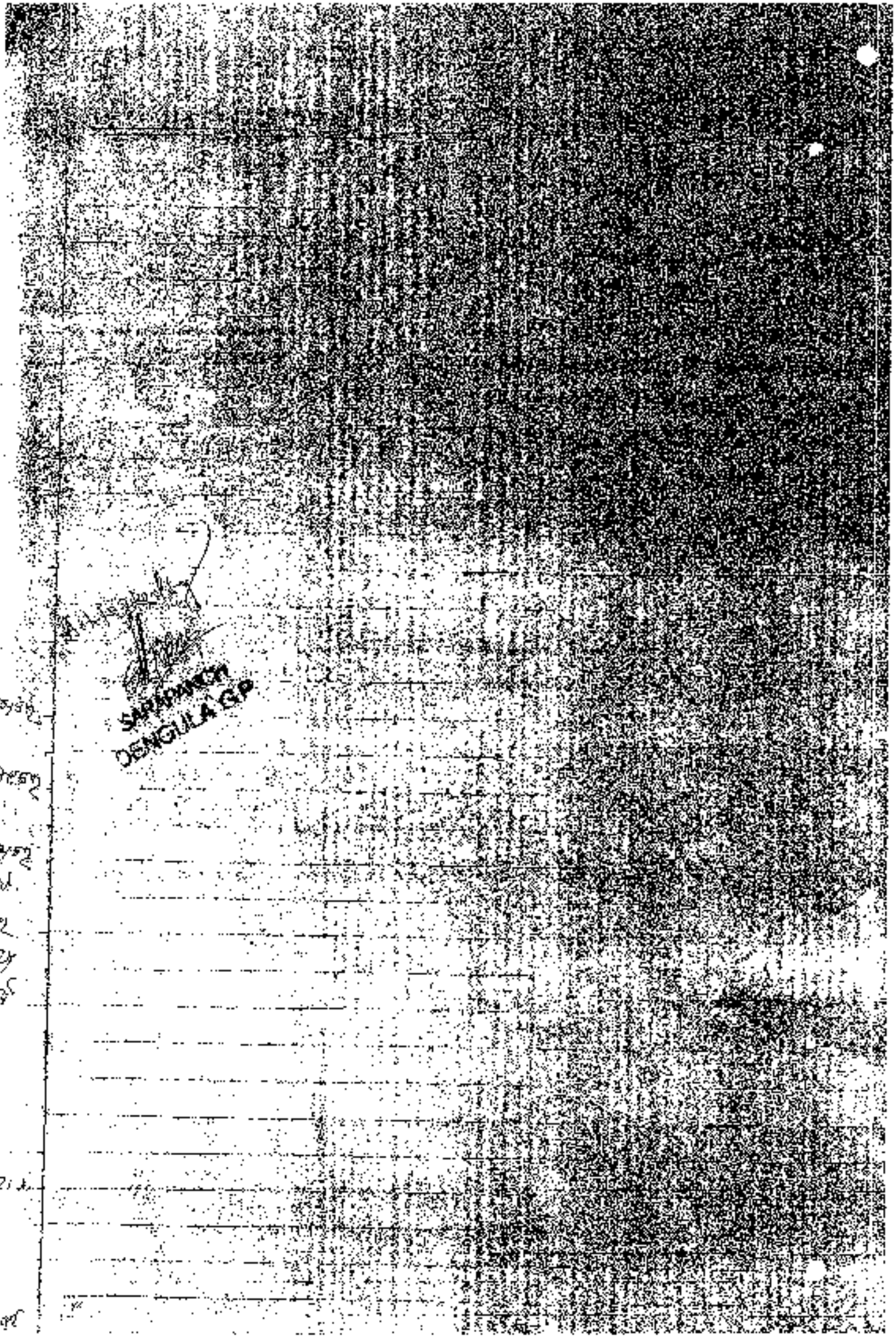


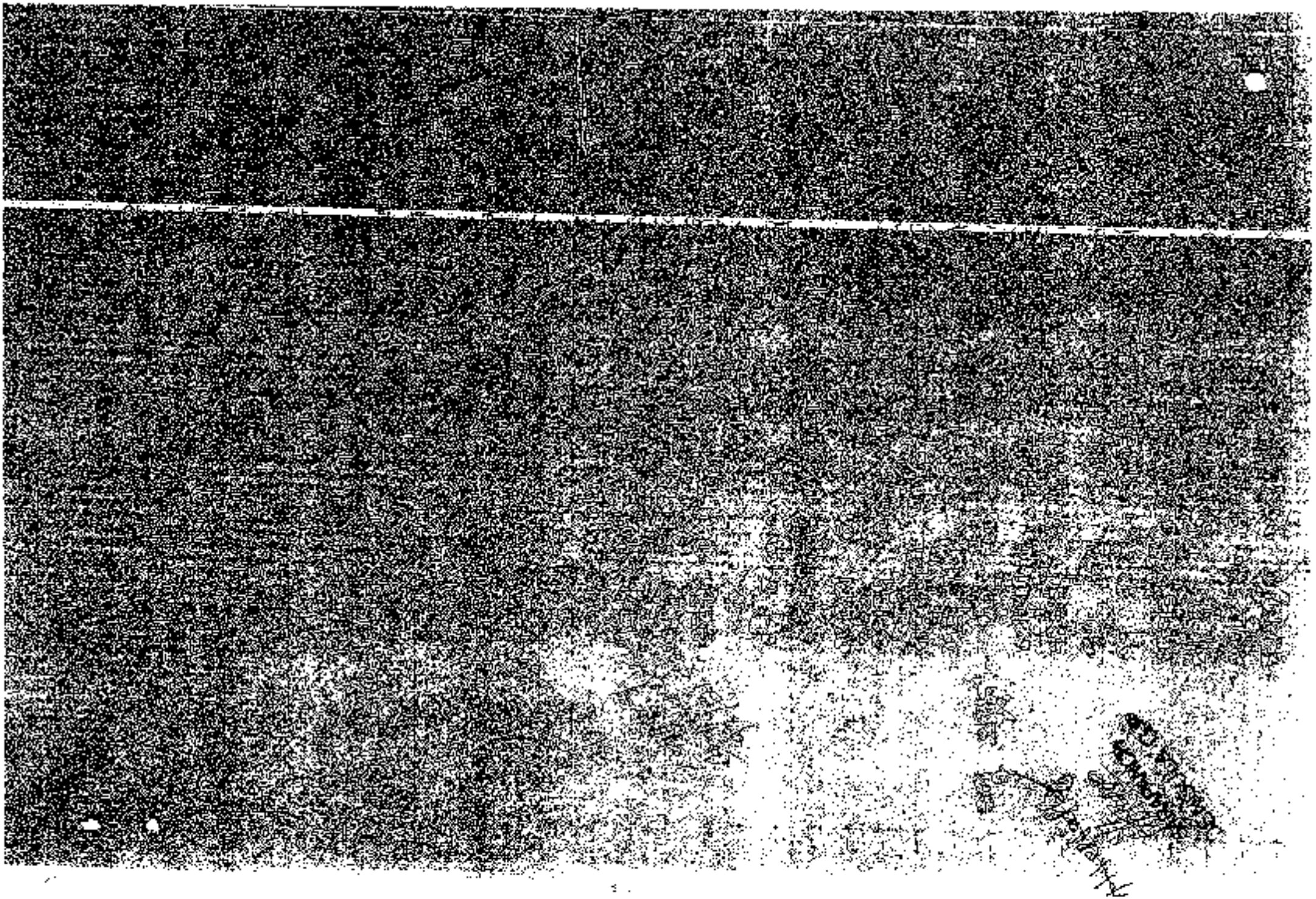
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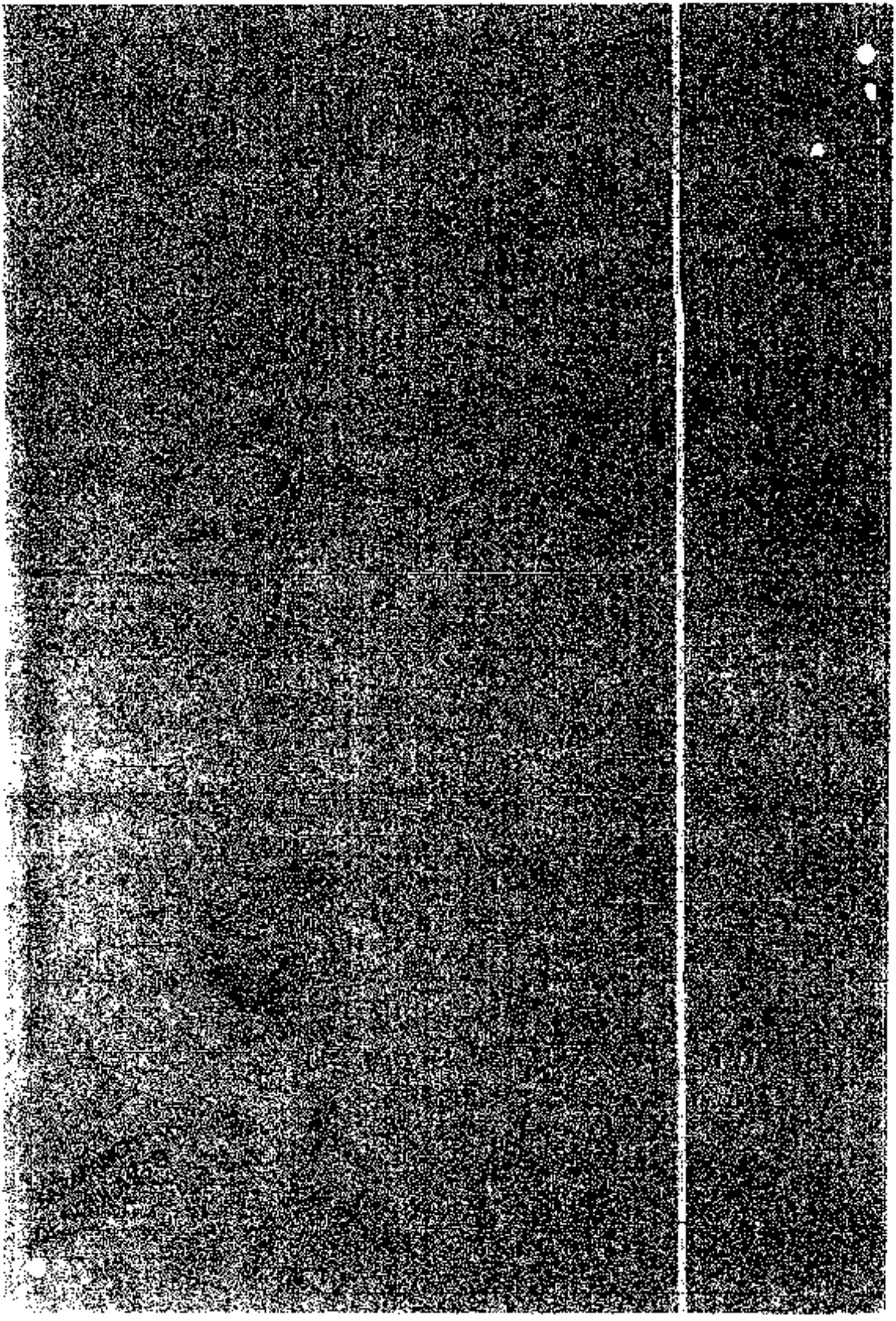


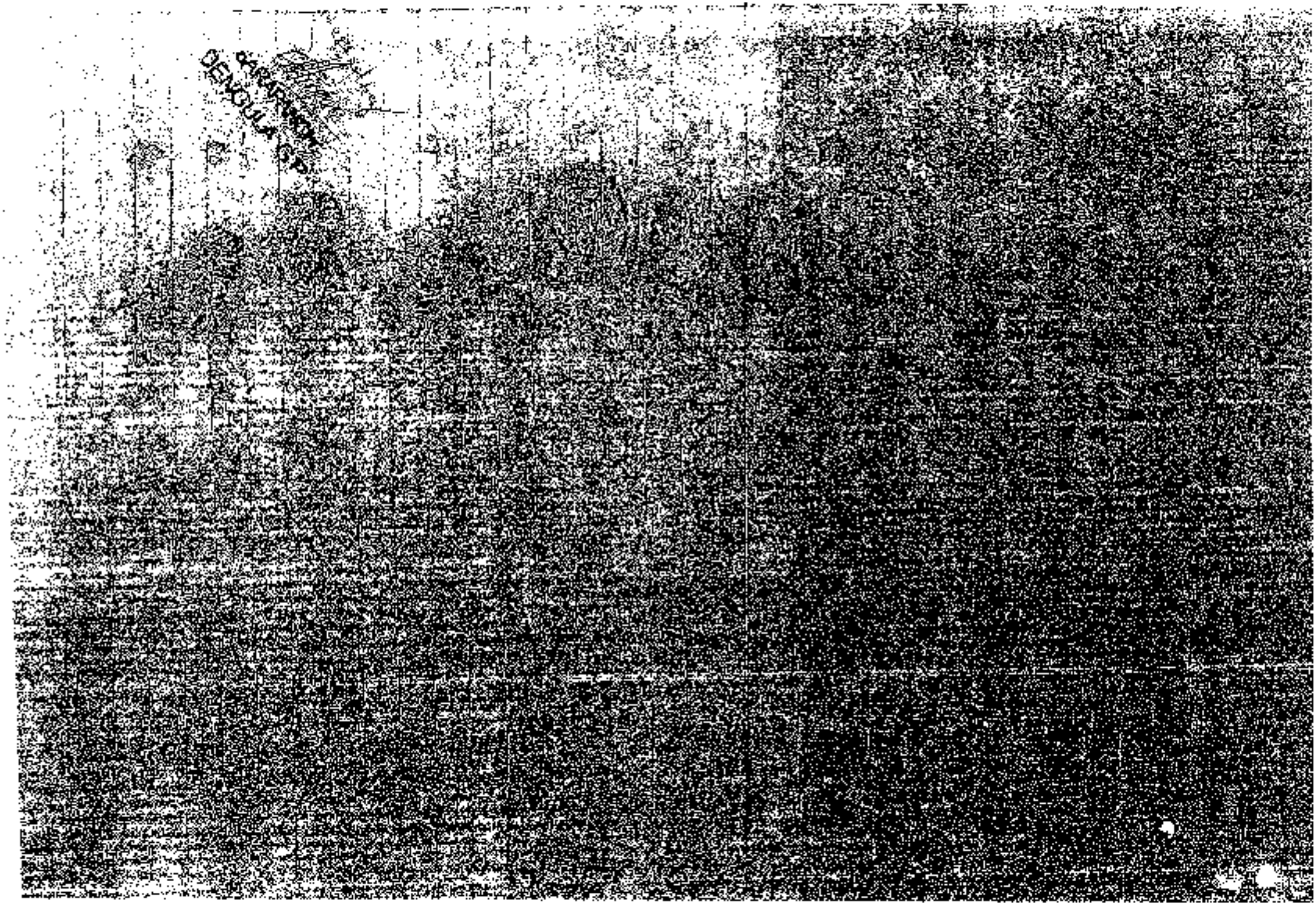





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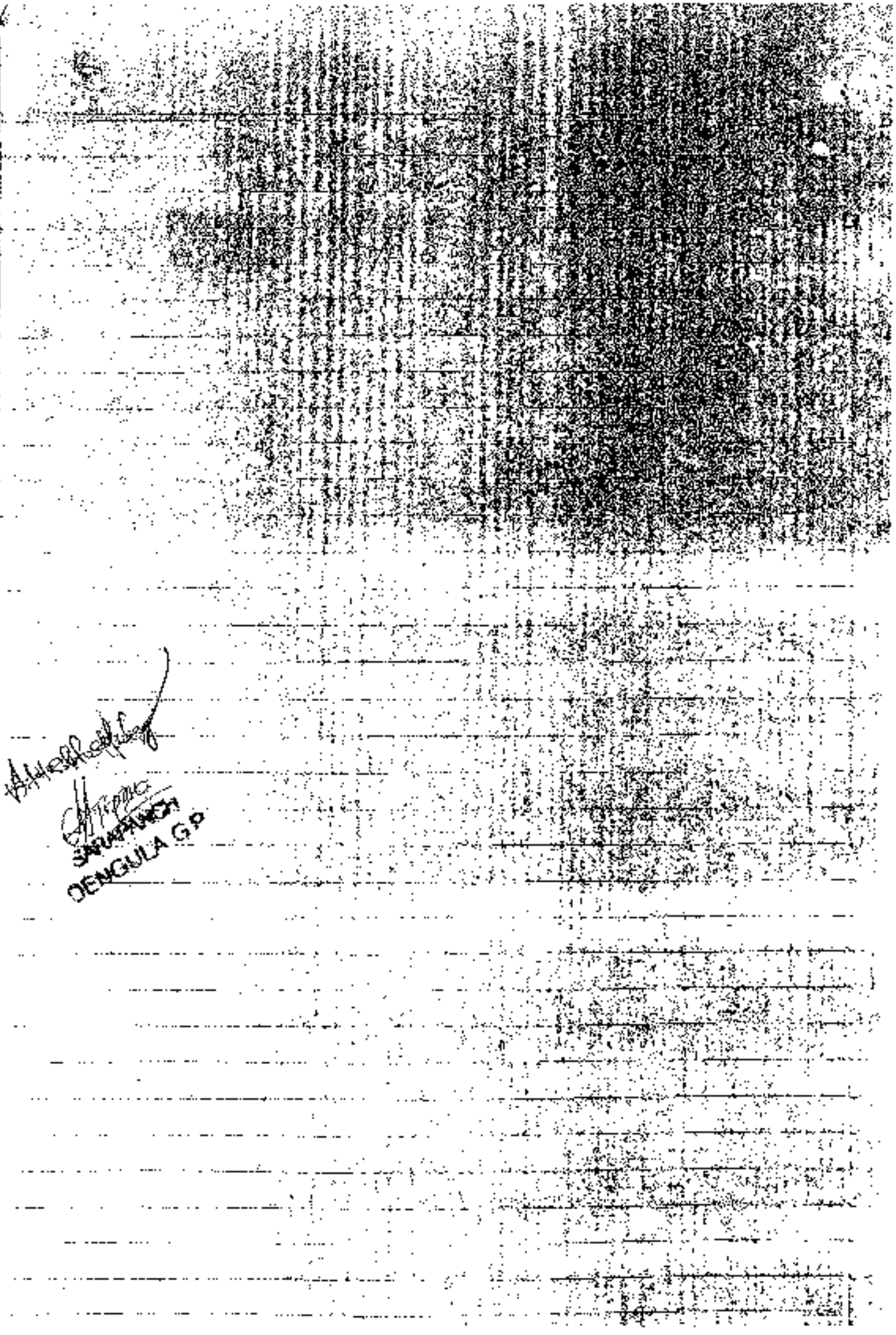


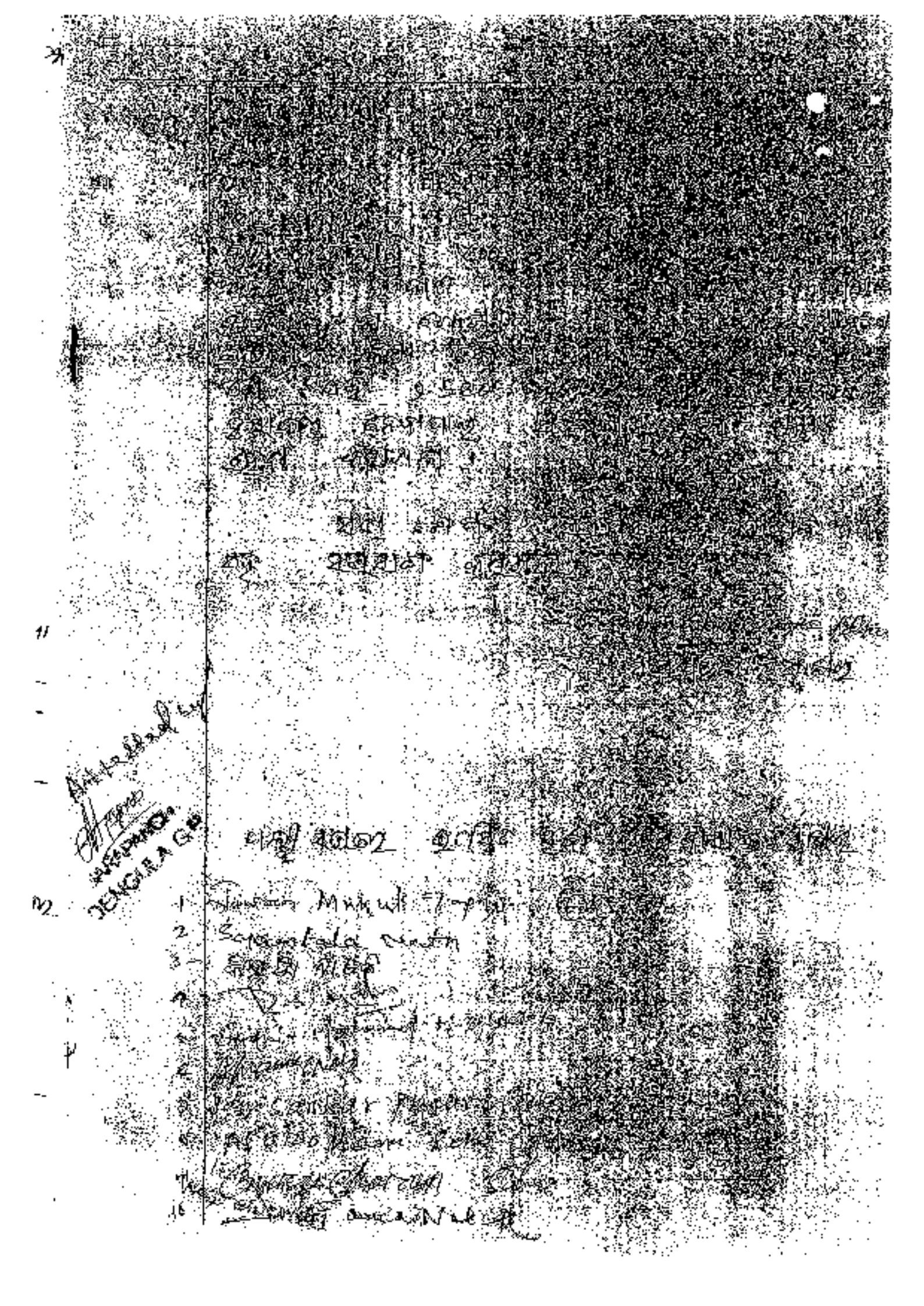


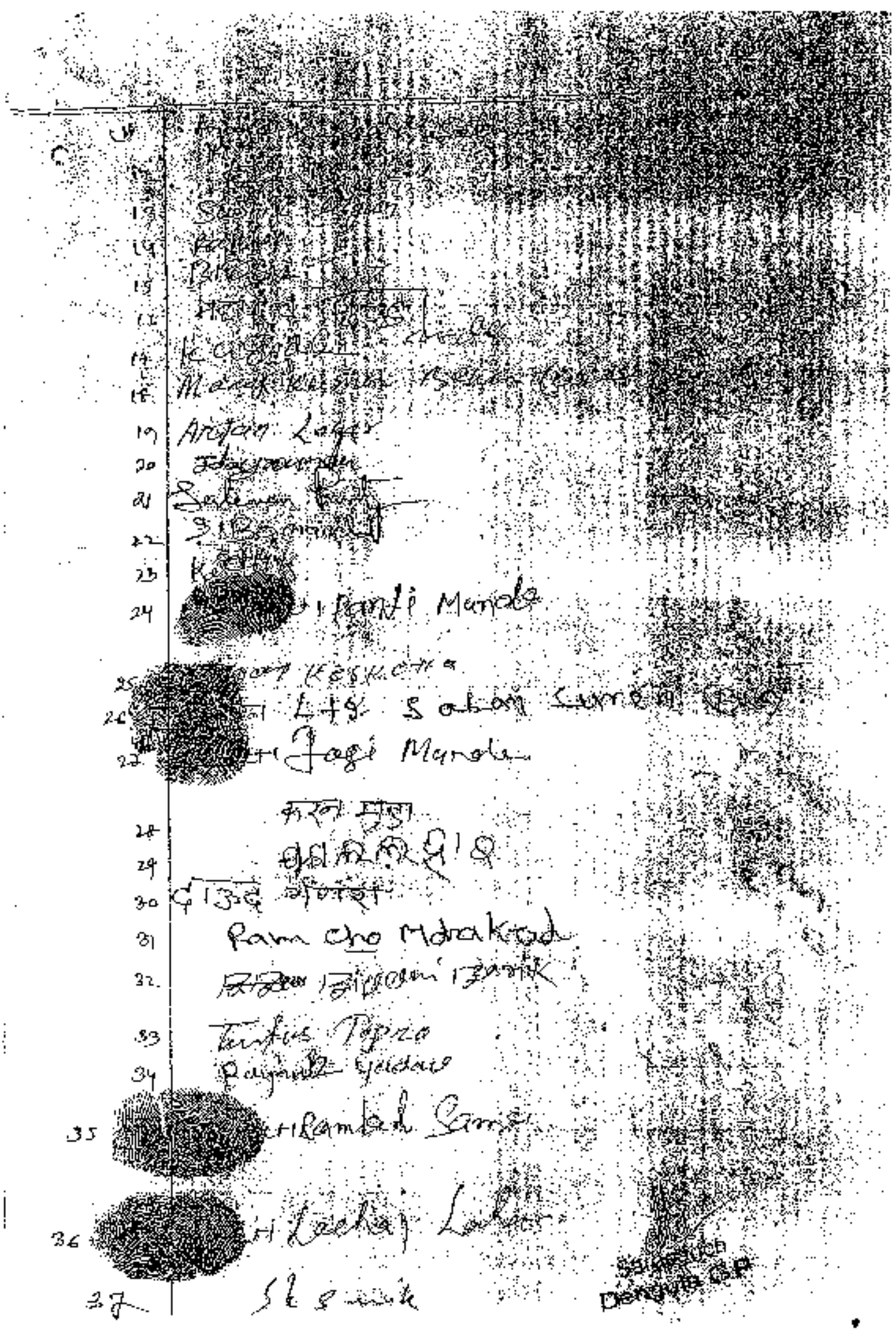

PARAMECIUM
CAUDATUM

Welfare Officer
Block Sundarban, SARADANDA
DENGULA GP

SARADANDA
DENGULA GP







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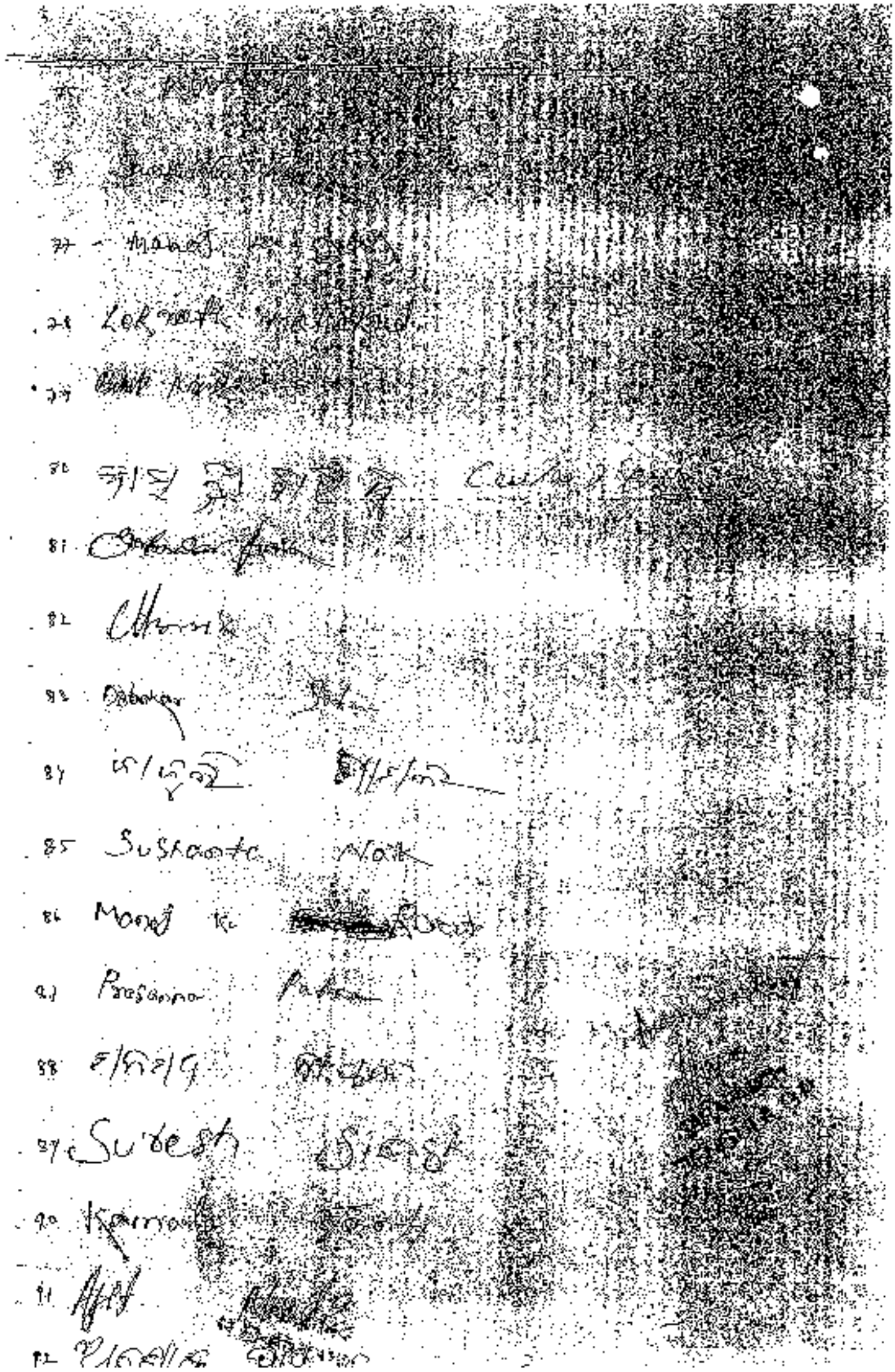
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Sd/-
Deputy G.P



93 Jagadish Patel

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95 Padma charan Pradhan

96 Raja Laxmi Pradhan

97 Sujata Ekka Sahu

98 Manuel Kandulna

99 Raju oram

100 Kani oram

101 Eman munda

102 Keltush Hans

103 Ashok Lakra

104 Susil Lugun

105 Mitra Pastra

106 Bimadin Patra

107 Asis Mahanta

108 Ramesh Topno

109 Chanu oram

Bishnupur
Dumka GP

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129 Saman Patna

130 Raman Patna

131 Ram

132 Sakshi Patna

133 Sonam Delhi

134 Raman Delhi

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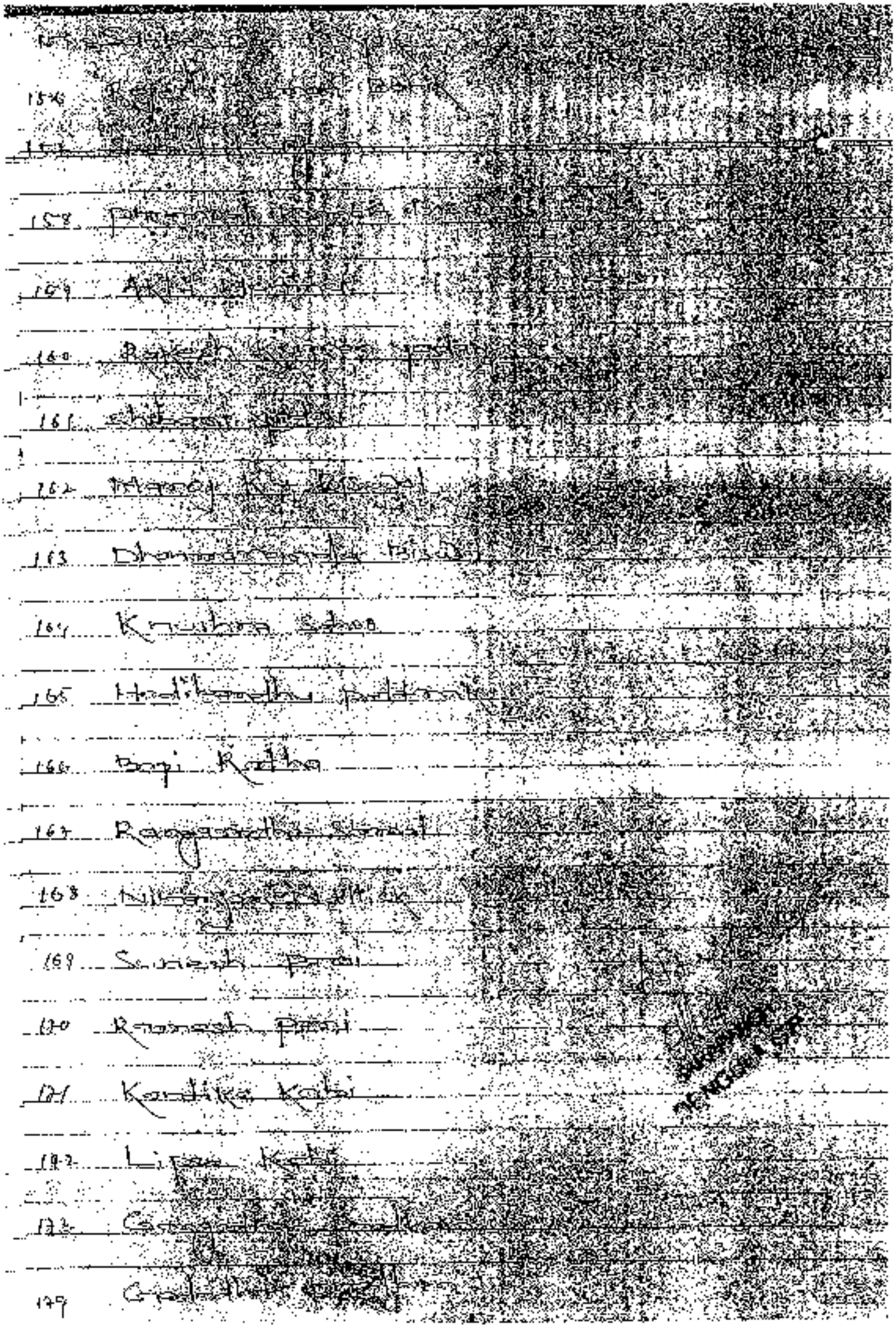
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152 Alka Shaw

153 Diya Nepal

159 Daman Patna



175 Pranab Chakraborty

176 Tarapada Mondal

177 Sanat Mondal

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179 Akbar Ali

180 Rabindra Barik

181 Ranjit Barik

182 Prabir Mahakud

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189 Sasoj Mallick

190 Manoj Mallick

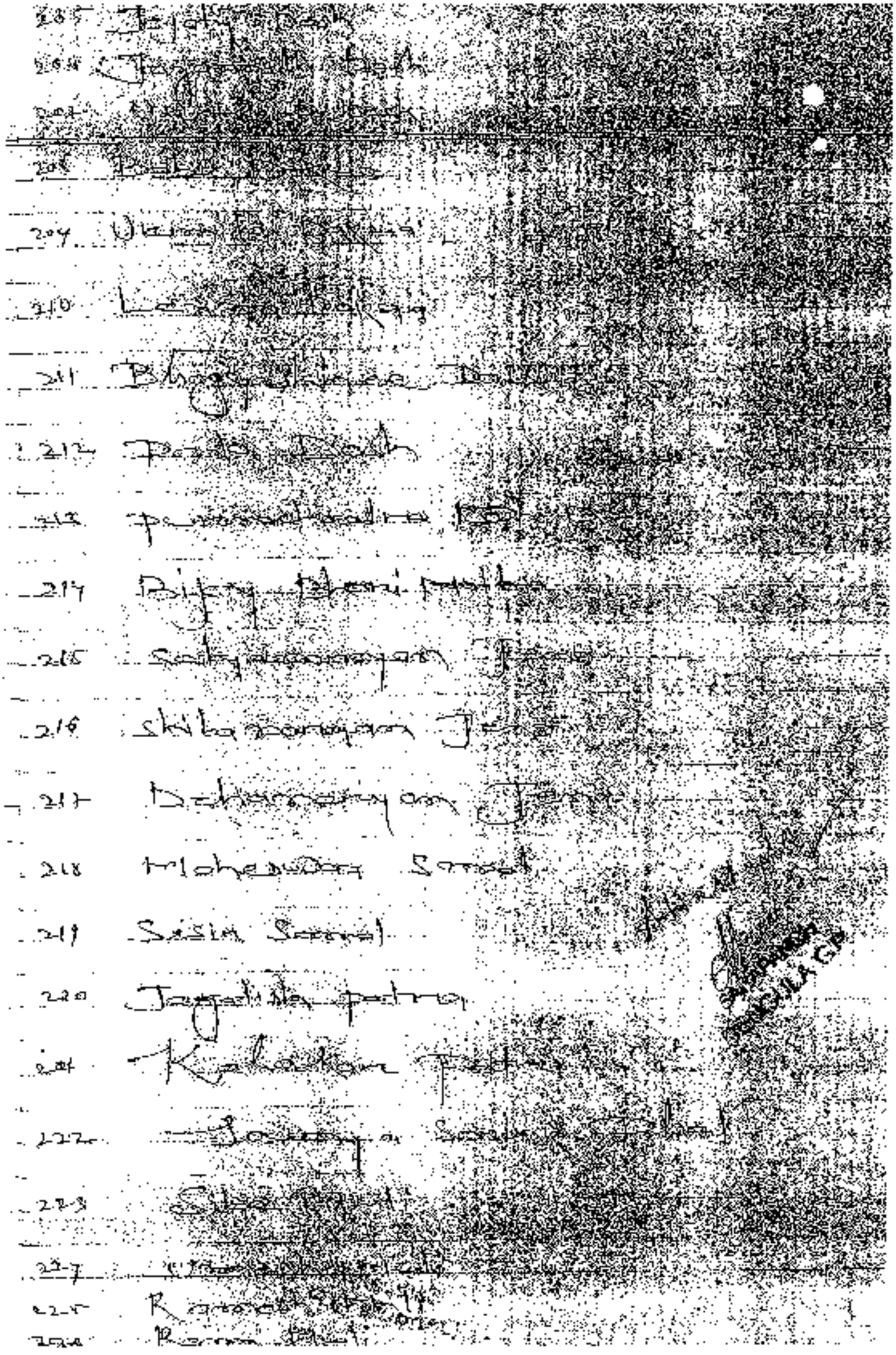
200 Gobinda Mallick

201 Prabir Dash

202 Rabindra Mahapatra

203 Babu Mahapatra

204 Bapi Tripathy



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| 274 | Rama | Routh |
| 275 | Nirmal | Routh |
| 276 | Mahaswar | Rout |
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| 279 | Dadi Nath | Sahu |
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| 283 | Gada Dhar | Patra |
| 284 | LILI | Purti |
| 285 | Sudhakar | Behera |
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Salapanga
Dengula G.P

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322 Rama

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329 Soma

320 Ramtar

331 Ramtar

332 Prakash Ku Sahoo

333 Basanta Sahoo

334 Sashi Ku Basia

335 Haladhar Naik

336 Santosh Sahoo

337 Deepak Sahoo

Sarapanch
nengula G.P

339 Krishnapura Sunk

340 Sunk

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342 Sonada Pada

343 Ramakanta Munda

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346 Anand Bekra

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348 Ramesh Das

349 Sushil Munda

350 Bhebon Munda

351 Hiradhara Mahak

352

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354 Ramesh Das

355 Sona Munda

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359 - Parameshwar

360 - ବିଶ୍ୱଜିତ ରାଉତ

361 - Sanjay munda -

362 - ଦୁଃଖୀ ମୁଣ୍ଡା

363 - ଜଗତି ମୁଣ୍ଡା

364 - ଯୋଗେନ୍ଦ୍ର ମୁଣ୍ଡା

365 - ଗଣ ମୁଣ୍ଡା

366 - Daniel Champia

367 - Santa Lohara

368 Deli Kalua

369 - Monjula Kalua

370 - Kalki pahan

371 - Kamen Hembram

372 - ପ୍ରାଣବାଣ୍ଡୁଲାମୁଣ୍ଡି

373 - ପୁନିଚନ୍ଦ୍ରାମୁଣ୍ଡି

374 - ସକିନ୍ଦ୍ରାମୁଣ୍ଡି

375 - ଦିଗମ୍ବରାମୁଣ୍ଡି

Sarapanch
Dengula G.P

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382 - Sangeeta University

383 - Pearl University

384 - Pushpa Jali Memorial

385 - Medha Mandir

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391 - Literature Universe

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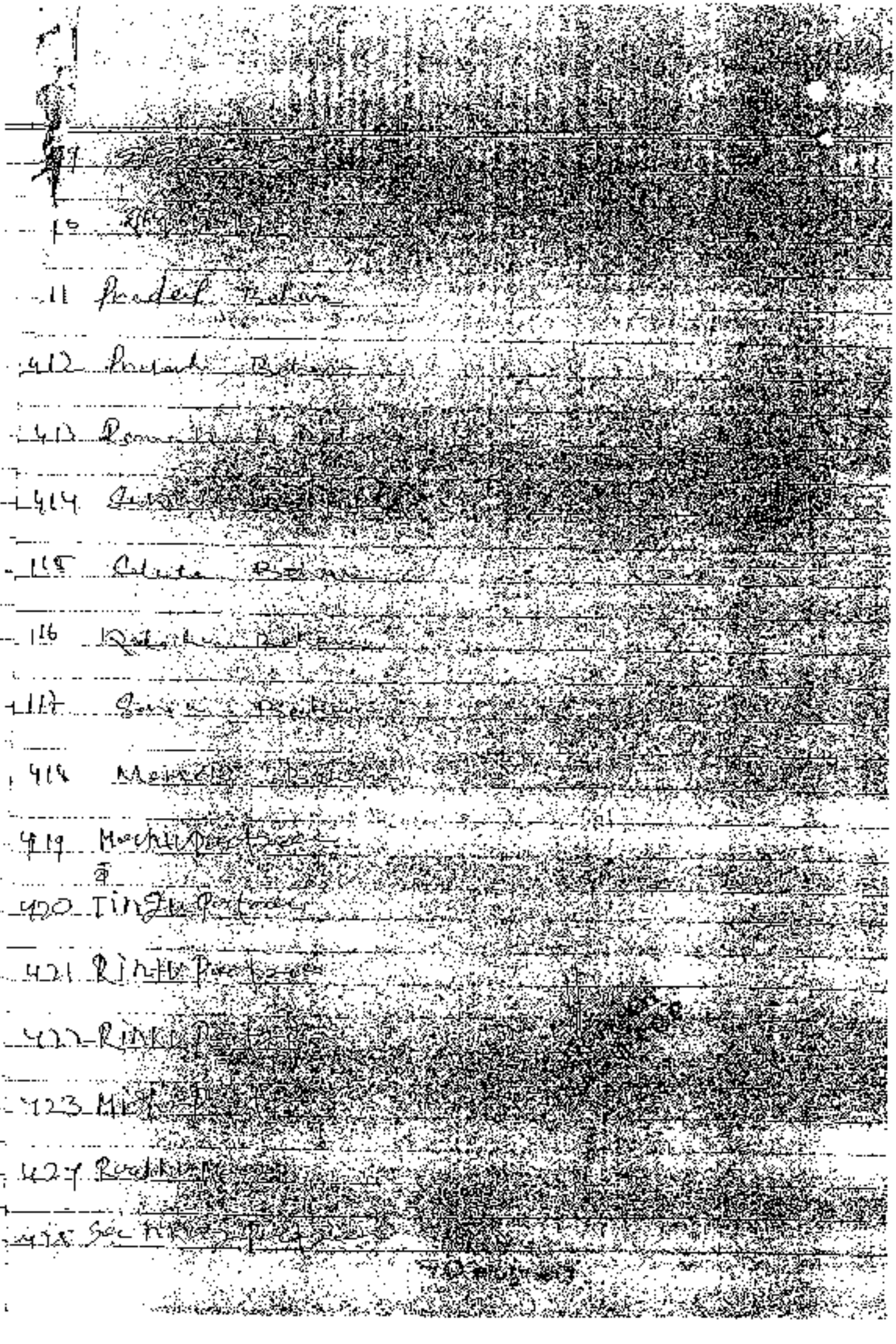
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Dengula GP



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5 431 [illegible]

6 432 [illegible] Subas Nath

7 433 [illegible]

8 434 Subhasree Dash

9 435 [illegible]

10 436 Balabhadra Bhatta Patel

437 DIPTI RANJAN DAS

438 Raja Bisoi

439 Puspalata Dash

440 Lipsa Dash

441 Annapurna Dash

442 Chinki BISWAL

443 [illegible]

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444 Barbadian [illegible]

445 Samuel [illegible]

446 [illegible]

447 Rosna [illegible]

448 Rashna Rebeca

449 Telesforo [illegible]

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452 R.C. [illegible]

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461 S. K. [illegible]

462 D. Jana

463 Bhaja Bandhu Behera

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466 A. K. [illegible]

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471 Baikuntha Pandia

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473 R. M. Shahi

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475 [illegible]

476 M. [illegible]

477 B. [illegible]

478 J. [illegible]

Sarapanch
Dengula GP

481 M. Purse

482 Jadhav

483 B. M.

484

485 S. Sakuta

486 S.

487 Akbar

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490 Akbar Ali

491 Mahadeo

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493 Sumanbai

494 chandramani sahu

495 Prasanta Pandey

496 Kanchan

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Sou Ramani Naik

501 Chandrani Kanta Sahoo

502 Gagan ch Sahoo

503 Bimachi Sahu

504 Dhanaddhar Sahoo

505 Boni Raha

506 R. Raha

507 Dina Naik

508 Raja Naik

509 Rama Sahu

510 Manura Bahera

511 Libu Bahera

512 Mina Naik

513 Raju Munda

514 Kalu Naik

515 Ranjan Nayak

515 Bhambara Sahoo

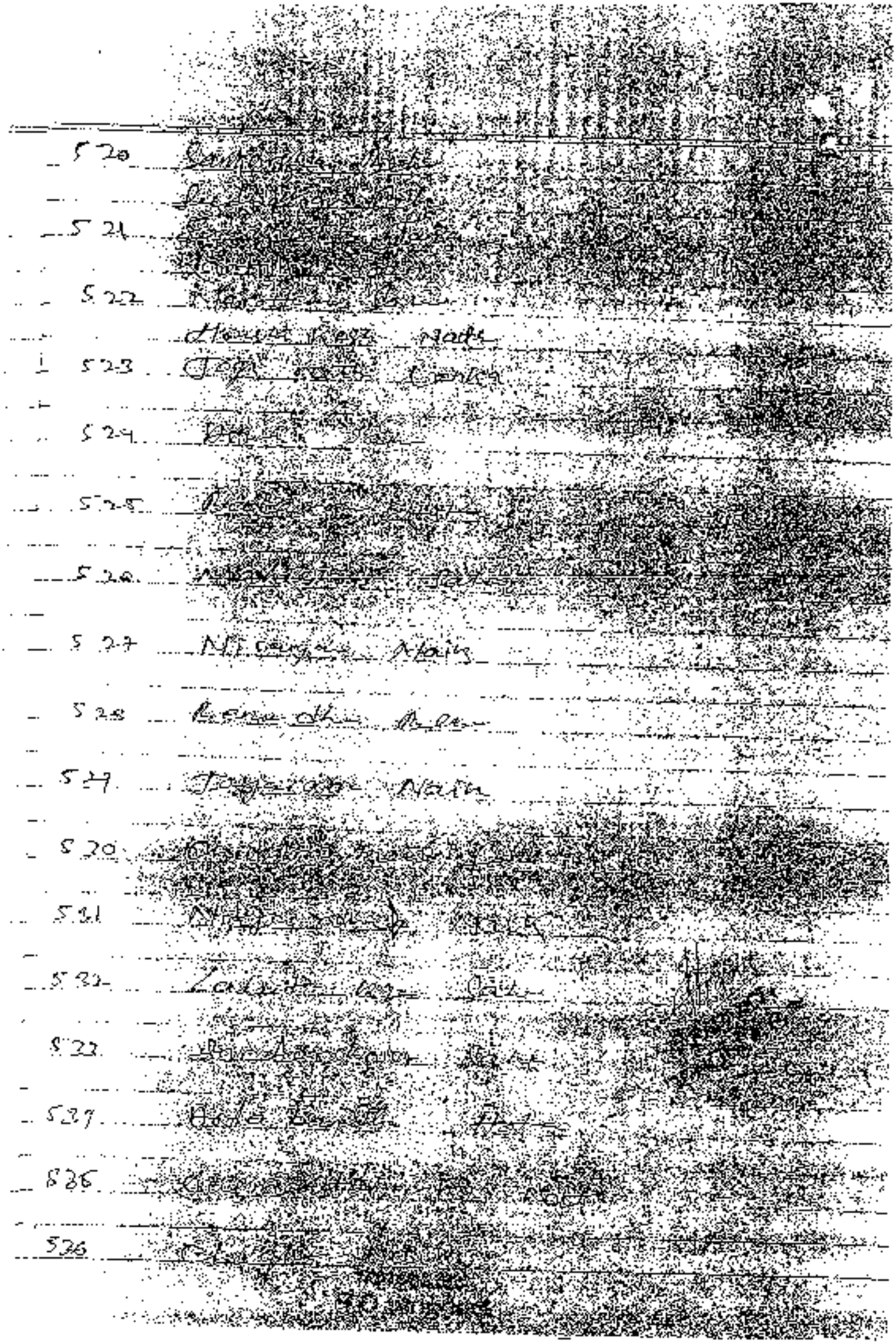
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517 Jaka Naik

518 D. Naik

519 Ramesh Pani

Sarapanch
Dengula GP



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544 Rajesh [illegible]

545 Rama [illegible]

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547 Rajesh kumar Satapathy

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553 [illegible]

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Dengula GP

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557 Somen Kumar Bahadur

558 Dayaram

559 Dilip

560 Alok Sahay

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52 Jageswar Behera

53 Santosh Behera

54 [illegible]

55 Bikash Tanti

56 Md Kadir

57 Sankara Pochmat

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Sarapanch
Mundia GP

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5012 Hari Lal Thapa

5013 Prem Mandal

5014 Prem Bahadur

5015 Nasib Khadka

5016 Manish Patra

5017 [illegible]

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5019 Sumit Sapkota

6000 Dabraj Patra

6001 Himan Sy Prasad [illegible]

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6003 Hukum Joshi

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113 — Pramila Pradhan
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Sarapanch
Dengula G.P

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651 Asmakhatun
652 Nazmuddin
653 Esatun bibi
654 Siraj Ahmad
655 Taslima

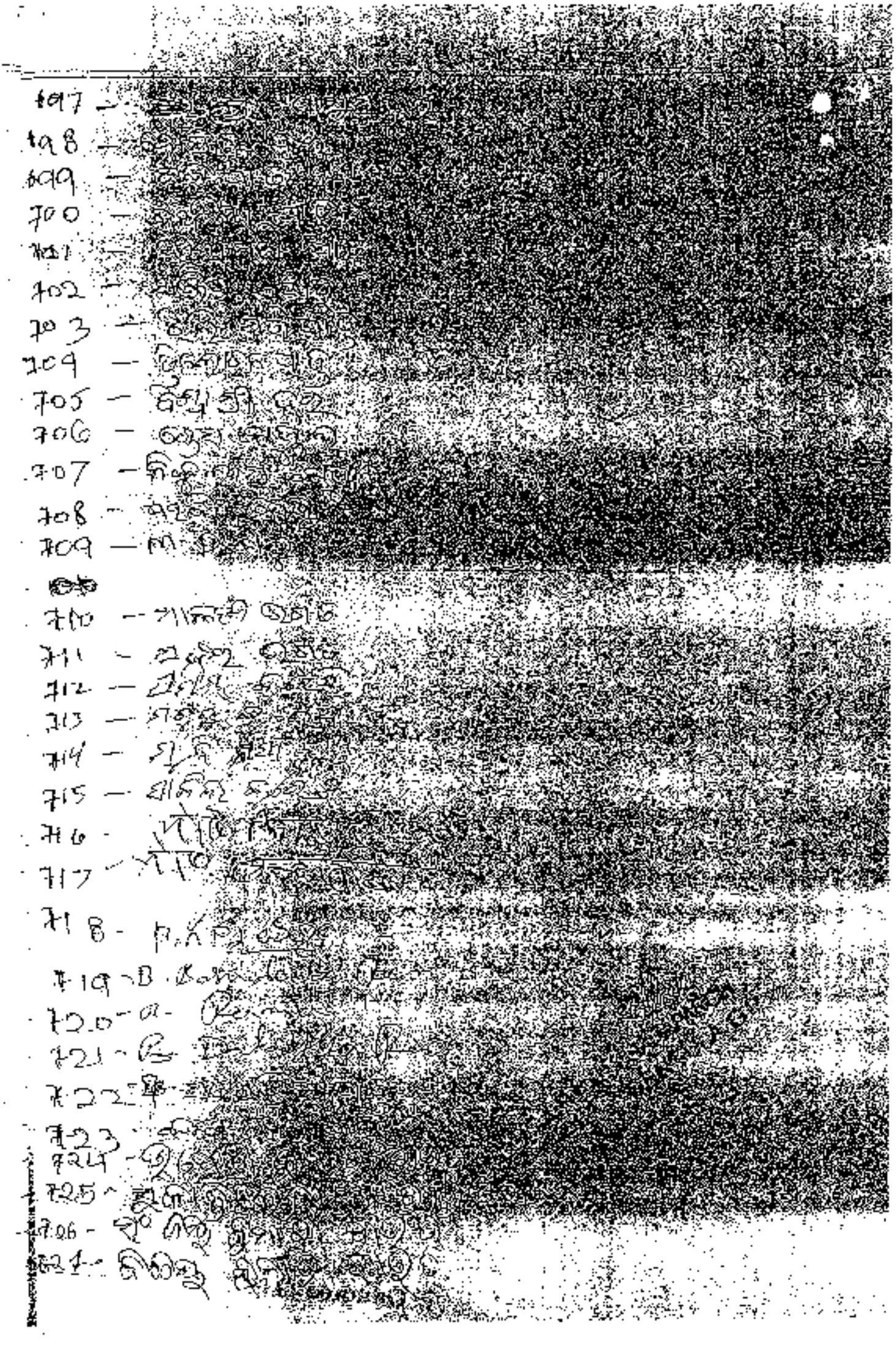
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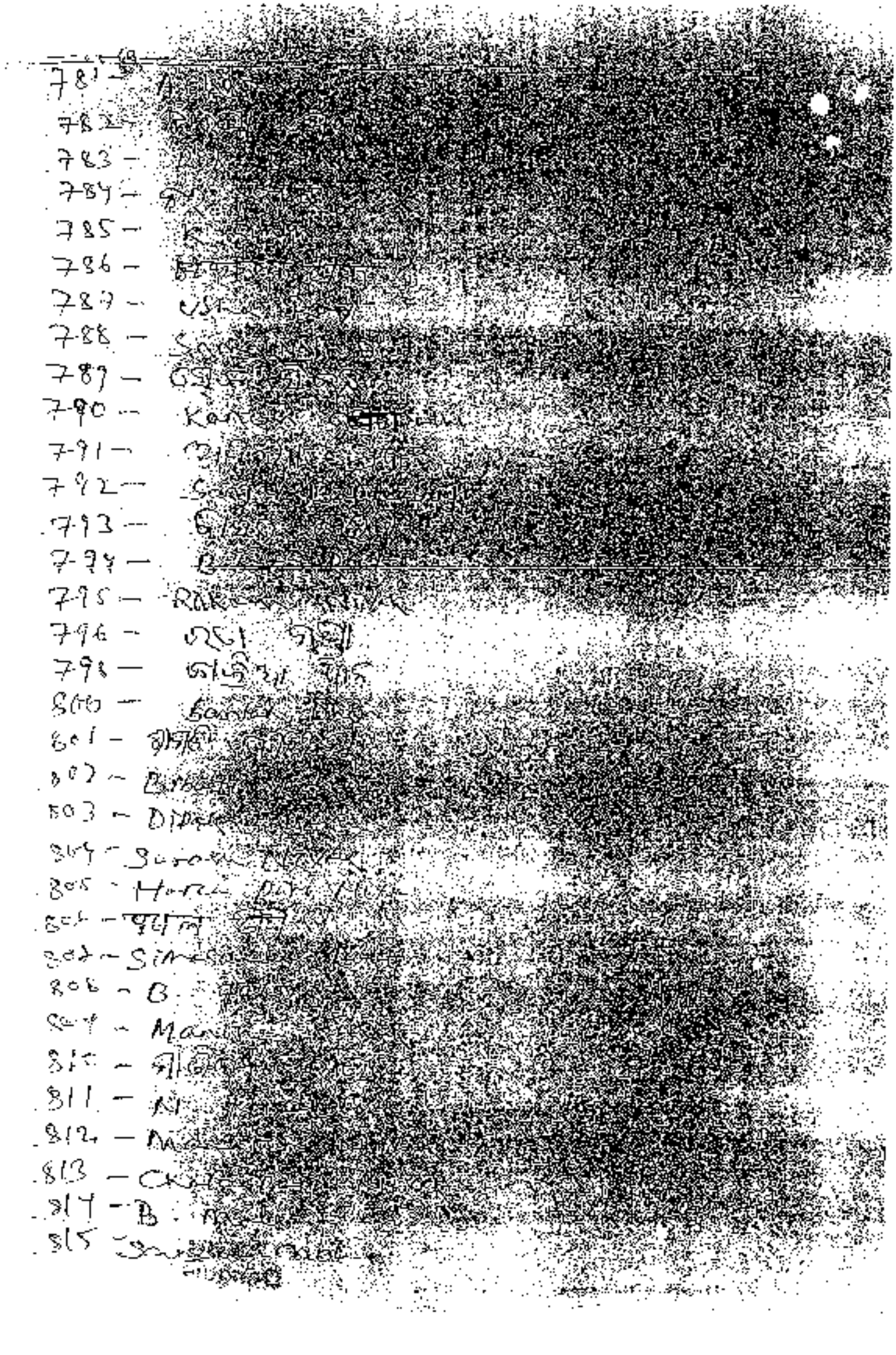
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679 - Aditi Jaiswal
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681 - Rajesh Jaiswal
682 - Ramkali Jaiswal
683 Suresh Prasad Jaiswal
684 - Maya devi Jaiswal
685 Sanjay Jaiswal
686 - Suman Jaiswal
687 - Shivanand Rudy
688 - Sailesh Rudy
689 - Jyoti Rudy
690 - Rajnish Rudy
691 - Bimla Rudy
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Sarpanch
Dengula GP



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735. Raja Mukhi
736. Shekhar Mukhi
737. Rita Mukhi
738. Deepak Mukhi
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757 - Daman [illegible]
758 - Sanjib Yadav
759 - G. Dash
760 - M. Mahanti

Sarapanch
Dengula GP



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827- Ranata [illegible]
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834- Ramakanta Behera
835- [illegible]
836- Sanketakumar [illegible]
837- [illegible]
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842- [illegible]
843- Pramod Kumar Naik
844- [illegible]
845- [illegible]
846- Narayan Sahu
847- Prabhanta Kumar [illegible]
848- Kalpalata Naik

Sarpanch
Dengula G.P

849 - Harpreet [illegible]
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856 - Prophet [illegible]
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859 - Shushant [illegible]
860 - [illegible]
861 - Benumhayan Pandey
862 - Kunchan [illegible]
863 - Trinath [illegible]
864 - [illegible]
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866 - [illegible]
867 - Nelamber Road
868 - Lokenath Poddar
869 - [illegible]
870 - Ashok Kanan Road
871 - [illegible]
872 - Raja Lakhan Road
873 - [illegible]
874 - Subrata Roy
875 - [illegible]
876 - [illegible]
877 - Saila bala Singh
878 - Balaram Road
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880 - [illegible]
881 - Dhramtala Road

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893 - [illegible]
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905 - Prupi Mishra
906 - Hari Bandhu Behera
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Sarapanch
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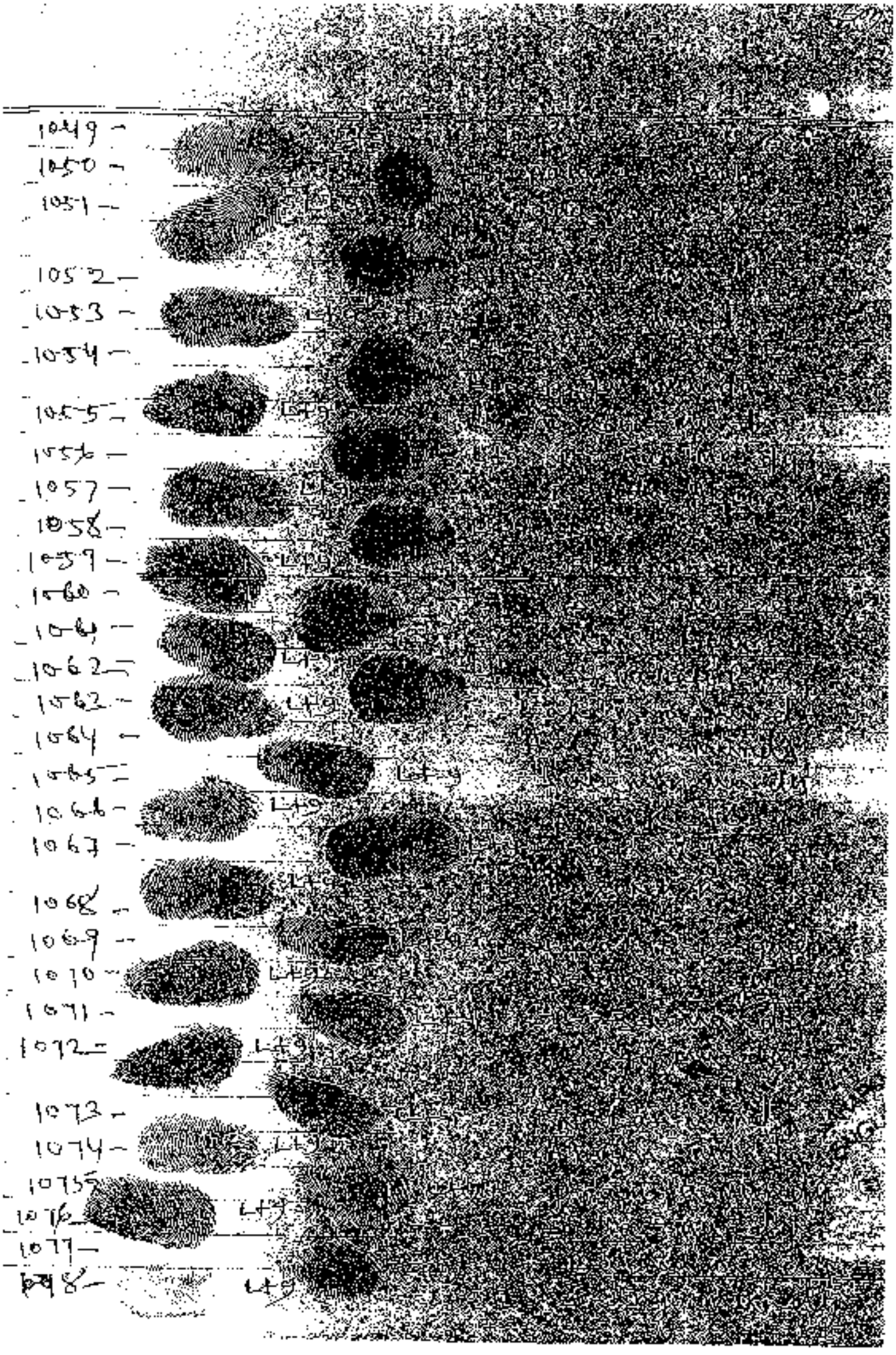
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932 – Ullash Kumar [illegible]
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934 – Bramha [illegible]
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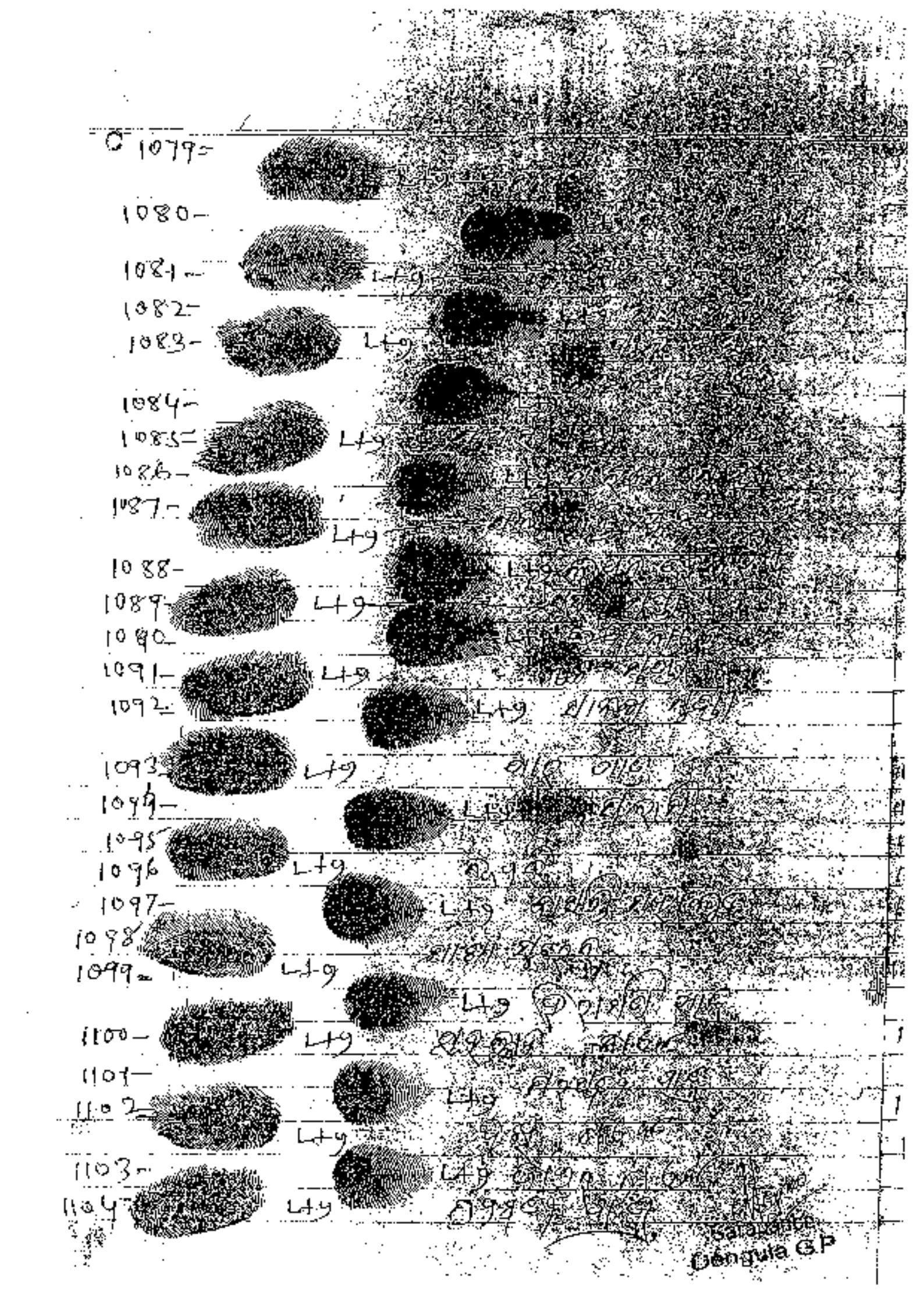
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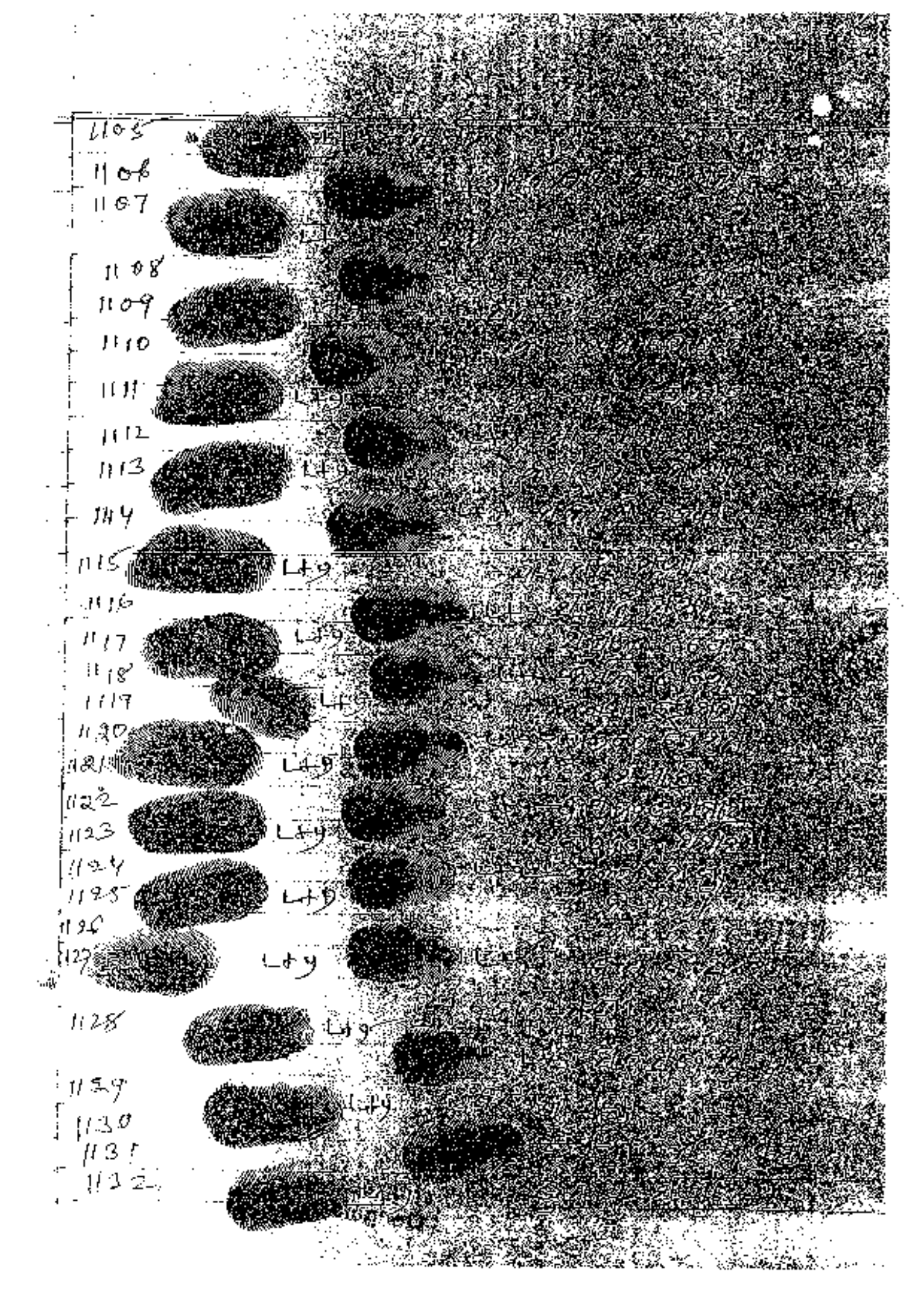
Bangalore

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1133 - Budhan Baipai
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1138 - ବିଜୟ ମହାନ୍ତି
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1234 Padma Hansda

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1237 Prasanta Kumar Patra

1238 Basanta Kumar Mishra

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1241 Govinda Shankar Mishra

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1243 Sisir Behera Mallik

1244 Chanda Behera Mallik

1245 Sitesh Nag

1246 Sisir Nag

1247 [illegible]

1248 Ranjeeta Sahoo

[illegible]

Welfare Officer, Balasore

Executive Officer

Panchayat Samiti, Balasore

[illegible]

DENGURA C.P.

Office of the Project Administrator
27 DEC 2022
TOPTDA, Sundargarh

# OFFICE OF THE TAHASILDAR, KOIRA

Ph/Fax- 06625-235380, E-mail: tah.koida-od@nic.in

Letter No. 3041 /Date 26.12.2022

Sub: - Submission of information required for Diversion Proposal of forest land measuring 16.98 hect. for Iron and Manganese Ore Mining of M/s CP Sharma in village-Tensa, Bahamba & Raikela under Koira Tahasil.

Ref. - Your office letter no 7483/FRA dt.22.12.2022

Sir,

With reference to the subject cited above, I am to say that, no FRA tittle has been issued to any beneficiaries within the proposed area for diversion under Forest Right Act 2006. Further I am to say that no new FRA claim application has been received in the special drive under saturation of FRA within proposed area for diversion of 16.98 ha./Ac.41.956 dec. of M/s CP Sharma. The land schedule has been given below.

**LAND SCHEDULE**

| Mouza | Khata No. | Plot No. | Kisam | Area in Ha. | Area in Ac. | Remarks |
|---|---|---|---|---|---|---|
| Tensa | 2 | 194/p | Jungle | 0.131 | 0.324 | Revenue Forest |
| Tensa | 2 | 194/217/p | Jungle | 0.628 | 1.552 | Revenue Forest |
| Tensa | 2 | 173/218/p | Jungle | 0.441 | 1.089 | Revenue Forest |
| Tensa | 2 | 192/p | Jungle | 0.017 | 0.042 | Revenue Forest |
| Bahamba | 25 | 84/p | Pahad | 0.187 | 0.462 | DLC Forest |
| Bahamba | 25 | 85/p | Pahad | 1.453 | 3.590 | DLC Forest |
| Bahamba | 25 | 86/p | Pahad | 0.034 | 0.084 | DLC Forest |
| Bahamba | 25 | 114/p | Pahad | 0.551 | 1.361 | DLC Forest |
| Bahamba | 25 | 120/p | Pahad | 1.356 | 3.351 | PRF |
| Bahamba | 25 | 120/p | Pahad | 0.009 | 0.022 | PRF |
| Bahamba | 25 | 121 | Pahad | 2.379 | 5.879 | DLC Forest |
| Bahamba | 25 | 122/p | Pahad | 0.206 | 0.509 | PRF |
| Bahamba | 29 | 123/p | Jungle | 0.252 | 0.623 | PRF |
| Raikela | 66 | 600/p | Pahad | 3.473 | 8.581 | DLC Forest |
| Raikela | 66 | 601/p | Pahad | 1.190 | 2.940 | DLC Forest/PRF |
| Raikela | 66 | 601/p | Pahad | 0.075 | 0.185 | PRF |
| Raikela | 66 | 608/p | Pahad | 0.482 | 1.191 | DLC Forest |
| Raikela | 66 | 609/p | Pahad | 3.949 | 9.756 | DLC Forest |
| Raikela | 66 | 602/p | Pahad | 0.167 | 0.413 | DLC Forest |
| | | TOTAL: - | | 16.98 | 41.956 | |

This is for favour of your kind information and necessary action.

Yours faithfully,

26/12/22

Tahasildar, Koira.

Memo No. 3042 Dt. 26.12.2022

Copy submitted to the Additional District Magistrate/PA ITDA, Sundargarh for favour of kind information and necessary action.

Tahasildar, Kolra.

## OFFICE OF THE COLLECTOR & DISTRICT MAGISTRATE: SUNDARGARH

**(Mining Section)**

E mail ID-dcminingsng@gmail.com

No. 53 /XII-B-101/18, Dt. 20.02.2020

To

The Deputy Director of Mines, Koira

Sub - Authenticatioin of lease map, land schedule & boundary description in respect of the mining lease of Sri C.P.Sharma for Iron and Manganese Ore in village-Bahamba, Raikela and Tensa under Bonai Sub-Division of Sundargarh district.

Ref - Your letter No. 245/Mines, dtd 17.01.2020

Sir,

With reference to the letter on the subject cited above, I am to submit herewith the lease map land schedule & boundary description of the mining lease area over 69.506 ha in village Bahamba, Raikela and Tensa under Bonai Sub-Division of Sundargarh district after duly authentication by Collector Sundargarh

Yours faithfully,

Deputy Collector (Mining)
Collectorate, Sundargarh

# BOUNDARY DESCRIPTION

REVISED BOUNDARY DESCRIPTION OF THE M. L. AREA FOR IRON & MANGANESE OVER AN AREA 172.00 AC. OR 69.606 HA OF SRI CHANDI PRASAD SHARMA IN VILLAGES RAIKELA No.14, TENSA No.13 AND BAHAMBA No. 249, UNDER BONAI SUB-DIVISION IN SUNDARGARH DISTRICT, ODISHA.

REFERENCE POINT :- THE REFERENCE POINT IS THE VILLAGE TRIJUNCTION POINT OF VILLAGES RAIKELA No.14, BAHAMBA No. 249 AND RESERVED FOREST (SARKUNDA STATE FOREST).

STARTING POINT :- THE STARTING POINT 'A' IS SITUATED WITH A MAGNETIC BEARING OF 252° 00' 00" AND AT A DISTANCE OF 1320 ft. OR 402.334 M. FROM THE VILLAGE TRIJUNCTION POINT OF VILLAGES RAIKELA No.14, BAHAMBA No. 249 AND RESERVED FOREST (SARKUNDA STATE FOREST).

From station 'A" the boundary line moves clock wise as follows.

| LINE | MAGNETIC BEARING | INTERIOR ANGLE | DISTANCE IN MTR. | DISTANCE IN FEET | REMARKS |
|---|---|---|---|---|---|
| A-A1 | 312° 00' 00" | 91° 30' 00" | 174.649 | 573 | 3000 ft or 914.397 m |
| A1-A2 | | 180° 00' 00" | 147.218 | 483 | |
| A2-A3 | | 180° 00' 00" | 165.202 | 542 | |
| A3-A4 | | 180° 00' 00" | 135.025 | 443 | |
| A4-A5 | | 180° 00' 00" | 83.514 | 274 | |
| A5 A6 | | 180° 00' 00" | 96.927 | 318 | |
| A6 B | | 180° 00' 00" | 111.862 | 367 | |
| B-B1 | | 63° 00' 00" | 72.846 | 239 | 3960 ft or 1207.004 m |
| B1-B2 | | 180° 00' 00" | 210.006 | 689 | |
| B2-B3 | | 180° 00' 00" | 171.906 | 564 | |
| B3 B4 | | 180° 00' 00" | 130.453 | 428 | |
| B4-B5 | | 180° 00' 00" | 291.083 | 955 | |
| B5-B6 | | 180° 00' 00" | 164.591 | 540 | |
| B6-C | | 180° 00' 00" | 166.115 | 545 | |
| C-C1 | | 115° 30' 00" | 167.944 | 551 | 1280 ft or 390.142 m |
| C1-C2 | | 180° 00' 00" | 106.070 | 348 | |
| C2-D | | 180° 00' 00" | 116.128 | 381 | |
| D-D1 | | 90° 00' 00" | 88.696 | 291 | 3500 ft or 1066.796 m |
| D1-D2 | | 180° 00' 00" | 173.126 | 568 | |
| D2-D3 | | 180° 00' 00" | 342.594 | 1124 | |
| D3-D4 | | 180° 00' 00" | 262.432 | 861 | |
| D4-D5 | | 180° 00' 00" | 131.673 | 432 | |
| D5-A | | 180° 00' 00" | 68.275 | 224 | |

N.B. Thus the traverse gets closed over an area of 172.00 Ac. or 69.606 hc

COUNTERSIGN

Deputy Director of Mines
KOIRA

Divisional Forest Officer
Bonai Division

20.09.19
Sr. Surveyor
O/o. D.D.M, KOIRA

Asst. Conservator of Forests
Bonai Division

Revenue Supervisor
KOIRA

Tehsildar
KOIRA 17.10.19

Forester
Bengula Section

Forest Range Officer
Bamnan Range

# LAND SCHEDULE

OF ML AREA FOR IRON & MANGANESE OVER AN AREA 69.606 HA OF SRI CHANDI PRASAD SHARMA IN VILLAGE RAIKELA No.14, TENSA No.13 AND BAHAMBA No.249 UNDER BONAI SUB DIVISION IN SUNDARGARH DISTRICT ODISHA

| Sl. No | Village Name | Khata No | Plot No | Kissam | Name of the tenant | Total area of Plot as per RoR (in Ac) | Area as per lease (in Ac) |
|---|---|---|---|---|---|---|---|
| 1 | Bahamba | 25 | 84/P | Pahada (DLC) | Abada Jogya Anabadi | 37.07 | 6.31 |
| 2 | Bahamba | 25 | 85/P | Pahada (DLC) | AJA | 10.32 | 16.4 |
| 3 | Bahamba | 23 | 86/P | Pahada (DLC) | AJA | 6.60 | 0 11 |
| 4 | Bahamba | 25 | 114/P | Pahada (DLC) | AJA | 30.50 | 1.7 |
| 5 | Bahamba | 25 | 117/P | Nala | AJA | 6.75 | 1.48 |
| 6 | Bahamba | 25 | 120/P | Pahada (DLC) | AJA | 36.75 | 14.725 |
| 7 | Bahamba | 25 | 121 | Pahada (DLC) | AJA | 22.5 | 22.5 |
| 8 | Bahamba | 25 | 122/P | Pahada (DLC) | AJA | 32.50 | 15 037 |
| 9 | Bahamba | 23 | 123/P | Jungle | Rakhit | 35 70 | 8 838 |
| | | | | | Sub-Total | | 87.10 Ac or 35.248 Ha |
| 10 | Raikela | 63 | 597/P | Nayanjodi | Rakhit | 3.08 | 1 242 |
| 11 | Raikela | 63 | 598/P | Rasta | Rakhit | 2 86 | 1.12 |
| 12 | Raikela | 63 | 599/P | Nayanjodi | Rakhit | 2.68 | 1.12 |
| 13 | Raikela | 66 | 606/P | Pahada (DLC) | Abada Ajogya Anabadi | 18 97 | 18.2 |
| 14 | Raikela | 66 | 601/P | Pahada (DLC) | AAA | 47 47 | 14.18 |
| 15 | Raikela | 66 | 608/P | Pahada (DLC) | AAA | 37.95 | 1.49 |
| 16 | Raikela | 66 | 609/P | Pahada (DLC) | AAA | 39.60 | 19 15 |
| 17 | Raikela | 66 | 602/P | Pahada (DLC) | AAA | 35 15 | 0.97 |
| | | | | | Sub-Total | | 57.572 Ac or 23.299 Ha |
| 18 | Tensa | 2 | 194/P | Jungle | Rakhit | 11.92 | 1.77 |
| 19 | Tensa | 2 | 194/217/P | Jungle | Rakhit | 2.42 | 1.78 |
| 20 | Tensa | 2 | 174/218/P | Jungle | Rakhit | 2.50 | 1.09 |
| 21 | Tensa | 2 | 192/P | Jungle | Rakhit | 7 04 | 0 00 |
| 22 | Tensa | 2 | 179/P | Rasta | Rakhit | 3.5 | 0.51 |
| | | | | | Sub-Total | | 5.21 Ac or 2.108 Ha |
| 23 | Sarkunda PRF | | | | | | 22.118 Ac or 8.951 Ha |
| | | | | | Grand Total | 172.00 Ac or 69.606 Ha | |

COUNTERSIGNED

Divisional Forest Officer
Bonai Division

Forester
Dangula Section

Forest Range Officer
Barsuan Range

COLLECT
SUNDARG

Record Keeper
Tahasil Office, Koira

DEPUTY DIRECTOR OF MINES
KOIRA CIRCLE, KOIRA

Asst. Conservator of Forests
Bonai Division

Revenue Supervisor
KOIRA

Sr. Surveyor
O/o. D.D.M, KOIRA

# LAND SCHEDULE

OF ML AREA FOR IRON & MANGANESE OVER AN AREA 69.606 HA OF SRI CHANDI PRASAD SHARMA IN VILLAGE RAIKELA No.14, TENSA No.13 AND BAHAMBA No.249 UNDER BONAI SUB DIVISION IN SUNDARGARH DISTRICT ODISHA

| Sl. No | Village Name | Khata No | Plot No | Kissam | Name of the tenant | Total area of Plot as per RoR (in Ac) | Area as per lease (in Ac) |
|---|---|---|---|---|---|---|---|
| 1 | Bahamba | 25 | 84/P | Pahada (DLC) | Abada Jogya Anabadi | 37.07 | 6.31 |
| 2 | Bahamba | 25 | 85/P | Pahada (DLC) | AJA | 30.32 | 10.4 |
| 3 | Bahamba | 25 | 86/P | Pahada (DLC) | AJA | 6.60 | 0.11 |
| 4 | Bahamba | 25 | 114/P | Pahada (DLC) | AJA | 30.50 | 1.7 |
| 5 | Bahamba | 25 | 127/P | Nala | AJA | 6.25 | 1.48 |
| 6 | Bahamba | 25 | 120/P | Pahada (DLC) | AJA | 30.75 | 24.725 |
| 7 | Bahamba | 25 | 121 | Pahada (DLC) | AJA | 22.5 | 22.5 |
| 8 | Bahamba | 25 | 122/P | Pahada (DLC) | AJA | 32.50 | 15.037 |
| 9 | Bahamba | 25 | 123/P | Jungle | Rakhit | 35.70 | 8.838 |
| | | | | | Sub-Total | | 87.10 Ac or 35.248 Ha |
| 10 | Raikela | 63 | 597/P | Nayanjodi | Rakhit | 3.08 | 1.242 |
| 11 | Raikela | 63 | 598/P | Rasta | Rakhit | 2.80 | 1.12 |
| 12 | Raikela | 63 | 599/P | Nayanjodi | Rakhit | 2.68 | 1.22 |
| 13 | Raikela | 66 | 600/P | Pahada (DLC) | Abada Ajogya Anabadi | 15.97 | 78.2 |
| 14 | Raikela | 66 | 601/P | Pahada (DLC) | AAA | 47.47 | 14.18 |
| 15 | Raikela | 66 | 608/P | Pahada (DLC) | AAA | 37.95 | 1.49 |
| 16 | Raikela | 66 | 609/P | Pahada (DLC) | AAA | 19.60 | 19.15 |
| 17 | Raikela | 66 | 602/P | Pahada (DLC) | AAA | 35.15 | 0.37 |
| | | | | | Sub-Total | | 57.572 Ac or 23.299 Ha |
| 18 | Tensa | 2 | 194/P | Jungle | Rakhit | 11.92 | 1.77 |
| 19 | Tensa | 2 | 194/217/P | Jungle | Rakhit | 2.42 | 1.78 |
| 20 | Tensa | 2 | 173/218/P | Jungle | Rakhit | 1.50 | 1.09 |
| 21 | Tensa | 2 | 192/P | Jungle | Rakhit | 7.04 | 0.06 |
| 22 | Tensa | 2 | 179/P | Rasta | Rakhit | 3.5 | 0.51 |
| | | | | | Sub-Total | | 5.21 Ac or 2.108 Ha |
| 23 | Sarkunda PRF | | | | | | 22.118 Ac o 8.951 Ha |
| | | | | | Grand Total | 172.00 Ac or 69.606 Ha | |

20/12/19
Revenue Inspector
Tehsil Office, Koira

Forester
Bonguda Section

12/12/19
Forest Range Officer
Barsuan Range

COLLECTOR SUNDAR
18-12-19
Sr. Surveyor
O/o. D.D.M, KOIRA

Asst. Conservator of Forests
Bonai Division

17/1/2020
Tehsildar
KOIRA

DEPUTY DIRECTOR OF MINES
KOIRA MINING CIRCLE, KOIRA

23/12/19
Revenue Supervisor
KOIRA

COUNTERSIGNED

Divisional Forest Officer
Bonai Division

# BOUNDARY DESCRIPTION

REVISED BOUNDARY DESCRIPTION OF THE M. L. AREA FOR IRON & MANGANESE OVER AN AREA 172.00 AC. OR 69.606 HA. OF SRI CHANDI PRASAD SHARMA IN VILLAGES RAIKELA No.14, JENSA No.13 AND BAHAMBA No. 249, UNDER BONAI SUB-DIVISION IN SUNDARGARH DISTRICT, ODISHA.

REFERENCE POINT :- THE REFERENCE POINT IS THE VILLAGE TRIJUNCTION POINT OF VILLAGES RAIKELA No.14, BAHAMBA No. 249 AND RESERVED FOREST (SARKUNDA STATE FOREST).

STARTING POINT :- THE STARTING POINT 'A' IS SITUATED WITH A MAGNETIC BEARING OF 252° 00' 00" AND AT A DISTANCE OF 1320 ft. OR 402.334 M. FROM THE VILLAGE TRIJUNCTION POINT OF VILLAGES RAIKELA No.14, BAHAMBA No. 249 AND RESERVED FOREST (SARKUNDA STATE FOREST).

From station "A" the boundary line moves clock wise as follows.

| LINE | MAGNETIC BEARING | INTERIOR ANGLE | DISTANCE IN MTR. | DISTANCE IN FEET. | REMARKS |
|---|---|---|---|---|---|
| A-A1 | 312° 00' 00" | 91° 30' 00" | 174.649 | 573 | 3000 ft or 914.397 m |
| A1-A2 | | 180° 00' 00" | 147.238 | 483 | |
| A2-A3 | | 180° 00' 00" | 165.202 | 542 | |
| A3-A4 | | 180° 00' 00" | 135.025 | 443 | |
| A4-A5 | | 180° 00' 00" | 83.514 | 274 | |
| A5 A6 | | 180° 00' 00" | 96.927 | 318 | |
| A6 B | | 180° 00' 00" | 111.862 | 367 | |
| B-B1 | | 63° 00' 00" | 72.846 | 239 | 3960 ft or 1207.004 m |
| B1-B2 | | 180° 00' 00" | 210.006 | 689 | |
| B2-B3 | | 180° 00' 00" | 171.906 | 564 | |
| B3-B4 | | 180° 00' 00" | 130.453 | 428 | |
| B4-B5 | | 180° 00' 00" | 291.083 | 955 | |
| B5 B6 | | 180° 00' 00" | 164.591 | 540 | |
| B6-C | | 180° 00' 00" | 166.115 | 545 | |
| C-C1 | | 115° 30' 00" | 167.944 | 551 | 1280 ft or 390.147 m |
| C1 C2 | | 180° 00' 00" | 106.070 | 348 | |
| C2-D | | 180° 00' 00" | 116.128 | 381 | |
| D-D1 | | 90° 00' 00" | 88.696 | 291 | 3500 ft or 1066.796 m |
| D1-D2 | | 180° 00' 00" | 173.126 | 568 | |
| D2-D3 | | 180° 00' 00" | 342.594 | 1124 | |
| D3-D4 | | 180° 00' 00" | 262.432 | 861 | |
| D4-D5 | | 180° 00' 00" | 131.673 | 432 | |
| D5 A | | 180° 00' 00" | 68.275 | 224 | |

N.B. Thus the traverse gets closed over an area of 172.00 Ac. or 69.606 ha.

COUNTERSIGNED

Divisional Forest Officer
Bonai Division

Sr. Surveyor
C/o. D.D.M. KOIRA

Asst. Conservator of Forests
Bonai Division

Tehsildar
KOIRA

Forest Range Officer
Barsuan Range

ଉପ-ଜିଲ୍ଲାପାଳଙ୍କ କାର୍ଯ୍ୟାଳୟ, ବଣାଇ

# OFFICE OF THE SUB-COLLECTOR, BONAI

Phone No.:- 0662-244433, E-mail : sdmbonai@gmail.com

Letter No. 7503 / FRA Date 22-12-2022 /

To

The Project Administrator,
I.T.D.A., Sundargarh.

Sub: Submission of diversion proposal of 16.98 ha. of forest land for Iron and Manganese Ore Mining in village Raikela, Babamba & Tensa under koida Tehsil.

Ref: Letter No. 11540 VIII-6/2022/Dt. 29.09.2022 of ADM, Sundargarh.

Sir,

With reference to the letter on the subject cited above, I am to submit herewith the copy of Palli Sabha resolution of village Raikela, Babamba & Tensa, enquiry report of Tehsildar, Koida, GPS reading Map & FRA certificate for issue of certificate ensuring compliance of Schedule Tribe & Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 and Subsequent Amendment Rules, 2012 in respect of forest land measuring 16.98 ha. in village Raikela, Babamba & Tensa under Koida Tehsil proposed to be diverted for mining and other ancillary purpose for your information and necessary action.

Yours faithfully

Encl: As above

Sub-Collector, Bonai

# CERTIFICATE TO WHOM MAY CONCERN

A proposal was received for diversion of forest land of 16.98 ha. covering villages Raikela (9.336 ha ), Bahamba (6.427 ha ) & Tensa (1.217 ha ) for non-forest purpose (Iron and Manganese Ore Mines) in favour of user agency, M/S C P Sharma under Forest Conservation Act, 1980 ensuring the compliance of provisions of Forest Rights Act, 2006. In complying to the statutory obligation of the relevant Act & Rules along with the Govt. guidelines received from time to time, required Palli Sabha was conducted on 10.06.2013 for Raikela village, on 11.06.2013 for Bahamba village & on 07.07.2013 for Tensa village with majority of Palli Sabha members of the village in presence of Govt. officials, PRI members. The Palli Sabha proceedings discloses that the villagers consented their willingness without any objection for such diversion of the forest land of their villages.

In view of the compliance to the provisions of Forest Rights Act, 2006 it is also reveals that the imperative tone of the provisions of the Act & Rules along with the Govt. guidelines have been strictly followed without prejudice to the interest of the villagers without indulgence to the claims of the forest rights beneficiaries.

This is submitted as follows:-

a) As reveals from the Palli Sabha proceedings the complete process for identification and settlement of rights under FRA has been carried out for the entire 16.98 Ha. of forest land proposed for diversion.

b) The Palli Sabha was conducted in local language and on being understood the villagers consented their views for diversion of forest land in favour of the user agency, M/s C P Sharma.

c) Further it is to submit that the Palli Sabha proceedings reveal to have completed all formalities/ process under Forest Rights Act, 2006 and villagers having understood and given their consent to the proposed diversion.

d) It reveals that the Palli Sabha was conducted with a quorum of minimum 50% of the members where discussion and decisions on such proposal had taken place

e) Regarding the claim right U/s-3(2) of the Forest Rights Act, 2006 it is manifested from the Palli Sabha proceedings that there is no claimant to be managed by the Govt. as required for such diversion of forest land of 16.98 Ha for non-forest purposes.

f) Similarly, from the Palli Sabha proceedings it is evident that the Gram Sabha meeting has looked into with the requirement U/s- 3 (1)(e) of FRA, 2006 for rights of Primitive Tribal Groups and Pre-Agricultural Communities to safeguard their rights as there is no claimant residing in the proposed forest land.

30/11/22

A.D.W.O
BONAI

30.11.22

SUB-COLLECTOR,
BONAI

# OFFICE OF THE TAHASILDAR, KOIRA

Ph/Fax- 06625-235380. E-mail tah.koira-odf@nic.in

Letter No...2041.../Date...26.12.2022

To

The Sub-Collector
Bonai

Sub: - Submission of Information required for Diversion Proposal of forest land measuring 16.98 hect for Iron and Manganese Ore Mining of M/s CP Sharma in village-Tensa, Bahamba & Raikela under Koira Tahasil.

Ref: - Your office letter no 7483/FRA dt.22.12.2022

Sir,

With reference to the subject cited above, I am to say that, no FRA title has been issued to any beneficiaries within the proposed area for diversion under Forest Right Act 2006. Further I am to say that no new FRA claim application has been received in the special drive under saturation of FRA within proposed area for diversion of 16.98 ha/Ac.41.956 dec. of M/s CP Sharma The land schedule has been given below

**LAND SCHEDULE**

| Mouza | Khata No. | Plot No. | Kisam | Area in Ha. | Area in Ac. | Remarks |
|---|---|---|---|---|---|---|
| Tensa | 2 | 194/p | Jungle | 0.131 | 0.324 | Revenue Forest |
| Tensa | 2 | 194/217/p | Jungle | 0.628 | 1.552 | Revenue Forest |
| Tensa | 2 | 173/218/p | Jungle | 0.441 | 1.089 | Revenue Forest |
| Tensa | 2 | 192/p | Jungle | 0.017 | 0.042 | Revenue Forest |
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| Bahamba | 25 | 85/p | Pahad | 1.453 | 3.590 | DLC Forest |
| Bahamba | 25 | 86/p | Pahad | 0.034 | 0.084 | DLC Forest |
| Bahamba | 25 | 114/p | Pahad | 0.551 | 1.361 | DLC Forest |
| Bahamba | 25 | 120/p | Pahad | 1.356 | 3.351 | PRF |
| Bahamba | 25 | 120/p | Pahad | 0.009 | 0.022 | PRF |
| Bahamba | 25 | 121 | Pahad | 2.379 | 5.879 | DLC Forest |
| Bahamba | 25 | 122/p | Pahad | 0.206 | 0.509 | PRF |
| Bahamba | 23 | 123/p | Jungle | 0.252 | 0.623 | PRF |
| Raikela | 66 | 600/p | Pahad | 3.473 | 8.581 | DLC Forest |
| Raikela | 66 | 601/p | Pahad | 1.190 | 2.940 | DLC Forest/PRF |
| Raikela | 66 | 601/p | Pahad | 0.075 | 0.185 | PRF |
| Raikela | 66 | 608/p | Pahad | 0.482 | 1.191 | DLC Forest |
| Raikela | 66 | 609/p | Pahad | 3.949 | 9.758 | DLC Forest |
| Raikela | 66 | 602/p | Pahad | 0.167 | 0.413 | DLC Forest |
| | | TOTAL: - | | 16.98 | 41.956 | |

This is for favour of your kind information and necessary action.

Yours faithfully,

26/12/22

Tahasildar, Koira.

NQUIRY REPORT ON DIVERSION OF FOREST LAND FOR NON FOREST PURPOSE – SURING COMPLIANCE OF SCHEDULE TRIBE & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHT) ACT, 2006 AND AMENMENT RULES, 20[illegible]2.

| | | | |
|---|---|---|---|
| 1. | Name of the project/ User Agency and purpose of Division | : | Iron and Manganese ore Mines of M/S CP Sharma |
| 2. | Name of the project and purpose of Diversion | : | Iron and Manganese ore Mines of M/S CP Sharma ,Mining and other ancillary Purpose. |
| 3. | Name or the village(s) and R.F. area covered under Diversion Proposal (In Ac.) | : | Mouza / Mining and other ancillary Purpose (in Ha.) / Total (in Ha.)<br>Bahamba / 6.427 / 6.427<br>Total / 6.427 / 6.427 |
| 4. | Name of the G.P.(s) / Municipality | : | Tensa |
| 5. | Name of the Tahasil | : | Kolra |
| 6. | Extent of Forest land under Diversion | : | 6.427 |
| a) | Revenue Forest : Area in Acre/ Hect. (Details of Land schedule & map is Annexed as per Format-I | : | Ac 15.881 / 6.427 ha. |
| b) | Reserved Forest : Area in Acre/ Hect. (Map to be enclosed) | : | Nill |
| c) | Total Area : In Acre/ Hect. | : | Ac 15.881 / 6.427 ha. |
| 7. | If any claims received under Forest Right Act, 2006 out of the above diversion Proposal | : | No |
| I. | If Yes, give details of claims received (To be enclosed in Format – II & III) | : | -- |
| a) | Total claims approved in the Dist. Level Committee out of the above diversion Proposal | : | -- |
| (i) | For Revenue Forest (In Acre/ Hect.) | : | -- |
| (ii) | For Reserved Forest (In Acre/ Hect.) | : | -- |
| b) | Balance area for diversion along with Map | : | Ac 15.881 / 6.427 ha. |
| (i) | Revenue Forest (In Acre/ Hect.) | : | Ac 15.881 / 6.427 ha. |
| (ii) | Reserved Forest (In Acre/ Hect.) | : | Nill |

| | | | | |
|---|---|---|---|---|
| | II. | If No, joint field verification by revenue and forest personnel regarding Forest Right claim, if any, for individual / community in the proposed diversion area. | : | Joint field enquiry conducted. Report attached. |
| 8. | a) | Whether proposal for such diversion of forest land have been placed before each of the ward sabha of forest dwellers who are eligible under Forest Fight Act and detail of the project and its implication have been explained to them in Local Language. | : | Yes |
| | b) | Whether such discussion and decision on such proposal had taken place with a quorum of minimum 50% of members of the ward sabha present or not. | : | Yes |
| | c) | Whether rights of Primitive Tribal Groups and Pre-agricultural community have been specifically safe guarded as per section 3(1) (e) of Forest Right Act. | : | Yes |
| | d) | Whether the diversion of forest land for facilities managed by Government as required u/s 3(2) of the Forest Right Act (if any) have been completed and that the Ward Sabha has consented to it. | : | Report attached. |
| 9. | | Documents to be enclosed | | |
| | a) | Proposed land schedule and map for diversion | : | Yes, land plan attached |
| | b) | Ward Sabha resolution in vernacular language and English translation | : | Yes, attached |
| | c) | Any other documents | : | -- |
| 10. | | **Remarks** | | |

Recommended for issue of compliance certificate under Forest Right Act, 2006 and amendment Rules,2012 for proposed diversion of forest land measuring Ac 15.881 / 6.427 ha. for Non forest purpose i.e Mining and other ancillary purpose in favor of Iron and Manganese ore mines of M/S CP Sharma .

Signature of the
Tahasildar, Kora

Tahasildar
KORA

FOREST RANGE OFFICER
BARSUAN RANGE

Signature of the
Range Officer, Barsuan

**FORMAT -I**

**Details of Revenue forest land for diversion (supported by map in duplicate)**

**Village – Bahamba**

| Sl No | KhataNo | Plot No | Kisam | Area in Ha | Remarks |
|---|---|---|---|---|---|
| 1 | 25(AAA) | 84/p | Pahada | 0.187 | DLC |
| | 25(AAA) | 85/p | Pahada | 1.453 | DLC |
| | 25(AAA) | 86/p | Pahada | 0.034 | DLC |
| | 25(AAA) | 114/p | Pahada | 0.551 | DLC |
| | 25(AAA) | 120/p | Pahada | 1.356 | PRF |
| | 25(AAA) | 120/P | Pahada | 0.009 | PRF |
| | 25(AAA) | 121 | Pahada | 2.379 | DLC |
| | 25(AAA) | 122/p | Pahada | 0.206 | PRF |
| | 23(RAKHIT) | 123/p | Jungle | 0.252 | PRF |
| Total | | | | **6.427** | |

**FORMAT – II**

**A) FOR REVENUE FOREST LAND**

| Mouza | Name of the claimant | Khata No | Plot No | Area | Whether approved in FRC | Whether approved in SDLC | Whether approved in DLC | Remarks |
|---|---|---|---|---|---|---|---|---|
| | NIL | NIL | NIL | NIL | NIL | NIL | NIL | NIL |

**FORMAT – III**

**B) FOR RESERVE FOREST LAND**

| Name of the Reserve forest | Name of the claimant under FR act | Area | Whether approved in FRC | Whether approved in SDLC | Whether approved in DLC | Remarks |
|---|---|---|---|---|---|---|
| Nil | Nil | Nil | Nil | Nil | Nil | Nil |

Signature of the Tahasildar, Koira

Tahasildar
KOIRA

Signature of the RANGE OFFICER
Range Officer, Bahamba

FOREST RANGE OFFICER
Bahamba

ENSURING COMPLIANCE OF SCHEDULE TRIBE & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHT) ACT, 2006 AND AMENMENT RULES, 2012.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | | Name of the project/ User Agency and purpose of Division | : | Iron and Manganese ore Mines of M/S CP Sharma | | |
| 2. | | Name of the project and purpose of Diversion | : | Iron and Manganese ore Mines of M/S CP Shrama , Mining and other ancillary Purpose. | | |
| 3. | | Name or the village(s) and R.F. area covered under Diversion Proposal (in Ac.) | : | Mouza | Mining and other ancillary Purpose (in Ha.) | Total (in Ha.) |
| | | | | Raikela | 9.336 | 9.336 |
| | | | | Total | 9.336 | 9.336 |
| 4. | | Name of the G.P.(s) / Municipality | : | Dangula | | |
| 5. | | Name of the Tahasil | : | Koira | | |
| 6. | | Extent of Forest land under Diversion | : | 9.336 | | |
| | a) | Revenue Forest : Area in Acre/ Hect. (Details of Land schedule & map is Annexed as per Format-I | : | Ac 23.069 / 9.336 ha. | | |
| | b) | Reserved Forest : Area in Acre/ Hect. (Map to be enclosed) | : | Nill | | |
| | c) | Total Area : In Acre/ Hect. | : | Ac 23.069 / 9.336 ha. | | |
| 7. | | If any claims received under Forest Right Act, 2006 out of the above diversion Proposal | : | No | | |
| | I. | If Yes, give details of claims received (To be enclosed in Format – II & III) | : | -- | | |
| | a) | Total claims approved in the Dist. Level Committee out of the above diversion Proposal | : | -- | | |
| | (i) | For Revenue Forest (In Acre/ Hect.) | : | -- | | |
| | (ii) | For Reserved Forest (In Acre/ Hect.) | : | | | |
| | b) | Balance area for diversion along with Map | : | Ac 23.069 / 9.336 ha. | | |
| | (i) | Revenue Forest (In Acre/ Hect.) | : | Ac 23.069 / 9.336 ha. | | |
| | (ii) | Reserved Forest (In Acre/ Hect.) | : | Nill | | |

| | | | | |
|---|---|---|---|---|
| | | revenue and forest personnel regarding Forest Right claim, if any, for individual / community in the proposed diversion area. | | |
| 8. | a) | Whether proposal for such diversion of forest land have been placed before each of the ward sabha of forest dwellers who are eligible under Forest Fight Act and detail of the project and its implication have been explained to them in Local Language. | : | Yes |
| | b) | Whether such discussion and decision on such proposal had taken place with a quorum of minimum 50% of members of the ward sabha present or not. | : | Yes |
| | c) | Whether rights of Primitive Tribal Groups and Pre-agricultural community have been specifically safe guarded as per section 3(1) (e) of Forest Right Act. | : | Yes |
| | d) | Whether the diversion of forest land for facilities managed by Government as required u/s 3(2) of the Forest Right Act (if any) have been completed and that the Ward Sabha has consented to it. | : | Report attached. |
| 9. | | Documents to be enclosed | | |
| | a) | Proposed land schedule and map for diversion | : | Yes, land plan attached |
| | b) | Ward Sabha resolution in vernacular language and English translation | : | Yes, attached |
| | c) | Any other documents | : | -- |
| 10. | | **Remarks** | | |
| | | Recommended for issue of compliance certificate under Forest Right Act, 2006 and amendment Rules,2012 for proposed diversion of forest land measuring Ac 23.069 / 9.336 ha.for Non forest purpose i.e Mining and other ancillary purpose in favor of Iron and Manganese ore mines of M/S CP Sharma . | | |

Signature of the
Tahasildar, Kora

Tehsildar
KORA

Signature of the
Range Officer ,Barsuan,

Engineer of the
RANGE OFFICER
BARSUAN RANGE

Details of Revenue forest land for diversion (supported by map in duplicate)

Village – Raikela

| Sl No | KhataNo | Plot No | Kisam | Area in Ha | Remarks |
|---|---|---|---|---|---|
| | 66(AAA) | 600/p | Pahada | 3.473 | DLC |
| | 66(AAA) | 601/p | Pahada | 1.190 | DLC/PRF |
| | 66(AAA) | 601/p | Pahada | 0.075 | PRF |
| | 66(AAA) | 608/p | Pahada | 0.482 | DLC |
| | 66(AAA) | 609/p | Pahada | 3.949 | DLC |
| | 66(AAA) | 602/p | Pahada | 0.167 | DLC |
| | TOTAL | | | **9.336** | |

**FORMAT – II**

**A) FOR REVENUE FOREST LAND**

| Mouza | Name of the claimant | Khata No | Plot No | Area | Whether approved in FRC | Whether approved in SDLC | Whether approved in DLC | Remarks |
|---|---|---|---|---|---|---|---|---|
| | NIL | NIL | NIL | NIL | NIL | NIL | NIL | NIL |

**FORMAT – III**

**B) FOR RESERVE FOREST LAND**

| Name of the Reserve forest | Name of the claimant under FR act | Area | Whether approved in FRC | Whether approved in SDLC | Whether approved in DLC | Remarks |
|---|---|---|---|---|---|---|
| Nil | Nil | Nil | Nil | Nil | Nil | Nil |

Signature of the
Tahasildar, Kolra

Signature of the
Range Officer, Barsuan

ENSURING COMPLIANCE OF SCHEDULE TRIBE & OTHER TRADITIONAL FORES' DWELLERS (RECOGNITION OF FOREST RIGHT) ACT, 2006 AND AMENMENT RULES 2012.

| | | | | | |
|---|---|---|---|---|---|
| 1. | Name of the project/ User Agency and purpose of Division | : | Iron and Manganese ore Mines of M/S CP Sharma | | |
| 2. | Name of the project and purpose of Diversion | : | Iron and Manganese ore Mines of M/S CP Shrama , Mining and other ancillary Purpose. | | |
| 3. | Name or the village(s) and R.F. area covered under Diversion Proposal (in Ac.) | : | Mouza | Mining and other ancillary Purpose (in Ha.) | Total (in Ha.) |
| | | | Tensa | 1.217 | 1.217 |
| | | | Total | 1.217 | 1.217 |
| 4. | Name of the G.P.(s) / Municipality | : | Tensa | | |
| 5. | Name of the Tahasil | : | Koira | | |
| 6. | Extent of Forest land under Diversion | : | 1.217 | | |
| a) | Revenue Forest : Area in Acre/ Hect. (Details of Land schedule & map is Annexed as per Format-I | : | Ac 3.007 / 1.217 ha. | | |
| b) | Reserved Forest : Area in Acre/ Hect. (Map to be enclosed) | : | Nill | | |
| c) | Total Area : In Acre/ Hect. | : | Ac 3.007 / 1.217 ha. | | |
| 7. | If any claims received under Forest Right Act, 2006 out of the above diversion Proposal | : | No | | |
| I. | If Yes, give details of claims received (To be enclosed in Format – II & III) | : | -- | | |
| a) | Total claims approved in the Dist. Level Committee out of the above diversion Proposal | : | -- | | |
| (i) | For Revenue Forest (In Acre/ Hect.) | : | -- | | |
| (ii) | For Reserved Forest (In Acre/ Hect.) | : | -- | | |
| b) | Balance area for diversion along with Map | : | Ac 3.007 / 1.217 ha. | | |
| (i) | Revenue Forest (In Acre/ Hect.) | : | Ac 3.007 / 1.217 ha. | | |
| (ii) | Reserved Forest (In Acre/ Hect.) | : | Nill | | |

| | | | | |
|---|---|---|---|---|
| | | revenue and forest personnel regarding Forest Right claim, if any, for individual / community in the proposed diversion area. | | |
| 8. | a) | Whether proposal for such diversion of forest land have been placed before each of the ward sabha of forest dwellers who are eligible under Forest Fight Act and detail of the project and its implication have been explained to them in Local Language. | : | Yes |
| | b) | Whether such discussion and decision on such proposal had taken place with a quorum of minimum 50% of members of the ward sabha present or not. | : | Yes |
| | c) | Whether rights of Primitive Tribal Groups and Pre-agricultural community have been specifically safe guarded as per section 3(1) (e) of Forest Right Act. | : | Yes |
| | d) | Whether the diversion of forest land for facilities managed by Government as required u/s 3(2) of the Forest Right Act (if any) have been completed and that the Ward Sabha has consented to it. | : | Report attached. |
| 9. | | Documents to be enclosed | | |
| | a) | Proposed land schedule and map for diversion | : | Yes, land plan attached |
| | b) | Ward Sabha resolution in vernacular language and English translation | : | Yes, attached |
| | c) | Any other documents | : | -- |
| 10. | | **Remarks**<br><br>Recommended for issue of compliance certificate under Forest Right Act, 2006 and amendment Rules.2012 for proposed diversion of forest land measuring Ac 3.007 / 1.217 ha. for Non forest purpose i.e Mining and other ancillary purpose in favor of Iron and Manganese ore mines of M/S CP Sharma . | | |

Signature of the
Tahasildar, Kora

Tehsildar
KORA

Signature of the
Range Officer, Barsuan

FOREST RANGE OFFICER
BARSUAN RANGE

FORMAT -I

Details of Revenue forest land for diversion (supported by map in duplicate)

Village – Tensa

| Sl No | KhataNo | Plot No | Kisam | Area in acres | Remarks |
|---|---|---|---|---|---|
| | 2(RAKHIT) | 194/P | Jungle | 0.131 | Rev Forest |
| | 2(RAKHIT) | 194/217/p | Jungle | 0.628 | Rev Forest |
| | 2(RAKHIT) | 173/218/p | Jungle | 0.441 | Rev Forest |
| | 2(RAKHIT) | 192/p | Jungle | 0.017 | Rev Forest |
| | TOTAL | | | 1.217 | |

FORMAT – II

A) FOR REVENUE FOREST LAND

| Mouza | Name of the claimant | Khata No | Plot No | Area | Whether approved in FRC | Whether approved in SDLC | Whether approved in DLC | Remarks |
|---|---|---|---|---|---|---|---|---|
| | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |

FORMAT – III

B) FOR RESERVE FOREST LAND

| Name of the Reserve forest | Name of the claimant under FR act | Area | Whether approved in FRC | Whether approved in SDLC | Whether approved in DLC | Remarks |
|---|---|---|---|---|---|---|
| Nil | Nil | Nil | Nil | Nil | Nil | Nil |

Signature of the
Tahasildar, Kora

Tahasildar
KORA

Signature of the
Range Officer, Barsuan

FOREST RANGE OFFICER
BARSUAN RANGE

## CERTIFICATE

REGARDING COMPLIANCE OF SCHEDULED TRIBES & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006 IN RESPECT OF DIVERSION OF FOREST LAND MEASURING HC. 50.372 IN **RAIKELA, TENSA, BAHAMBA IRON AND MANGANESE MINES OF C.P.SHARMA UNDER KOIRA TEHSIL**

1. It is certified that the complete process for diversion and settlement of rights under the Scheduled Tribes & Other Traditional Forest Dwellers (Recognition of Forest Right) Act 2006 has been carried out for the entire Forest area of 50.372 hectors purposed for diversion for **Raikela, Tensa and Bahamba Iron and Manganese Mines** project of **C.P.Sharma**, under **Koira** Tehsil. The concerned record of all consultations and meetings held are annexed in shape of Palli Sabha Resolution **dt. 07.05.2010** of village **Raikela, dt. 10.05.2010** of village **Bahamba and dt. 11.05.2010** of village **Tensa** and enquiry report of Revenue Department.

2. It is certified that the proposals for such diversion has been placed before the Palli Sabha of forest dwellers under the Chairmanship of ward member of village **Raikela, Bahamba and Tensa** of **Dengula G.P.** and in presence of more than 50% of members of Palli Sabha and members of Village Forest Committee where the details of the projects and its implication have been explained to them in vernacular and English language. It is further ascertained that no eligible forest dwellers was found under Forest Right Act, 2006.

3. It is certified that discussions and decisions on such proposals had taken place only when there was quorum of minimum 50% of the members of the Palli Sabha present.

4. It is certified on the basis of the verification report and Palli Sabha Resolution **dt. 07.05.2010** of village **Raikela, dt. 10.05.2010** of village **Bahamba and dt. 11.05.2010** of village Tensa that no such primitive Tribal groups and pre-agricultural communities were available on forest land proposed for diversion and whose forest rights are required to be specifically safeguarded as per section 3(1)(e) of the Forest Rights Act, 2006.

5. It is certified on the basis of the verification report and Palli Sabha Resolution **dt. 07.05.2010, dt. 10.05.2010 and dt. 11.05.2010** of village **Raikela, Bahamba and Tensa** that no such facilities managed by Government requiring diversion of Forest land u/s 3(2) of the Forest Rights Act, 2006 exist over the forest land proposed for diversion.

COLLECTOR, SUNDARGARH
& CHAIRMAN, D.L.C.

# ଉପ-ଜିଲ୍ଲାପାଳଙ୍କ କାର୍ଯ୍ୟାଳୟ, ବଣାଇଁ

## OFFICE OF THE SUB-COLLECTOR, BONAI

Phone: 06626-244433, E-Mail: sdmbonai@gmail.com

Letter No. 7499 / FRA Date. 22-12-2022

To

The Project Administrator
I.T.D.A., Sundargarh

Sub: Submission of proceeding of S.D.L.C. (Forest Rights) meeting held on 30.11.2022 in the Office Chamber of the Sub-Collector, Bonai

Sir,

With reference to the letter on the subject cited above, I am to submit herewith proceeding along with enclosures of S.D.L.C(Forest Rights) meeting held on 30.11.2022 in the Office Chamber of the Sub-Collector, Bonai under FRA-2006 & Amendment Rules-2012 for favour of your information and necessary action.

Yours faithfully,

Encl.: (1) As above

Sub-Collector, Bonai

Memo No. 7500 /Date 22-12-2022

Copy along with copy of proceeding of S.D.L.C. (Forest Rights) meeting forwarded to all members of S.D.L.C.(Forest Rights), Bonai/ all Tehsildars/Block Development Officers of this Sub-Division for information and necessary action.

Copy along with copy of proceeding of S.D.L.C. (Forest Rights) meeting submitted to the Project Administrator, I.T.D.A., Bonai for favour of information.

Sub-Collector, Bonai

Memo No. 7501 /Date 22-12-2022

Copy along with copy of proceeding of S.D.L.C.(Forest Rights) meeting submitted to the Collector-cum-Chairman, D.L.C.(Forest Rights), Sundargarh for favour of kind information.

Sub-Collector, Bonai

**PROCEEDING OF SUB-DIVISIONAL LEVEL COMMITTEE MEETING UNDER FOREST RIGHTS ACT HELD ON 30.11.2022 IN THE OFFICE CHAMBER OF THE SUB-COLLECTOR, BONAI.**

The Sub-Divisional Level Committee (Forest Rights) Meeting under FRA-2006 & its Subsequent Amendment Rule, 2012 held on 30.11.2022 at 11.00 AM in the office chamber of the Sub-Collector, Bonai under the Chairmanship of Sub-Collector, Bonai.

The list of members present in the meeting is annexed at **Annexure-A.**

At the outset, the Sub-Collector-cum-Chairman, Sub-Divisional Level (Forest Rights) Committee, Bonai welcomed all the members to the meeting.

1. **Diversion Proposal of Forest land for Non-Forest Purpose.**

**i)Diversion proposal of 16.98 ha. Of forest land for Non-Forest purpose in village Raikela, Bahamba & Tensa under Koida Tehsil for Iron & Manganese Ore Mines.**

Sub-Collector apprised the committee that the Additional District Magistrate, Sundargarh has submitted the copy of Palli Sabha resolution vide his letter No. 11540 VIII-6/2022/Dt. 29.09.2022 for issue of NOC under FRA Act, 2006 and its Subsequent Amendment Rules 2012 for balance area of 16.98 ha. (Safety Zone) of forest land for Iron and Manganese Ore Mining in village Raikela, Bahamba & Tensa under koida Tehsil.

It is revealed from the Palli Sabha resolution that the Palli Sabha was conducted on 10.06.2013 in village Raikela of Dengula G.P. for diversion of Forest land of 21.541 ha. for Iron & Manganese Ore Mines of M/S CP Sharma. More than 50% voters (378/637) participated in Palli Sabha of village Raikela of Dengula G.P.

Similarly, it is revealed from the Palli Sabha resolution that the Palli Sabha was conducted on 11.06.2013 in village Bahamba of Dengula G.P. for diversion of Forest land of 43.201 ha. for Iron & Manganese Ore Mines of M/S CP Sharma. More than 50% voters (57/63) participated in Palli Sabha of village Bahamba of Dengula G.P.

Similarly, it is revealed from the Palli Sabha resolution that the Palli Sabha was conducted on 07.07.2013 in village Tensa under Dengula G.P. for diversion of Forest land of 2.610 ha. for Iron & Manganese Ore Mines of M/S CP Sharma. More than 50% voters (1248/2400) participated in Palli Sabha of village Tensa of Dengula G.P. duly certified by Executive Officer, Dengula G.P..

The quorum certificates of above Palli Sabhas have been given by the respective Gram Panchayat Executive Officers where in all the Palli Sabhas more than 50% of the total members of the respective villages were present.

Further, it is revealed from the certificate of Collector, Sundargarh, Chairman, D.L.C. that the certificate has already been issued in respect of 50.372 ha. of forest land for Iron and Manganese Mining. Now, Tehsildar, koida has submitted FRA certificate in respect balance 16.98 ha. (Raikela- 9.336 ha./ Bahamba- 6.427 ha./ Tensa- 1.217 ha.) of forest land for non-forest purpose in favour of M/S C P Sharma for mining and other ancillary purpose. Tehsildar, Koida has submitted enquiry report in the prescribed format for issue of certificate regarding compliance of ST's

and Other Traditional Forest Dwellers (FRA) Act, 2006 and Amendmeat Rules, 2012 for Iron and Manganese Ore Mines of M/S CP Sharma. The joint enquiry has conducted by Tehsildar, Koira & Range Officer, Barsuan which revealed that there is no claims exist over the proposed area of diversion

The proceedings of Gram Sabhas & report of Tehsildar, Koira has placed before the SDLC, Bonai for discussion.

After threadbare discussion, basing on the Palli Sabha proceedings, joint enquiry report of Tehsildar, Koira & Range Officer, Barsuan, the committee unanimously decided to recommend the proposal to the DLC for approval in favour of the uger agency M/S CP Sharma.

**Land Scheduled of proposed land, Mouza- Raikela**

| Sl No | Khata No | Plot No | Kisam | Area in Ha. |
|---|---|---|---|---|
| 1 | 66 (AAA) | 600/p | Pahad | 3.473 |
| 2 | 66 (AAA) | 601/p | Pahad | 1.190 |
| 3 | 66 (AAA) | 601/p | Pahad | 0.075 |
| 4 | 66 (AAA) | 608/p | Pahad | 0.482 |
| 5 | 66 (AAA) | 609/p | Pahad | 3.949 |
| 6 | 66 (AAA) | 602/p | Pahad | 0.167 |
| **Total** | | | | **9.336** |

**Land Scheduled of proposed land, Mouza- Bahamba**

| Sl No | Khata No | Plot No | Kisam | Area in Ha. |
|---|---|---|---|---|
| 1 | 25 (AAA) | 84/p | Pahad | 0.187 |
| 2 | 25 (AAA) | 85/p | Pahad | 1.453 |
| 3 | 25 (AAA) | 86/p | Pahad | 0.034 |
| 4 | 25 (AAA) | 114/p | Pahad | 0.551 |
| 5 | 25 (AAA) | 120/p | Pahad | 1.356 |
| 6 | 25 (AAA) | 120/p | Pahad | 0.009 |
| 7 | 25 (AAA) | 121 | Pahad | 2.379 |
| 8 | 25 (AAA) | 122/p | Pahad | 0.206 |
| 9 | 25 (RAKHIT) | 123/p | Jungle | 0.252 |
| | **Total** | | | **6.427** |

**Land Scheduled of proposed land, Mouza- Tensa**

| Sl No | Khata No | Plot No | Kisam | Area in Ha. |
|---|---|---|---|---|
| 1 | 2 (RAKHIT) | 194/p | Jungle | 0.131 |
| 2 | 2 (RAKHIT) | 194/217/p | Jungle | 0.628 |
| 3 | 2 (RAKHIT) | 173/218/p | Jungle | 0.441 |
| 4 | 2 (RAKHIT) | 192/p | Jungle | 0.017 |
| **Total** | | | | **1.217** |

**ii) Kala Barrage Irrigation Project.**

Sub-Collector, Bonai stated the committee that in spite of several intimation, the Gram Sabha resolution and report of Tehsiladar, Lahunipara in respect of diversion of Forest land for Non-Forest purpose for Kala Barrage Irrigation Project are not yet received. In this connection, Tehsildar, Lahunipara informed the committee that she has organized a Gram Sabha with the Irrigation department official to get consent of Banki villagers for the proposed project, but villagers of Banki didn't gave consent. The Committee instructed Tehsildar, Lahunipara and Welfare Extension Officer, Lahunipara to consult once again with the villagers of Banki for the proposed project and submit the FRA certificate along with Gram Sabha resolution early for further action.

**iii) Karapani Irrigation Project.**

Similarly, Sub-Collector, Bonai stated the committee that in spite of several intimation, the Gram Sabha resolution and report of Tehsildar, Lahunipara in respect of Karapani Irrigation Project for diversion of Forest land for Non-Forest purpose are not yet received. In this connection, Tehsildar, Lahunipara informed the committee that the villagers of Barghat, Haldikudar, Khajurinali, Jadibahal, Kantakudar & Sadhubahal gave their consent for the proposed project but villagers of Dhanjam & Sulabhdihi didn't consent. Further Tehsildar, Lahunipara informed that the villagers of Anugul & Ranja requested for compensatory land if their land diverted for the proposed project. Sub-Collector instructed Tehsildar, Lahunipara to expedite the process of IFR claims if any received from the villagers of Anugul & Ranja. Further, Sub-Collector instructed Welfare Extension Officer, Bonai to once again organize the Gram Sabha in village Sihidia, Mahuldia & Sialkudar to get the consent for the proposed project and submit the proper Gram Sabha resolution for further action.

After discussion, the committee instructed Tehsildar, Lahunipara/Bonai and Welfare Extension Officer, Bonai to consult with villagers to get consent for the project and submit FRA certificate along with the proper Gram Sabha resolution early for further action.

**iv) Diversion proposal of 42.608 ha. of Forest land (25.950 ha. in Bonai Division & 16.658 in Keojhar Division ) within Kamalanga West (Northern Part) Block for Iron Ore Block allotted to M/s Bhusan Steel Ltd.(Now Tata Steel BSL Limited).**

Similarly, Sub-Collector, Bonai stated the committee that in spite of several intimation, the Gram Sabha resolution and FRA certificate of Tehsiladar, Koida in respect of diversion proposal of 42.608 ha. of Forest land (25.950 ha. in Bonai Division & 16.658 in Keojhar Division ) within Kamalanga West (Northern Part) Block for Iron Ore Block allotted to M/s Bhusan Steel Ltd.(Now Tata Steel BSL Limited) are not yet received. The committee instructed Tehsildar, Koida & BDO, Koida to take necessary action and submit the FRA certificate along with Gram Sabha resolution for further action.

2. **CFR claims**

A.D.W.O., Bonai apprised the committee that, 04 no. of CFR claims of village Kucheita, Hatiodha, Ergeda, Chhidi are pending with the Divisional Forest Officer, Rourkela & 01 no. of CFR claim of village Madhupur is pending with the Divisional Forest Officer, Bonai for GPS reading work since long. The committee instructed ACF, Rourkela & Bonai for early submission of said 05 no. of CFR claims after necessary compliance. Further, ADWO, Bonai apprised the committee that 01 no. of CFR claims are pending in Gurundia Tehsil. The Sub-Collector instructed Tehsildar, Gurundia for early submission of said 01 no. of CFR claims after necessary claims.

3. **Filling of Revision Petition by Tehsildar, Bonai under FRA.**

The matter has reviewed by the Sub-Collector, Bonai. Sub-Collector, Bonai instructed to Tehsildar, Bonai to file Revision Petition of balance cases at an early.

4. **Demarcation & Correction of RoR under FRA- 2006**

Sub-Collector, Bonai reviewed the matter and expressed his displeasure for poor performance of the Tehsildars on demarcation and correction of RoR under Forest Rights Act. Sub-Collector, Bonai instructed all Tehsildars to dispose 200 no. of pending cases of RoR correction per month and upload in Bhulekh portal to clear the pendency and report compliance. Details report in this regard is annexed in **Annexure-B.**

The meeting ended with the vote of thanks to the chair and participants.

Sub-Collector-cum-Chairman,
SDLC(Forest Rights), Bonai

A.D.W.O
BONAI

Annexure-II

**Attendance Sheet for the SDLC Meeting under FRA-2006 & Amendment Rule- 2012 held on 30.11.2022 at 11.00 A.M. in the Office chamber of the Sub-Collector , Bonai**

| Sl No | Name & Designation | Signature |
|---|---|---|
| 1 | Suranjan Kumar Sahoo, OAS (S), Sub-Collector, Bonai | 30.11.22 |
| 2 | Satvinder Singh, ACF, Rourkela. Forest Division, Rourkela. | 30/11/2022 |
| 3 | Samir Prakash Tirkey, ACF o/o. D.F.O, Bonai | 30/11/22 |
| 4 | Habil Xaxa Tdo. Bonai | 30/11/22 |
| 5 | Sadhabi Deburia. Tdr Gurundia | 30/11/22 |
| 6 | D.S. Subhadarshi Sahu Tdr, Kolra | 30/11/22 |
| 7 | Surendra Rakshit, Rev Supervisor, Koira | 30.11.22 |
| 8 | Anjali Robidas, Co-ordinator FRA Cell, Koira | 30/11/22 |
| 9 | Mateswari Behera W.E.O, Bonai | 30.11.2022 |
| 10 | Prakash Ranjan Nayak AEO, Koira | 30/11/22 |
| 11 | Dutaman Sabar Amin P.B.D.A Khuntagaon | 30/11/22 |

Attendance Sheet for the SDLC Meeting under FRA-2006 & Amendment Rule- 2012 held on 30.11.2022 at 11.00 A.M. in the Office chamber of the Sub-Collector , Bonai

| Sl No | Name & Designation | Signature |
|---|---|---|
| 12 | Kanhaiher Mohanta FRA Co-ordinator | 30-11-22 |
| 13 | Seema Singh FRA - Co-ordinator | 30-11-22 |
| 14 | Sumitra Dey FRA Co-ordinator, Bonai | 30/11/2022 |
| 15 | Sarodamini Nayak Tahasildar Lahunipara | 30/11/22 |
| 16 | Laxmi Kisan P.S Member Lahunipara | 30.11.22 |
| 17 | Rasual Oram P.S.Member Gurundia Block | 30-11-2022 |
| 18 | Rasool Kr. Panda Asst, Bonai | 30/11/22 |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |

.tendance Sheet for the SDLC Meeting under FRA-2006 & Amendment Rule- 2012 held on 30.11.2022 at 11.00 A.M. in the Office chamber of the Sub-Collector, Bonai

| Sl No | Name & Designation | Signature |
|---|---|---|
| 24 | | |
| 25 | | |
| 26 | | |
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |

Annexure-B

## Information on ROR Correction upto 30.11.2022

| Sl. No. | Tehsil | Title Distributed | ROR Corrected upto 30.11.2022 | Pending |
|---|---|---|---|---|
| 1 | Bonai | 1294 | 206 | 1088 |
| 2 | Lahunipara | 2839 | 1987 | 852 |
| 3 | Gurundia | 2945 | 2211 | 734 |
| 4 | Koida | 2596 | 2596 | 0 |
| | Total = | 9674 | 7000 | 2674 |

N:B: 1088 no. of IFR claims under Bonai Tehsil filed for reversion petition.

## Information on ROR uploaded in Bhulekh Portal upto 30.11.2022

| Sl. No. | Tehsil | Title Distributed | ROR uploaded up to 30.11.2022 | Pending |
|---|---|---|---|---|
| 1 | Bonai | 1294 | 206 | 1088 |
| 2 | Lahunipara | 2839 | 1742 | 1097 |
| 3 | Gurundia | 2945 | 288 | 2657 |
| 4 | Koida | 2596 | 1671 | 925 |
| | Total= | 9674 | 3907 | 5767 |

## Information on Demarcation upto 30.11.2022

| Sl. No. | Tehsil | Title Distributed | ROR Demarcation Completed | Pending |
|---|---|---|---|---|
| 1 | Bonai | 1294 | 1294 | 0 |
| 2 | Lahunipara | 2839 | 2839 | 0 |
| 3 | Gurundia | 2945 | 2945 | 0 |
| 4 | Koida | 2596 | 2596 | 0 |
| | Total= | 9674 | 9674 | 0 |

Sub-Collector,
Bonai

## PROCEEDINGs OF DISTRICT LEVEL COMMITTEE MEETING ON (FOREST RIGHT ACT, 2006) HELD ON 28.12.2022

The District Level Committee meeting on Forest Right Act, 2006 was held under the Chairmanship of the Collector, Sundargarh on 28.12.2022 at 11.00 A.M at Sadbhabana Bhawan, Sundargarh. The list of members present in the meeting is annexed at Annexure-"A".

1. **CONFIRMATION OF THE DLC (FOREST RIGHT ACT, 2006) PROCEEDING HELD ON 25.11.2022: -**

No objection has been received by the members. Hence the committee confirmed the proceedings of the DLC held on 25.11.2022.

2. **HEARING OF 19 NOS. OF HIGH COURT CASES: -**

On personal hearing into the 19 nos. of individual cases, it was observed that the claimants could not produce the relevant documents regarding possession of the suit land. It is stated by the petitioners that, the land has already been acquired and coal mining is operational by the O.C.P.L. The list of the cases is enclosed at Annexure- "B".

That, keeping in view of the facts, the committee unanimously decided to obtain the satellite maps/images of the land in question from ORSAC, Bhubaneswar to ascertain the situation of the occupation/ possession over the suit lands prior to 13.12.2005 and Tahasil, Hemgir to submit the GPS Coordinates for the purpose. After receipt of the GPS Coordinate from the Tahsildar, Hemgir, ORSAC, Bhubaneswar will be moved to provide the satellite maps/images of the suit lands for taking final decision of the committee.

(Action: P.A, ITDA, Sundargarh/ Tahasildar, Hemgir)

3. **COMPLIANCE STATUS OF THE PREVIOUS DLC: -**

A) **The generation of IFR titles.**

P.A, ITDA, Sundargarh appraised the house that the title IFR claims approved earlier of the following villages are yet to be submitted by the Sub-Collectors concerned.

| Sl. No | Name of the village | Name of the Tahasil | Name of the SDLC | No. of IFR claims approved | Present position | |
|---|---|---|---|---|---|---|
| | | | | | Title prepared & submitted | Title yet to be prepared |
| 1 | Bad-Nuagaon | Lahunipada | Bonai | 6 | 0 | 6 |
| 2 | Hatisole | Lahunipada | Bonai | 2 | 0 | 2 |
| 3 | Kilinda | Lahunipada | Bonai | 16 | 0 | 16 |
| 4 | Muchurinali | Bonai | Bonai | 5 | 0 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | S. Chandrapur | Bonai | Bonai | 17 | 0 | 17 |
| 6 | San-Nuagaon | Lahunipada | Bonai | 22 | 0 | 22 |
| 7 | Sasa | Lahunipada | Bonai | 10 | 0 | 10 |
| 8 | Bandhabhuin | Bonai | Bonai | 15 | 0 | 15 |
| 9 | Siarmal | Hemgir | Sundargarh | 29 | 29 | 0 |
| 10 | Nuagaon | Kutra | Sundargarh | 5 | 5 | 0 |
| 11 | Latagaon | Kutra | Sundargarh | 31 | 31 | 0 |
| 12 | Jareikela | Rajganggpur | Sundargarh | 8 | 8 | 0 |
| 13 | Jampali | Rajganggpur | Sundargarh | 21 | 21 | 0 |
| 14 | Uperginia | Lahunipara | Bonai | 8 | 0 | 8 |
| 15 | Budhabhuin | Lahunipara | Bonai | 4 | 0 | 4 |
| 16 | Kardakudar | Lahunipara | Bonai | 3 | 0 | 3 |
| 17 | Fuljhar | Lahunipara | Bonai | 20 | 0 | 20 |
| 18 | Ladapani | Lahunipara | Bonai | 4 | 0 | 4 |
| 19 | Nagaria | Lahunipara | Bonai | 5 | 0 | 5 |
| 20 | Talginia | Lahunipara | Bonai | 15 | 0 | 15 |
| 21 | Sanjal | Lahunipara | Bonai | 4 | 0 | 4 |
| 22 | Badjal | Lahunipara | Bonai | 16 | 0 | 16 |
| 23 | Uskela | Lahunipara | Bonai | 12 | 0 | 12 |
| 24 | Patamunda | Lahunipara | Bonai | 7 | 0 | 7 |
| 25 | Ranja | Lahunipara | Bonai | 4 | 0 | 4 |
| 26 | Batagaon | Lahunipara | Bonai | 46 | 46 | 0 |
| 27 | Silkuta | Gurundia | Bonai | 13 | 0 | 13 |
| 28 | Kantabahal | Gurundia | Bonai | 4 | 0 | 4 |
| 29 | Gurundia | Gurundia | Bonai | 34 | 0 | 34 |
| 30 | Soldega | Gurundia | Bonai | 49 | 0 | 49 |
| 31 | Talita | Bonai | Bonai | 5 | 0 | 5 |
| 32 | Itma | Bargaon | Sundargarh | 6 | 0 | 6 |
| 33 | Bhalulata | Bisra | Panposh | 2 | 0 | 2 |
| 34 | Chengjharan | Bisra | Panposh | 1 | 0 | 1 |
| 35 | Bijadihi | Bisra | Panposh | 5 | 0 | 5 |
| 36 | Maridria | Kuarmunda | Panposh | 1 | 0 | 1 |
| 37 | Jagdishpur | Kuarmunda | Panposh | 2 | 0 | 2 |
| 38 | Ushra | Kuarmunda | Panposh | 3 | 0 | 3 |
| 39 | Khukhundubahal | Kuramunda | Panposh | 8 | 0 | 8 |
| 40 | Gobira | Kuarmunda | Panposh | 1 | 0 | 1 |
| 41 | Dolensera | Biramitrapur | Panposh | 2 | 0 | 2 |
| 42 | Baneilata | Biramitrapur | Panposh | 3 | 0 | 3 |
| 43 | Ghoghia | Biramitrapur | Panposh | 1 | 0 | 1 |
| 44 | Bartoli | Bisra | Panposh | 3 | 0 | 3 |
| 45 | Jareikela | Bisra | Panposh | 2 | 0 | 2 |
| 46 | Kopsingha | Bisra | Panposh | 4 | 0 | 4 |
| 47 | Bad Biringajhar | Bisra | Panposh | 1 | 0 | 1 |
| 48 | Jundaposh | Bisra | Panposh | 2 | 0 | 2 |
| 49 | Bhurtabahal | Bisra | Panposh | 2 | 0 | 2 |
| 50 | Mahipali | Bisra | Panposh | 1 | 0 | 1 |
| | | | **Total** | **492** | **140** | **352** |

352 Nos. of case records to be returned to the Sub-Collector concerned for preparation of IFR titles. The Sub-Collectors are requested to expedite the GPS mapping and submit the titles along with the GPS readings at the earliest.

**(Action:- All DFOs/ Sub-Collectors/ Tahasildars)**

B) **Revision Petition: -**

| Sl. No. | Name of the Sub-Division | Name of the village | No. of IFR claims | Dt. of approval of SDLC/ DLC | Reasons of objection | Compliance | Balance for compliance |
|---|---|---|---|---|---|---|---|
| 1 | Bonai | Gujapal | 48 | DLC Dt. 12.03.2013 & 15.11.2014 | The claimants have claimed land out of Khata No 35 & 37 which stands recorded in the name of Parakhita Nayak, Jhasketan Nayak, S/o- Natha Nayak and Pala Munda, S/o- Laba Munda of the said village. | 42 Nos. of Revision petition filed | 6 |
| 2 | Bonai | Dalki | 7 | 31.08.2016/ 14.09.2016 | The Khata No. and Plot No. shown in the claim records are not tallied with Bhulekh Portal. | 4 No. of Revision petition filed | 3 |
| 3 | Bonai | Balitakudar | 41 | | Remanded due to non matching of Khata No. and Plot No. | 40 Nos. of Revision petition filed | 1 |
| 4 | Bonai | Sibnathpur | 25 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 24 Nos. of Revision petition filed | 1 |
| 5 | Bonai | Kandheipoah | 55 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 55 Nos. of Revision Petition filed | 0 |
| 6 | Bonai | Bhadimara | 8 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 8 Nos. of Revision Petition filed | 0 |
| 7 | Bonai | Barghat | 24 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 23 Nos. of Revision Petition filed | 1 |
| 8 | Bonai | Ghanashyampur | 33 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 22 Nos. of Revision Petition filed | 11 |
| 9 | Bonai | Lamsi | 2 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 2 Nos. of Revision Petition filed | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | Bonai | Sanbandhabhuin | 61 | DLC Dt 05.04.21 | Khata No. & Plot No. not tallied with Bhulekh Portal | Not complied | 61 |
| 11 | Bonai | Basudihi | 19 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 19 Nos. of Revision Petition filed | 0 |
| 12 | Bonai | Sindurkela | 25 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 24 Nos. of Revision petition filed | 1 |
| 13 | Bonai | Chandrapur | 63 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 63 Nos. of Revision Petition filed | 0 |
| 14 | Bonai | Sansarsara | 3 | DLC Dt. 05.04.21 | The claim land not available at applied Khata | 3 Nos. of Revision Petition filed | 0 |
| 15 | Bonai | Bandhabhuin | 21 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 21 Nos. of Revision petition filed | 0 |
| 16 | Bonai | Kareipat | 30 | DLC Dt. 05.04.21 | The claim land are recorded as Rayati Land | 24 Nos. of Revision Petition filed | 6 |
| 17 | Bonai | Gopinathpur | 2 | DLC Dt. 05.04.21 | The claim land not available at applied Khata | 2 Nos. of Revision Petition filed | 0 |
| | | Total | 467 | | | 376 | 91 |

After threadbare discussion the committee instructed to the Sub-Collector, Bonai for examine the claim case records and submit the revision petition as per U/s 15 (b) of Odisha survey settlement Act, 1958 for the recording of the suit land in favour of the beneficiary. Out of 467 Nos. of IFR cases, revision petition has been filed in respect 376 Nos. of cases leaving a balance of 91 cases.

**(Action:- Sub-Collector, Bonai/ Tahasildar, Bonai)**

4. **DEMARCATION WITH GPS OF CFR CLAIMS APPROVED IN THE DLC: -**

P.A ITDA apprised the committee that 243 Nos. of CR/ CFR claims were approved by the DLC subject to scrutinization of all community claims properly before issue of community titles. Accordingly, all the 243 nos. of CR/CFR claims were submitted to the respective Sub-Collectors for necessary compliance as per check list and inserting of GPS reading thereof. The present status of the claims are as detailed below.

| Sl. No. | Name of the Sub-Division | No. of CFR claims approved | No. of CFR claims complied | No. of CFR claims pending for compliance | Remarks |
|---|---|---|---|---|---|
| 1 | Sadar, Sundargarh | 87 | 32 | 55 | 22 nos. of titles returned by DFO, Sundargarh with due signature out of 30 nos. submitted. The rest 7 nos. of titles will be submitted to the DFO, Sundargarh for signature. |
| 2 | Panposh | 93 | 93 | 0 | 93 Titles to be submitted to the DFO, Rourkela for signature. |
| 3 | Bonai | 63 | 28 | 35 | Out of 28 nos. of claims, 15 nos. of titles have been returned by the DFO, Bonai after due signature. 12 nos. of claim records submitted and 1 No. to be submitted to SDLC Bonai for preparation of titles |
| | Total | **243** | **153** | **90** | |

Collector-cum-Chairman, DLC has instructed to the Sub-Collector concerned to look into the matter personally and effective steps should be taken for early submission of the remaining CFR/CR cases.

**(Action: All Sub-Collectors/ P.A, ITDA, Sundargarh)**

5. <u>APPROVAL OF DIVERSION PROPOSAL OF FOREST LAND</u>: -

The P.A, ITDA, Sundargarh apprised the committee that, the Sub-Collector, Bonai has submitted 4 Nos. of diversion proposals (Non-Linear) and Sub-Collector Sadar has submitted 2 nos. of diversion proposal (1 linear & 1 non-linear) of forest land for approval in the DLC. The details are as follows: -

(i) <u>**Diversion proposal of 4.521 Ha. of forest land for non-forest purpose under the forest (Conservation) Act, 1980 ensuring compliance of the STs and Other Traditional Forest Dwellers (FRA) Act, 2006 for Pureibahal Iron Ore Block in village Bad-Indipur of Malda G.P. under Koira Tahasil by user agency M/s Rungta Mines Limited for mining and ancillary activities.**</u>

The proposal has been received from the user agency, M/s Rungta Mines Limited for diversion of 4.521 ha. of forest land for non-forest purpose under the forest (Conservation) Act, 1980 ensuring compliance of the STs and Other Traditional Forest Dwellers (FRA) Act, 2006 for Pureibahal Iron Ore Block in village Bad-Indipur of Malda

G.P. under Koira Tahasil. The user agency has requested to the District Administration to issue of No Objection Certificate under FRA,2006.

On receipt of the above proposal, in order to ensure compliance of Forest Rights Act, 2006 and to obtain Gram Sabha consent the BDO & Tahasildar, Koira were required to submit a detailed report/ status of the forest land proposed for diversion. Accordingly, Gram Sabha was held at village Bad-Indipur of Malda GP on 10.10.2022 in presence of majority of the villagers, WEO, Koira, PEO, Malda GP & Revenue Inspector, Patamunda. The PEO of Malda GP has certified on quorum of Gram Sabha that 235 nos. of members were present out of 325 which is more than 50% of the total members as per voter list of the village. The resolution of Gram Sabha was submitted by the Tahasildar, Koira vide letter No. 2950 dated 15.12.2022 with due countersignature of the resolution and translated copy of resolution from Odia to English. The Tahasildar, Koira has also submitted the enquiry report in the prescribed model format for issue of certificate regarding compliance of STs and Other Traditional Forest Dwellers (FRA) Act, 2006 for Pureibahal Iron Ore Block in village Bad-Indipur of Malda G.P. under Koira Tahasil. The joint enquiry was conducted by Range Officer, Koira Forest Range & Tahasildar, Koira.

The proceedings of Gram Sabha, report of the Tahasildar, Koira, proceedings of SDLC, Bonai as well as certificate of Sub-Collector, Bonai were placed before the DLC for discussion. The Gram Sabha proceedings reveals that, all the members have agreed for diversion of proposed forest land. It is revealed from the Gram Sabha Resolution that there are no further claims on the proposed diversion area. The Tahasildar, Koira has also reported that, no beneficiaries have been vested with forest land of proposed area of 4.521 ha. and no new FRA claim applications have been received/ left out during Special Drive for Saturation of FRA works vide his letter No. 3047 dated 26.12.2022. The Sub-Collector, Bonai and ADWO, Bonai have given a certificate to the effect that,

a. The complete process for identification and settlement of rights under FRA has been carried out for the entire 4.521 Ha of forest land to non-forest land proposed for diversion.
b. The Gram Sabha was conducted in local language and on being understood the villagers consented their views for diversion of forest land in favour of the user agency, M/s Rungta Mines Limited.

c. The Gram Sabha proceedings reveal to have completed all formalities/ process under Forest Rights Act, 2006 and villagers having understood and given their consent to the proposed diversion.

d. The Gram Sabha was conducted with a quorum of minimum 50% of the members where discussion and decisions on such proposal had taken place.

e Regarding the claim right U/s-3(2) of the Forest Rights Act, 2006, it is manifested from the Gram Sabha proceedings that there is no claimant to be managed by the Govt. as required for such diversion of forest land of 4.521 Ha for non-forest purposes.

f. It is evident that the Gram Sabha meeting has looked into with the requirement U/s- 3 (1)€ of FRA, 2006 for rights of Primitive Tribal Groups and Pre-Agricultural Communities to safeguard their rights as there is no claimant residing in the proposed forest land.

The above mention reports and SDLC proceedings received from Sub-Collector, Bonai discloses that, all actions have been adopted positively in maintaining equity in adherence to intended Govt. guidelines as required in letter No. 17446/ F& E, Dt. 21.08.2013 with reference to GOI, Ministry of Environment and Forest (FC Division) letter Dt. 05.02.2013 of F. No. 11-9/98-FC (pt.) ensuring the compliance of the Forest Rights Act, 2006.

After threadbare discussion, basing on Gram Sabha proceedings, SDLC proceedings, report of the Tahasildar, Koira and certificate of the Sub-Collector, Bonai the committee unanimously decided to issue certificate for diversion of the proposed forest land in favour of the user agency. It was also decided that, the claimants issued with IFR titles shall be settled by the user agency as per appropriate law/ norms of the Govt. and if any ST or OTFD will be affected in the future on the said Non-Linear project shall be settled by the user agency as per the norms of Govt. from time to time and provision under Forest Rights Act,2006 and Amendment Rules,2012.

**LAND SCHEDULED OF PROPOSED LAND, MOUZA- BAD-INDIPUR**

| Sl. No. | Khata No. | Plot No. | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 39 | 114/p | Dunguri | 4.521 |
| | | | Total | 4.521 |

A copy of the Certificate in Form-II (Other than linear project) along with details of allied documents be submitted to the DFO concerned.

Further, the Collector-cum-Chairman, DLC (FRA), Sundargarh instructed to maintain the concerned case records of Forest Rights Act regarding diversion of forest land of the beneficiaries and a copy of the proceeding be kept in the case record which will form the part of the record.

ii) **Diversion proposal of 0.405 ha. of forest land for re-routing of 132KV overhead transmission line in village Rengalbeda under Koira Tahasil of M/s Rungta Mines Ltd., Barbil (Linear Project)**

The Project Administrator, ITDA, Sundargarh apprised the committee that the linear project namely, "Diversion proposal of 0.405 ha. of forest land for re-routing of 132KV overhead transmission line in village Rengalbeda under Koira Tahasil of M/s Rungta Mines Ltd., Barbil has been received for approval in District Level Committee (FRA).

Further, the PA, ITDA, Sundargarh apprised that, as per the L No. F No.11-9/98-FC (pt) dated 28.10.2014 Ministry of Environment and Forest (FC Division) Govt. of India and the instructions contained therein, the Projects likes construction of roads, canals, laying of pipe lines/optical fibers and transmissions line etc. where linear diversion of use forest land in several villages are involved, unless recognized rights of Primitive Tribal Groups (PTG) and Pre-Agricultural Communities (PAC) are being affected, are exempted from the requirement of obtaining consent of the concerned Gram Sabha(s) as stipulated in clause € read with clause (d) € and (f) in second para of this Ministry's said letter dated 03.08.2009.

In this connection,

i) As per Notification No. GSR 200€ dated 06.03.2017 of Ministry of Environment, Forests and Climate Change (FC Division) Govt. of India, the District Collector shall (1) complete the process of recognition and vesting of forest rights in accordance with the provision of the scheduled Tribes and OTFDs (Recognition of Forest Rights) Act, 2006 (2 of 2007) for the entire forest land indicated in the proposal.

ii) obtain consent of each Gram Sabha having jurisdiction over the whole or a part of the forest land indicated in the proposal for the diversion of such forest land and compensatory and ameliorative measures, if any, having understood the purposes and details of diversion, wherever required and

iii) forward his findings in this regard to the Conservator of Forests.

But, the committee seen that, as per the instruction contained in letter No F No.11-09/1998-FC(pt) dated 23.10.2017 of Ministry of Environment, Forest & Climate

Change (FC Division) Govt. of India, which is issued after the above said Notification of GSR 200€ dated 06.03.2017 that, the ropeway project shall be considered as linear projects for the purpose of guidelines dated 03.08.2009 and 05.02.2013 issued in this regards. Further, the Ministry of Environment, Forest & Climate Change (FC Division) Govt. of India have issued clarification vide Letter No F No.5-2/2017-FC dated 05.08.2019 that, the construction of linear infrastructure (Conveyor belt) for an already working/ existing mines including the loading point/unloading point may be considered as a linear project.

As such the committee interpreted that, unless recognized rights of Primitive Tribal Groups (PTG) and Pre-Agricultural Communities (PAC) are being affected, are exempted from the requirement of obtaining consent of the concerned Gram Sabha(s).

The PA, DFDA, Sundargarh also informed the committee that, for Diversion proposal of 0.405 ha. of forest land for re-routing of 132KV overhead transmission line in village Rengalbeda under Koira Tahasil of M/s Rungta Mines Ltd., Barbil, the Tahasildar, Koira has submitted the certificate in Form-I for linear project for 0.405 Ha (1.002 Acre) of forest land along with land schedule duly countersigned by Range Officer, Koira Forest Range & Revenue Inspector, Koira.

It is revealed from the said certificates that,

(i) There is no Primitive Tribal Groups (PTG) or Pre-Agricultural Communities (PAC) staying in the village where forest land is proposed for diversion.

(ii) There are no such families in the villages.

(iii) There is no PTG/PAC staying in the villages.

(iv) Identification and settlement under FRA have been carried out for the entire forest land of 0.405 Ha (1.002 Acre) under Koira Tahasil. No title has been issued on the forest land proposed for the diversion.

The above mention certificates and SDLC proceedings received from Sub-Collector, Bonai reveals that, all actions have been adopted positively in maintaining equity in adherence to intended Govt. guidelines as required in letter No. 17446/ F& E, Dt. 21.08.2013 with reference to GOI, Ministry of Environment and Forest (FC Division), letter Dt. 05.02.2013 of F. No. 11-9/98-FC (pt.) ensuring the compliance of the Forest Rights Act, 2006.

After threadbare discussion, basing on SDLC proceedings, report of Tahasildar, Koira & Sub-Collector, Bonai, the committee unanimously decided to issue certificate for diversion of the proposed forest land in favour of the user agency. It was also decided that, the claimants issued with IFR titles shall be settled by the user agency as per appropriate law/ norms of the Govt. and if any ST or OTFD will be affected in the future on the said linear project shall be settled by the user agency as per the norms of Govt. from time to time and provision under Forest Rights Act,2006 and Amendment Rules,2012.

**LAND SCHEDULED OF PROPOSED LAND FOR DIVERSION**

| Sl. No. | Village | Khata No. | Plot No. | Hal Kisam | Area in Ha |
|---|---|---|---|---|---|
| 1 | Rengalbeda | 26 | 74 | Patit | 0.232 |
| 2 | Rengalbeda | 26 | 79 | Patit | 0.001 |
| 3 | Rengalbeda | 26 | 77 | Patit | 0.050 |
| 4 | Rengalbeda | 26 | 76 | Patra Jungle | 0.009 |
| 5 | Rengalbeda | 26 | 75 | Rasta | 0.014 |
| 6 | Rengalbeda | 24 | 206 | Jungle | 0.099 |
| | | | | Total | **0.405** |

iii) **Diversion proposal of 3.104 ha. (2.397 ha. under Koira Tahasil & 0.707 ha. under Lahunipara Tahasil) of forest land for construction of 11 KV transmission line from Jaldihi village to Jhumka Pathuriposhi Pahar Iron Ore Block under Lahunipara & Koira Tahasil of M/s Rungta Mines Ltd., Barbil (Linear Project)**

The Project Administrator, ITDA, Sundargarh apprised the committee that the linear project namely, "Diversion proposal of 3.104 ha. of forest land for construction of 11 KV transmission line from Jaldihi village to Jhumka Pathuriposhi Pahar Iron Ore Block under Lahunipara & Koira Tahasil of M/s Rungta Mines Ltd., Barbil has been received for approval in District Level Committee (FRA).

Further, the PA, ITDA, Sundargarh apprised that, as per the L No. F No.11-9/98-FC (pt) dated 28.10.2014 Ministry of Environment and Forest (FC Division) Govt. of India and the instructions contained therein, the Projects likes construction of roads, canals, laying of pipe lines/optical fibers and transmissions line etc. where linear diversion of use forest land in several villages are involved, unless recognized rights of Primitive Tribal Groups (PTG) and Pre Agricultural Communities (PAC) are being affected, are exempted from the requirement of obtaining consent of the concerned Gram Sabha(s) as stipulated in clause € read with clause (d) € and (f) in second para of this Ministry's said letter dated 03.08.2009.

In this connection,

i) As per Notification No. GSR 200€ dated 06.03.2017 of Ministry of Environment, Forests and Climate Change (FC Division) Govt. of India, the District Collector shall (1) complete the process of recognition and vesting of forest rights in accordance with the provision of the scheduled Tribes and OTFDs (Recognition of Forest Rights) Act, 2006 (2 of 2007) for the entire forest land indicated in the proposal.

ii) obtain consent of each Gram Sabha having jurisdiction over the whole or a part of the forest land indicated in the proposal for the diversion of such forest land and compensatory and ameliorative measures, if any, having understood the purposes and details of diversion, wherever required and

iii) forward his findings in this regard to the Conservator of Forests.

But, the committee seen that, as per the instruction contained in letter No F No.11-09/1998-FC(pt) dated 23.10.2017 of Ministry of Environment, Forest & Climate Change (FC Division) Govt. of India, which is issued after the above said Notification of GSR 200€ dated 06.03.2017 that, the ropeway project shall be considered as linear projects for the purpose of guidelines dated 03.08.2009 and 05.02.2013 issued in this regards. Further, the Ministry of Environment, Forest & Climate Change (FC Division) Govt. of India have issued clarification vide Letter No F No.5-2/2017-FC dated 05.08.2019 that, the construction of linear infrastructure (Conveyor belt) for an already working/ existing mines including the loading point/unloading point may be considered as a linear project.

As such the committee interpreted that, unless recognized rights of Primitive Tribal Groups (PTG) and Pre-Agricultural Communities (PAC) are being affected, are exempted from the requirement of obtaining consent of the concerned Gram Sabha(s).

The PA, ITDA, Sundargarh also informed the committee that,

1. For Diversion proposal of 3.104 ha. (2.397 ha. under Koira Tahasil & 0.707 ha. under Lahunipara Tahasil) of forest land for construction of 11 KV transmission line from Jaldihi village to Jhumka Pathuriposhi Pahar Iron Ore Block under Koira & Lahunipara Tahasil of M/s Rungta Mines Ltd., Barbil, the Tahasildar, Koira has submitted the certificate in Form-I for linear project for 2.397 ha. of forest land along

with land schedule duly countersigned by Forest Range Officer, Barsuan Forest Range & Revenue Inspector, Koira.

It is revealed from the said certificates that,

(i) There is no Primitive Tribal Groups (PTG) or Pre-Agricultural Communities (PAC) staying in the village where forest land is proposed for diversion.

(ii) There are no such families in the villages

(iii) There is no PTG/PAC staying in the villages.

(iv) Identification and settlement under FRA have been carried out for the entire forest land of 2.397 Ha under Koira Tahasil. No title has been issued on the forest land proposed for the diversion.

2. Similarly, the Tahasildar, Lahunipara has submitted the certificate in Form-1 for linear project for 0.707 ha. of forest land along with land schedule duly countersigned by Revenue Inspector, Sasyakela.

It is revealed from the said certificates that,

(i) There is no Primitive Tribal Groups (PTG) or Pre-Agricultural Communities (PAC) staying in the village where forest land is proposed for diversion.

(ii) There are no such families in the villages.

(iii) There is no PTG/PAC staying in the villages.

(iv) Identification and settlement under FRA have been carried out for the entire forest land of 0.707 Ha under Lahunipara Tahasil. No title has been issued on the forest land proposed for the diversion.

The above mention certificates and SDLC proceedings received from Sub-Collector, Bonai reveals that, all actions have been adopted positively in maintaining equity in adherence to intended Govt. guidelines as required in letter No. 17446/ F& E, Dt. 21.08.2013 with reference to GOI, Ministry of Environment and Forest (FC Division), letter Dt. 05.02.2013 of F, No. 11-9/98-FC (pt.) ensuring the compliance of the Forest Rights Act, 2006.

After threadbare discussion, basing on SDLC proceedings, report of Tahasildar, Koira, Tahasildar, Lahunipara & Sub-Collector, Bonai, the committee unanimously decided to issue certificate for diversion of the proposed forest land in favour of the user agency. It was also decided that, the claimants issued with IFR titles shall be settled by the user agency as per appropriate law/ norms of the Govt. and if any

ST or OTFD will be affected in the future on the said linear project shall be settled by the user agency as per the norms of Govt. from time to time and provision under Forest Rights Act,2006 and Amendment Rules,2012.

**LAND SCHEDULED OF PROPOSED LAND FOR DIVERSION UNDER KOIRA TAHASIL**

| Sl. No. | Village | Khata No. | Plot No. | Hal Kisam | Area in Ha |
|---|---|---|---|---|---|
| 1 | Jaldihi | 17 | 48 | Jungle | 0.055 |
| | | | | | 0.272 |
| 2 | Jaldihi | 18 | 153 | Pahad | 0.182 |
| 3 | Jaldihi | 18 | 157 | Pahad | 0.177 |
| 4 | Jaldihi | 18 | 154 | Pahad | 0.434 |
| 5 | Jaldihi | 18 | 158 | Pahad | 0.306 |
| 6 | Jaldihi | 18 | 160 | Pahad | 0.247 |
| 7 | Tantigram | 15 | 76 | Pahad | 0.302 |
| 8 | Tantigram | 15 | 78 | Pahad | 0.042 |
| 9 | Tantigram | 15 | 75 | Pahad | 0.088 |
| | | | | | 0.050 |
| 10 | Tantigram | 15 | 77 | Pahad | 0.302 |
| | | | | **Total** | 2.397 |

**LAND SCHEDULED OF PROPOSED LAND FOR DIVERSION UNDER LAHUNIPARA TAHASIL**

| Sl. No. | Village | Khata No. | Plot No. | Hal Kisam | Area in Ha |
|---|---|---|---|---|---|
| 1 | Kensara | 10 | 90 | Pahad | 0.118 |
| 2 | Kensara | 10 | 91 | Pahad | 0.252 |
| 3 | Kensara | 10 | 95 | Pahad | 0.030 |
| 4 | Kensara | 10 | 98 | Pahad | 0.039 |
| 5 | Kensara | 10 | 94 | Pahad | 0.268 |
| | | | | **Total** | 0.707 |

iv) **<u>Diversion proposal of forest land measuring 16.98 ha. (Safety Zone) for iron and manganese ore mining of M/s CP Sharma in village- Tensa, Bahamba & Raikela under Koira Tahasil.</u>**

The proposal has been received from the user agency, M/s CP Sharma for diversion of forest land of 16.98 ha. (Safety zone) of forest land for non-forest purpose under the forest (Conservation) Act, 1980 ensuring compliance of the STs and Other Traditional Forest Dwellers (FRA) Act, 2006 in village Tensa, Bahamba & Raikela under Koira Tahasil. The user agency has requested to the District Administration to issue of No Objection Certificate under FRA,2006.

On receipt of the above proposal, in order to ensure compliance of Forest Rights Act, 2006 and to obtain Gram Sabha consent the BDO & Tahasildar, Koira were required to submit a detailed report/ status of the forest land proposed for diversion.

Accordingly, Gram Sabha was held at village Raikela of Dengula GP on 10.06.2013, Bahamba of Dengula GP on 11.06.2013 & Tensa of Dengula GP on 07.07.2013 respectively in presence of majority of the villagers, WEO, Koira, PEO, Dengula GP. The PEO of Dengula GP has certified on quorum of Gram Sabha that more than 50% of the total members were present during the Gram Sabhas as per voter list of the above villages.

The P.A, ITDA, Sundargarh apprised that, in the resolution of Gram Sabha of Raikela, diversion proposal of forest land is 21.541 ha. Out of which, 13.730 ha. is diversion area and 7.811 ha. is safety zone area for non-forest use. Secondly, in the resolution of Gram Sabha of Bahamba, diversion proposal of forest land is 43.201 ha. Out of which, 35.569 ha. is diversion area and 7.632 ha. is safety zone area for non-forest use. Thirdly, in the resolution of Gram Sabha of Tensa, diversion proposal of forest land is 2.610 ha. Out of which, 1.073 ha. is diversion area and 1.537 ha. is safety zone area for non-forest use. But as per letter No. 53 dated 20.02.202 of Deputy Collector, Mining, Collectorate, Sundargarh, after correction of land schedule and boundary description of the above said villages the diversion of forest land are as follows:

| Sl. No. | Name of the village | Proposed area of diversion of forest land in ha. before correction | Proposed area of diversion of forest land in ha. after correction |
|---|---|---|---|
| 1 | Bahamba | 43.201 | 43.082 |
| 2 | Raikela | 21.541 | 22.368 |
| 3 | Tensa | 2.610 | 1.902 |
| | Total | 67.352 | 67.352 |

After correction of land schedule and boundary description, the safety zone area for the village Bahamba, Raikela & Tensa is 6.427 ha., 9.336 ha. & 1.217 ha. respectively i.e., in total 16.98 ha. Accordingly, the Tahasildar, Koira has submitted the enquiry reports in the prescribed model format for issue of certificate regarding compliance of STs and Other Traditional Forest Dwellers (FRA) Act, 2006 in village Bahamba, Raikela & Tensa of Dengula G.P. under Koira Tahasil. The joint enquiry was conducted by Range Officer, Barsuan Forest Range & Tahasildar, Koira.

The proceedings of Gram Sabha, report of the Tahasildar, Koira, proceedings of SDLC, Bonai as well as certificate of Sub-Collector, Bonai were placed before the DLC for discussion. The Gram Sabha proceedings reveals that, all the members have agreed for diversion of proposed forest land. It is revealed from the

Gram Sabha Resolution that there are no further claims on the proposed diversion area. The Tahasildar, Koira has also reported that, no beneficiaries have been vested with forest land of proposed area of 16.98 ha. and no new FRA claim applications have been received/ left out during Special Drive for Saturation of FRA works vide his letter No. 3041 dated 26.12.2022. The Sub-Collector, Bonai and ADWO, Bonai have given a certificate to the effect that,

a. The complete process for identification and settlement of rights under FRA has been carried out for the entire 16.98 Ha of forest land to non-forest land proposed for diversion.
b. The Gram Sabha was conducted in local language and on being understood the villagers consented their views for diversion of forest land in favour of the user agency, M/s CP Sharma.
c. The Gram Sabha proceedings reveal to have completed all formalities/ process under Forest Rights Act, 2006 and villagers having understood and given their consent to the proposed diversion.
d. The Gram Sabha was conducted with a quorum of minimum 50% of the members where discussion and decisions on such proposal had taken place.
e. Regarding the claim right U/s-3(2) of the Forest Rights Act, 2006, it is manifested from the Gram Sabha proceedings that there is no claimant to be managed by the Govt. as required for such diversion of forest land of 16.98 Ha for non-forest purposes.
f. It is evident that the Gram Sabha meeting has looked into with the requirement U/s- 3 (1)€ of FRA, 2006 for rights of Primitive Tribal Groups and Pre-Agricultural Communities to safeguard their rights as there is no claimant residing in the proposed forest land.

The above mention reports and SDLC proceedings received from Sub-Collector, Bonai discloses that, all actions have been adopted positively in maintaining equity in adherence to intended Govt. guidelines as required in letter No. 17446/ F& E, Dt. 21.08.2013 with reference to GOI, Ministry of Environment and Forest (FC Division) letter Dt. 05.02.2013 of F. No. 11-9/98-FC (pt.) ensuring the compliance of the Forest Rights Act, 2006.

After threadbare discussion, basing on Gram Sabha proceedings, SDLC proceedings, report of the Tahasildar, Koira and certificate of the Sub-Collector, Bonai, the committee unanimously decided to issue certificate for diversion of the proposed forest land in favour of the user agency. It was also decided that, the claimants issued with IFR titles shall be settled by the user agency as per appropriate law/ norms of the Govt. and if any ST or OTFD will be affected in the future on the said Non-Linear project shall be settled by the user agency as per the norms of Govt. from time to time and provision under Forest Rights Act,2006 and Amendment Rules,2012.

**LAND SCHEDULED OF PROPOSED LAND, VILLAGE- BAHAMBA**

| Sl. No. | Khata No. | Plot No. | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 25 (AAA) | 84/p | Pahada | 0.187 |
| 2 | 25 (AAA) | 85/p | Pahada | 1.453 |
| 3 | 25 (AAA) | 86/p | Pahada | 0.034 |
| 4 | 25 (AAA) | 114/p | Pahada | 0.551 |
| 5 | 25 (AAA) | 120/p | Pahada | 1.356 |
| 6 | 25 (AAA) | 120/p | Pahada | 0.009 |
| 7 | 25 (AAA) | 121 | Pahada | 2.379 |
| 8 | 25 (AAA) | 122/p | Pahada | 0.206 |
| 9 | 23 (RAKHIT) | 123/p | Jungle | 0.252 |
| | | | Total | 6.427 |

**LAND SCHEDULED OF PROPOSED LAND, VILLAGE- RAIKELA**

| Sl. No. | Khata No. | Plot No. | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 66 (AAA) | 600/P | Pahada | 3.473 |
| 2 | 66 (AAA) | 601/P | Pahada | 1.190 |
| 3 | 66 (AAA) | 601/P | Pahada | 0.075 |
| 4 | 66 (AAA) | 608/P | Pahada | 0.482 |
| 5 | 66 (AAA) | 609/P | Pahada | 3.942 |
| 6 | 66 (AAA) | 602/P | Pahada | 0.167 |
| | | | Total | 9.336 |

**LAND SCHEDULED OF PROPOSED LAND, VILLAGE- TENSA**

| Sl. No. | Khata No. | Plot No. | Kisam | Area in Ha |
|---|---|---|---|---|
| 1 | 2 (RAKHIT) | 194/P | Jungle | 0.131 |
| 2 | 2 (RAKHIT) | 194/217/P | Jungle | 0.628 |
| 3 | 2 (RAKHIT) | 173/218/P | Jungle | 0.441 |
| 4 | 2 (RAKHIT) | 192/P | Jungle | 0.017 |
| | | | Total | 1.217 |

A copy of the Certificate in Form-II (Other than linear project) along with details of allied documents be submitted to the DFO concerned.

Further, the Collector-cum-Chairman, DLC (FRA), Sundargarh instructed to maintain the concerned case records of Forest Rights Act regarding diversion of forest

land of the beneficiaries and a copy of the proceeding be kept in the case record which will form the part of the record.

6. **REVIEW OF REJECTED IFR CLAIMS:- (Supreme Court order Dt. 13.02.2019 AND DT. 28.02.2019 PASSED IN W.P(CIVIL) NO(S). 109/2008)**

P.A ITDA apprised the committee that, the Sub-Collector, Sadar, Sundargarh has submitted 534 Nos. of rejected IFR claims at SDLC level. Out of 534 cases, the SDLC has recommended for approval of 55 nos. of claim of Hemgir, Rajgangpur, Tangarpali, Lephripara & Balisankara Block and 479 nos. of cases of Rajgangpur, Bargaon, Tangarpali, Hemgir, Sadar, Lephripara & Balisankara Tahasil for rejection due to non-possession of land, non production of documents on residing for 3-generation prior to 13.12.2005, non forest land etc.

Similarly, the SDLC, Sadar, Sundargarh has submitted 232 nos. of rejected claims at Gram Sabha level. Out of which, SDLC has recommended 31 nos. of claims of Hemgir, Tangarpali, Lephripara, Subdega & Balisankara for approval and 201 nos. of claims for rejection due to non possession of land, non production of documents on residing for 3-generation prior to 13.12.2005, non forest land etc.

After threadbare discussion the committee has decided to approve 55 Nos. of IFR claims of out of 534 of rejected IFR claims at SDLC level and 31 Nos. of claims out of 232 nos. of rejected claims at Gram Sabha level. Accordingly, 55 Nos. of IFR claims out of 534 Nos. of rejected IFR claims are disposed as approved and 479 are disposed as rejected. Similarly, out of 232 Nos. of rejected IFR claims at Gram Sabha level, 31 Nos. of claims are disposed as approved and 201 Nos. of IFR claims are disposed as rejected.

The details of approved IFR claims are annexed at **Annexure- "C".**

The details of rejected IFR claims are annexed at **Annexure- "D".**

7. **CORRECTION OF RORs & DEMARCATION OF FOREST LAND:**

P.A ITDA apprised the committee that, 22809 Nos. of IFR titles have been distributed so far. Out of which 18091 Nos. of titles relates to Revenue Forest and 4718 Nos. of titles relates to Reserve Forest. The correction of RoR has been done in respect of 16070 Nos. of IFR titles and demarcation has been made for 22559 Nos. of titles. The report on achievement made on Correction of RoR and Demarcation for Forest land are not being forth coming from all Sub-Collectors and Tahasildars by 5th of the succeeding month regularly inspite of repeated instructions. The Tahasil wise

break up on correction of RoR and demarcation of forest land is annexed at Annexure-"E"

After threadbare discussion on the matter, Collector instructed all the Sub-Collectors to impress upon the Tahasildars to expedite for submission of the monthly progress report on time.

(Action: All Sub-Collectors and Tahasildars)

8. APPROVAL OF NEW IFR CLAIMS RECEIVED FROM SDLCs: -

No new IFR claims have been submitted by any SDLC.

9. APPROVAL OF NEW CFR CLAIMS: -

No new CFR claims have been submitted by any SDLC.

10. CONVERSION OF FOREST VILLAGES INTO REVENUE VILLAGES: -

P.A, ITDA apprised the committee that out of 68 Nos. of un-surveyed forest villages identified earlier out of which proclamation has been issued in favour of 67 Nos. of forest village except Dhangribandha village under Balisankara Tahasil. The process of work on Conversion of forest village into revenue villages has been taken up through Mrs. Puspanjali Satpathy, consultancy and Smt. Anna Kujur, Conveyer Athakosia Adibasi Lok Sangathan in 46 Nos. of villages. The list of un-surveyed forest villages is annexed at Annexure-"F".

Further, P.A, ITDA apprised the committee that detail status of conversion work taken by the DGPS survey and Plane Table survey for the forest villages through the GIS, Technology, Bhubaneswar/ MRDS, Sundergarh and Tahasildar, Lephripara s/s annexed at Annexure-"G"

11. SPECIAL DRIVE ON SATURATION OF FOREST RIGHTS ACT,2006 WORKS: -

The status on Special drive on saturation of Forest Rights Act,2006 vide letter No. 1387 dated 11.05.2022 of Collector-cum-Chairman, DLC (FRA) is as follows: -

STATUS ON SPECIAL DRIVE ON SATURATION OF FOREST RIGHTS ACT,2006

| SL No. | Name of the Tahasil/ FRA cell | CFR received | Total No. of IFR application received (cumulative figure) | Total No. of application scrutinised | Total Nos. of invalid application (Cumulative figure) (Duplicacy) | Total Nos. of valid application (Cumulative figure) | Joint verification made |
|---|---|---|---|---|---|---|---|
| 1 | Hemgir | 38 | 4242 | 2124 | 152 | 2089 | 0 |
| 2 | Lephripara | 47 | 3701 | 931 | 16 | 918 | 0 |
| 3 | Tangarpali | 55 | 1980 | 476 | 0 | 476 | 0 |
| 4 | Sundergarh | 20 | 2807 | 480 | 12 | 326 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5 | Subdega | 18 | 3667 | 406 | 0 | 406 | 0 |
| 6 | Balisankara | 60 | 3421 | 825 | 52 | 773 | 0 |
| 7 | Bargaon | 45 | 2080 | 912 | 0 | 912 | 0 |
| 8 | Kutra | 69 | 1801 | 508 | 7 | 501 | 0 |
| 9 | Rajgangpur | 30 | 3145 | 1635 | 33 | 1602 | 0 |
| 10 | Kuarmunda | 73 | 1510 | 329 | 3 | 448 | 0 |
| 11 | Biramitrapur | 13 | 2290 | 506 | 126 | 449 | 0 |
| 12 | Bisra | 0 | 1059 | 245 | 2 | 243 | 0 |
| 13 | Lathikata | 80 | 4688 | 89 | 2 | 74 | 0 |
| 14 | Bonai | 15 | 1950 | 1050 | 11 | 1050 | 0 |
| 15 | Gurundia | 79 | 3263 | 1650 | 4 | 1646 | 268 |
| 16 | Koida | 13 | 3023 | 268 | 52 | 216 | 0 |
| 17 | Lahunipara | 42 | 5302 | 35 | 0 | 0 | 134 |
| | Total | 697 | 49929 | 12471 | 472 | 12129 | 402 |

After threadbare discussion the committee has decided to expedite the process of work.
(Action : All DFOs, all Sub-Collectors, all BDOs, all Tahasildars)

The meeting ended with vote of thanks to the chair and participants.

Smt. Manjulata Naik, Z.P. Member, Sadar, Sundargarh

Sri Manoj Barua, Z.P. Member, Subdega

Sri Apindra Khan, Z.P. Member, Gurundia

District Welfare Officer, Sundargarh

Project Administrator, ITDA, Bonai

Project Administrator, ITDA, Panposh

Project Administrator, ITDA, Sundargarh

Divisional Forest Officer, Bonai

Divisional Forest Officer, Rourkela

Divisional Forest Officer, Sundargarh

APPROVED

Collector-cum-Chairman, DLC (FRA), Sundargarh

ANNEXURE - 20

F.No.J-11015/481/2007-IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003.

Dated the 16th June, 2008

To

Shri Chandi Prasad Sharma
Mine owner,
At Amlatola, P.O. Chaibasa,
District West Singhbhum,
Jharkhand-833 201

**Subject: Expansion of Raikela Bahamba Iron & Manganese Mining Project of Shri Chandi Prasad Sharma located in Village(s) Raikela, Bahamba and Tensa, Tehsil Bonai, District Sodergarh, Orissa-environmental clearance regarding.**

Sir,

This has reference to your letter No. 'Nil' dated 28.05.2007 and subsequent letters dated 15.02.2008, 10.03.2008 and 19.03.2008 on the subject mentioned above. The proposal is for enhancement of production of iron ore from 36,000tonnes per annum (TPA) to 50,000TPA. The total mine lease area of the project is 69.606ha, out of which 67.716ha is forestland and 1.89ha is non-forestland. Area proposed for mining is 40.975ha, an area of 0.416ha is kept for over burden dumps, 0.54ha for mineral storage, 0.272ha for infrastructure, 0.123ha for roads, 1.9ha for green belt and 25.38ha is others (untouched area for future exploration). A seasonal nallah is located in the middle portion of the mine lease. The Kurarhi Nadi is flowing at a distance of 6km to the west of the mining lease. Modification/diversion in the existing drainage pattern has not been envisaged. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. is reported to be located in the core and buffer zone of the mine and that the area does not report to form corridor for Schedule-I fauna. In support of this, the project proponent has furnished a map duly authenticated by DFO and Wildlife Warden, Bonai Division. The Karo Karampada Elephant Corridor is reported to be located beyond buffer zone of the mine. The mine working will be opencast by semi-mechanised method involving blasting. The targetted production capacity of the mine is 50,000 TPA of iron ore and life of mine is 23years. The topography of the area is hilly at an elevation ranging from 590m-765m AMSL. The present working depth of mine is 765m RL and the ultimate working depth of mine will be 590m RL. The water table is at 570 mRL. The mine working will not intersect groundwater table. The water requirement of the project is estimated as 18m$^3$ per day, which will be sourced from the surface water. There is no population in the core zone, therefore, no

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displacement of population and R&R is involved. Approximately 1381.33$m^3$ per month of over burden will be generated, which will be dumped in the earmarked areas. It is estimated that 164164$m^3$ of over burden will be generated during the life of the mine, which will be disposed off in the form of an external dump. The maximum height of dump will be 40m. Plantation will be raised in an area of 44.27ha at the end of the mine life. The Public hearing of the project was held on 28.02.2007 for enhancement of iron ore production upto 50,000TPA over an area of 69.6074ha. The Indian Bureau of Mines had approved mining plan along with the progressive mine closure plan of the project on 11.01.2008 for lease area of 69.606ha. The capital cost of the project is Rs.280Lakhs.

2. The Ministry of Environment and Forests has examined the application in accordance with Section 12 of the EIA Notification, 2006 read with para 1.2 of the Circular No. J-11013/41/2006-IA.II(I) dated 13.10.2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned Raikela Bahamba Iron & Manganese Ore Mining Project of Shri Chandi Prasad Sharma for an annual production capacity of 50,000tonnes (0.05million tonnes) by opencast semi-mechanized method involving mining lease area of 69.606ha, subject to implementation of the following conditions and environmental safeguards.

**A. Specific conditions**

(i) The project proponent shall obtain Consent to Establish from the State Pollution Control Board, Orissa and effectively implement all the conditions stipulated therein.

(ii) Necessary forestry clearance under the Forest (Conservation) Act, 1980 for forestland involved in the project shall be obtained before commencing mining operation in that area. Environmental clearance is subject to grant of forestry clearance.

(iii) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment and Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.

(iv) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The project proponent shall take appropriate safeguard measures for protection of seasonal nallah located in the middle portion of the mine lease. Any blockage due to silting or accumulation of loose materials shall be checked on regular basis.

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(v) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for a period more than 3years. The topsoil shall be used for land reclamation and plantation.

(vi) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for long period of time. The maximum height of dump shall not exceed 40m in 5 terraces of 8m each and the overall slope of dump shall not exceed $27^0$. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.

(vii) Catch drains and siltation ponds of appropriate size shall be constructed around the working pit(s), soil, mineral and OB dumps to prevent run off of water and flow of sediments directly into the Kurarhi Nadi and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly.

Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and temporary over burden dumps to prevent run off of water and flow of sediments directly into the Kurarhi Nadi and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

(viii) Dimension of the retaining wall at the toe of over burden dumps and over burden benches within the mine to check run-off and siltation should be based on the rain fall data.

(ix) Plantation shall be raised in an area of 44.27ha including a 7.5m wide green belt in the safety zone around the mining lease, quarry benches, OB dump, roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.

(x) Regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as around

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crushing and screening plant, loading and unloading point and transfer points. Extensive water sprinkling should be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

(xi) Regular monitoring of water quality upstream and downstream of springs and nallahs located within 1km of the mine lease shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.

(xii) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.

(xiii) Regular monitoring of ground water level and quality should be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year - pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment and Forests and its Regional Office Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board.

(xiv) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.

(xv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.

(xvi) Appropriate mitigative measures should be taken to prevent pollution of Kurarhi Nadi in consultation with the State Pollution Control Board.

(xvii) Minerals handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

(xviii) Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in

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mining operations and in transportation of mineral. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded.

(xlx) Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.

(xx) Drills shall either be operated with dust extractors or equipped with water injection system.

(xxi) Consent to operate should be obtained from the State Pollution Control Board prior to start of enhanced production from the mine.

(xxii) Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated during mining operation.

(xxiii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna if any spotted in the study area and contribute towards the cost of implementation of the plan and/or Regional Wildlife Management Plan for conservation of flora and fauna so prepared by the State Government. The amount so contributed shall be included in the project cost. A copy of action plan may be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months.

(xxiv) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

**B. General conditions**

(i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.

(ii) No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.

(iii) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, $SO_2$ & NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

..6/-

(iv) Data on ambient air quality (RPM, SPM, $SO_2$ & NOx) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.

(v) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.

(vi) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.

(vii) Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.

(viii) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

(ix) A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

(x) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.

(xi) The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

(xii) The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.

..7/-

(xiii) The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board.

(xiv) A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.

(xv) State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tahsildar's Office for 30 days.

(xvi) The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.

3. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

5. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made thereunder and also any other orders passed by any Court of Law relating to the subject matter.

6. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

(SATISH C. GARKOTI)
Additional Director (S)
..8/-

**Copy to:**

(i) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.

(ii) The Secretary, Department of Environment, Government of Orissa, Secretariat, Bhubaneswar.

(iii) The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.

(iv) The Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.

(v) The Chief Wildlife Warden, Government of Orissa, Bhubaneswar.

(vi) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.

(vii) The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharpur, Bhubaneshwar-751023.

(viii) The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneshwar-751012.

(ix) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.

(x) The District Collector, Sundergarh District, Government of Orissa.

(xi) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.

(xii) Monitoring File.

(xiii) Guard File.

(xiv) Record File.

**Annexure-21**

## PROFORMA FOR VERIFICATION OF DEPOSITS IN COMPENSATORY AFFORESTATION FUND

| | | |
|---|---|---|
| 1. | Name of Regional Office | Regional Office, MoEF & CC, Bhubaneswar |
| 2. | State/District/Forest Division to which the proposal relates | Odisha/ Sundargarh/ Bonai Forest Division |
| 3. | Name of User Agency, nature of proposal | Anil Kumar Sharma, PoA Late C.P. Sharma (Raikela, Bahamba & Tensa Iron & Mn. Ore Mining Project) |
| 4. | Nature and category of proposal | Mining |
| 5. | Proposal number | FP/OR/MIN/39199/2019 |
| 6. | Extent of forest area involved | 67.352 ha. of forest land |
| 7. | Whether original or extension | Original |
| 8. | If extension of lease, please clarify if proposal involves additional forest area and if so, specify | - |
| 9. | Date of 1st Stage clearance | Stage-I granted on 04.12.2023 |
| 10. | Extent of CAMPA charges, head wise viz.: | |
| | (a) Compensatory Afforestation | ₹ 6,17,24,200/- |
| | (b) Addl. Compensatory Afforestation. | Nil |
| | (c) Penal Compensatory Afforestation | Nil |
| | (c) Wildlife Management Plan | |
| | i) Site Specific Wildlife Conservation Plan. | ₹ 5,98,19,560/- |
| | ii) Regional Wildlife Management Plan | Nil |
| | (d) Additional charges for diversion of area falling under notified/protected areas | Nil |
| | (e) Net Present Value | ₹ 9,67,62,598/- |
| | (f) Penal NPV | ₹ 5,03,07,442/- |
| | (g) Safety Zone | Nil |
| | (h) 1.5 times Safety Zone | Nil |
| 11. | Whether payment made through challan or otherwise. In case of online payment, details of challan: | |
| 12. | Details of deposits | |

Contd.2...

| Sl. No. | Type of deposit (NPV/CA/ RWMP/ Others (specify)) | Whether by RTGS /DD / NEFT (Spacify) | UTR/ DD No. | Amount deposited (₹) | Date of deposit | Name of Bank from which amount transferred to account of CAF | Bank Account of CAF managed by CAMPA in which fund deposited |
|---|---|---|---|---|---|---|---|
| i) | NPV | DD | DD No 094965 dt.25.06.2010 | 4,94,32,680/- | 25.06.2010 | SBI, Barbil Branch | Compensatory Afforestation Fund (CAF)-Odisha A/C No.1565, Corporation Bank, Lodhi Road, New Delhi. |
| ii) | | Online | UTR No INDBR320240312001 16369 | 4 73,29,918/- | 12.03.2024 | Indusind Bank Ltd, Barbil Branch. | A/c No.150825839199734 ORRISA CAMPA, IFSC No.UBIN0996335. Union Bank of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027. |
| iii) | Compensatory Afforestation | Online | UTR No. INDBR320240715002 24550 | 6,17,24,200/- | Challan dated 11.7.2024, payment dated 15.07.2024 | Indusind Bank Ltd. Barbil Branch. | A/c No.150825839199260, ORRISA CAMPA, IFSC No UBIN0996335, Union Bank of India FCS Centre 21/1, III Floor, Jelitta Tower, Mission Road, Bengaluru-560027. |
| iv) | Site Specific Wildlife Conservation Plan | Online | UTR No. INDBR320240425003 12283 | 5,98,19,560/- | Challan dated 24.4.2024, payment dated 25.04.2024 | Indusind Bank Ltd, Barbil Branch. | A/c No.150825839199037, ORRISA CAMPA, IFSC No.UBIN0996335 Union Bank of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027. |
| V) | Penal NPV | Online | UTR No. ICICR520250121004 53428 | 5,03,07,442/- | Challan dated 16.1.2025, payment dated 21.01.2025 | ICICI Bank, Patrapada Branch | A/c No.150825839199441, ORRISA CAMPA. IFSC No.UBIN0996335 Union Bank of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027. |

Divisional Forest Officer,
Bonai Division.