



7.0 ABANDONMENT COST

In next five year pit will not be backfilled or abandonment, only parapet wall, fencing & garland drain will be made all along the proposed plantation & mining area in next five years. However final cost will be calculated at the end of mining plan period and reviewed at the time of next progressive closure plan submission. Year wise expenditure for next five year is given below:

YEARWISE PROPOSAL FOR ITEM NO 6& 7 OF PMCP FOR THE YEAR 2014-15

ITEM	DETAILS	AREA (In Hect)	QUANTITY (in No.)	EXPENDITURE (In Rs.)	REMARKS
A	RECLAMATION&REHABILITATION OF MINED OUT LAND				
	I) BACK-FILLING				
	II) AFFORESTATION				
	III) OTHER AFFORESTATION ON MINED OUT BENCHES				
	IV) MISCELLANEOUS				
	V) CONVERTING INTO WATER RESERVOIR				
	VI) PICNIC SPOT				
VII) OTHERS	Stone wall (in mtr.)				
	Parapet wall (in mtr.)				
B	STABILIZATION AND REHABILITATION OF DUMP (with lease)				
	I) TERRACING				
	II) FITTING				
	III) CONSTRUCTION OF PARAPET WALL/RETAINING WALL AT TOE OF DUMPS				
	IV) CONSTRUCTION OF CHECK DAMS ALONG SLOPE OF VALLES ETC				
	V) CONSTRUCTION OF SETTLING PONDS (GARLAND DRAIN ETC)				
	VI) DESILTING OF SETTLING PONDS CHANNELS				
VII) AFFORESTATION ON DUMPS					
VIII) OTHER (PLEASE SPECIFY) (Retaining wall)					
C	REHABILITATION OF BARREN AREA WITHIN LEASE	0.1	100	5000	Rs50/Sq. mtr
	I) OTHERS (Wire fence) + Post plantation care		300	36000 + 10000	Rs120/m
D	ENVIRONMENTAL MONITORING (Core Zone and Buffer Zone separately)			60000	
	I) AMBIENT AIR QUALITY				
	II) WATER QUALITY				
	III) NOISE LEVEL SURVEY				
	IV) GROUND VIBRATION				
V) OTHERS (PLEASE SPECIFY)					
TOTAL				101000	



YEARWISE PROPOSAL FOR ITEM NO 6 & 7 OF PMCP FOR THE YEAR 2015-16

ITEM	DETAILS	AREA (In Hect)	QUANTITY (in No.)	EXPENDITURE (In Rs.)	REMARKS	
A	RECLAMATION & REHABILITATION OF MINED OUT LAND					
	DI BACK-FILLING					
	DII AFFORESTATION					
	DIII OTHER AFFORESTATION ON MINED OUT BENCHES					
	DIV PISCICULTURE					
	DV CONVERTING INTO WATER RESERVOIR					
	DVI PICNIC SPOT					
	DVII OTHERS	Stone wall (in mt.) Parapet wall (in mt.)				
B	STABILIZATION AND REHABILITATION OF DUMP (with lease)					
	BI TERRACING					
	BII PITCHING					
	BIII CONSTRUCTION OF PARAPET WALL/RETAINING WALL AT TOE OF DUMPS					
	BIV CONSTRUCTION OF CHECK DAMS ALONG SLOPE OF VALLIES ETC					
	BV CONSTRUCTION OF SETTLING PONDS (GARLAND DRAIN ETC)					
	BVI DESILTING OF SETTLING PONDS CHANNELS					
	BVII AFFORESTATION ON DUMPS					
BVIII OTHER (PLEASE SPECIFY) (Retaining wall)						
C	REHABILITATION OF BARREN AREA WITHIN LEASE	DAFFORESTATION GREEN BELT BUILDING	01	100	5000	Rs 50/Sq m
		DII OTHERS (Wire fence) + Post plantation care	300	36000	+20000	Rs 120/m
D	ENVIRONMENTAL MONITORING (Core Zone and Buffer Zone separately)	DI AMBIENT AIR QUALITY			50000	
		DII WATER QUALITY				
		DIII NOISE LEVEL SURVEY				
		DIV GROUND VIBRATION				
		DV OTHERS (PLEASE SPECIFY)				
TOTAL				111000		

YEARWISE PROPOSAL FOR ITEM NO 6 & 7 OF PMCP FOR THE YEAR 2016-17

ITEM	DETAILS	AREA (In Hect)	QUANTITY (in No.)	EXPENDITURE (In Rs.)	REMARKS	
A	RECLAMATION & REHABILITATION OF MINED OUT LAND					
	DI BACK-FILLING					
	DII AFFORESTATION					
	DIII OTHER AFFORESTATION ON MINED OUT BENCHES					
	DIV PISCICULTURE					
	DV CONVERTING INTO WATER RESERVOIR					
	DVI PICNIC SPOT					
	DVII OTHERS	Stone wall (in mt.) Parapet wall (in mt.)				
B	STABILIZATION AND REHABILITATION OF DUMP (with lease)					
	BI TERRACING					
	BII PITCHING					
	BIII CONSTRUCTION OF PARAPET WALL/RETAINING WALL AT TOE OF DUMPS					
	BIV CONSTRUCTION OF CHECK DAMS ALONG SLOPE OF VALLIES ETC					
	BV CONSTRUCTION OF SETTLING PONDS (GARLAND DRAIN ETC)					
	BVI DESILTING OF SETTLING PONDS CHANNELS					
	BVII AFFORESTATION ON DUMPS					
BVIII OTHER (PLEASE SPECIFY) (Retaining wall)						
C	REHABILITATION OF BARREN AREA WITHIN LEASE	DAFFORESTATION GREEN BELT BUILDING	01	100	5000	Rs 50/Sq m
		DII OTHERS (Wire fence) + Post plantation care	300	36000	+20000	Rs 120/m
D	ENVIRONMENTAL MONITORING (Core Zone and Buffer Zone separately)	DI AMBIENT AIR QUALITY			50000	
		DII WATER QUALITY				
		DIII NOISE LEVEL SURVEY				
		DIV GROUND VIBRATION				
		DV OTHERS (PLEASE SPECIFY)				
TOTAL				121000		



YEARWISE PROPOSAL FOR ITEM NO 6& 7 OF PMCP FOR THE YEAR 2017-18

ITEM	DETAILS	AREA (In Hec)	QUANTITY (in No.)	EXPENDITURE (In Rs.)	REMARKS
A	RECLAMATION&RE HABILITATION OF MINED OUT LAND				
	I) BACK-FILLING				
	II) AFFORESTATION				
	III) OTHER AFFORESTATION ON MINED OUT BENCHES				
	IV) PISCICULTURE				
	V) CONVERTING INTO WATER RESERVOIR				
	VI) PICNIC SPOT				
VII) OTHERS	Stone wall (in mtr.)				
	Parapet wall (in mtr.)				
B	STABILIZATION AND REHABILITATION OF DUMP(with lease)				
	I) TERRACING				
	II) PITCHING				
	III) CONSTRUCTION OF PARAPET WALL/ RETAINING WALL AT TOE OF DUMPS				
	IV) CONSTRUCTION OF CHECK DAMS ALONG SLOPE OF VALLIES ETC				
	V) CONSTRUCTION OF SETTLING PONDS (GARLAND DRAIN ETC				
	VI) DESILTING OF SETTLING PONDS CHANNELS				
	VII) AFFORESTATION ON DUMPS				
VIII) OTHER (PLEASE SPECIFY) (Retaining wall)					
C	REHABILITATION OF BARREN AREA WITHIN LEASE	0.1	100	5000	Rx50/Seal ing
	II) OTHERS (Wire fence) - Post plantation care		300	36000 +40000	Rx120/m
D	ENVIRONMENTAL MONITORING (Core Zone and Buffer Zone separately)			50000	
	I) AMBIENT AIR QUALITY				
	II) WATER QUALITY				
	III) NOISE LEVEL SURVEY				
	IV) GROUND VIBRATION				
V) OTHERS (PLEASE SPECIFY)					
TOTAL				121000	

YEARWISE PROPOSAL FOR ITEM NO 6& 7 OF PMCP FOR THE YEAR 2018-19

ITEM	DETAILS	AREA (In Hec)	QUANTITY (in No.)	EXPENDITURE (In Rs.)	REMARKS
A	RECLAMATION&RE HABILITATION OF MINED OUT LAND				
	I) BACK-FILLING				
	II) AFFORESTATION				
	III) OTHER AFFORESTATION ON MINED OUT BENCHES				
	IV) PISCICULTURE				
	V) CONVERTING INTO WATER RESERVOIR				
	VI) PICNIC SPOT				
VII) OTHERS	Stone wall (in mtr.)				
	Parapet wall (in mtr.)				
B	STABILIZATION AND REHABILITATION OF DUMP(with lease)				
	I) TERRACING				
	II) PITCHING				
	III) CONSTRUCTION OF PARAPET WALL/ RETAINING WALL AT TOE OF DUMPS				
	IV) CONSTRUCTION OF CHECK DAMS ALONG SLOPE OF VALLIES ETC				
	V) CONSTRUCTION OF SETTLING PONDS (GARLAND DRAIN ETC				
	VI) DESILTING OF SETTLING PONDS CHANNELS				
	VII) AFFORESTATION ON DUMPS				
VIII) OTHER (PLEASE SPECIFY) (Retaining wall)					
C	REHABILITATION OF BARREN AREA WITHIN LEASE	0.1	100	5000	Rx50/Seal ing
	II) OTHERS (Wire fence) - Post plantation care		300	36000 +50000	Rx120/m
D	ENVIRONMENTAL MONITORING (Core Zone and Buffer Zone separately)			50000	
	I) AMBIENT AIR QUALITY				
	II) WATER QUALITY				
	III) NOISE LEVEL SURVEY				
	IV) GROUND VIBRATION				
V) OTHERS (PLEASE SPECIFY)					
TOTAL				141000	



8.0 FINANCIAL ASSURANCE

The lessee is required to submit the financial Assurance for the area to be put to use for mining and allied activities at the end of scheme of mining period. Following table shows the calculation as per the CCOM's circular no. 4/2006.

Details of area put in use as given below :

Sl No.	Head	Area put on use at start of plan (in Ha.) A	Additional requirement during plan period (in Ha.) B	Total (in Ha.) C=(A+B)	Area considered as fully reclaimed & rehabilitated (in Ha.) D	Net area considered for calculation (in Ha.) E=(C-D)
1.	Area under Mining	9.544	3.466	13.01	-	13.01
2.	O/B dump	-	-	-	-	-
3.	Road	0.49	-	0.49	0	0.49
4.	Infrastructure	-	-	-	-	-
5.	Green Belt	0.02	0.50	0.52	-	0.52
	GRAND TOTAL	10.054	3.966	14.02	-	14.02

Proposed area to be put to use at the end of plan period is 14.02 hectares. Financial assurance for mechanized mine is calculated at the rate of Rs. 25,000/- per hectares of area to be put to use. For 14.02 hectares, it works out to Rs 3,50,500/-.

Financial assurance for this amount is being submitted in the form of Bank guarantee, with final 5 copies of Mining plan, See Annexure no.19.

If there will be any change for financial assurance, then IBM will be informed in advance.



9.0 CERTIFICATES

Enclosed at the beginning of the report.

For Udaipur Min-Tech Pvt. Limited
(No. RQP/UDP/354/2009/B, Valid up to 20.8.2019)

Place : Udaipur

B. L. Mod

S.S. Bist

Date : 10-2-14

Key Person

Key Person

अनुमोदित
Approved



क्षेत्रीय खान नियन्त्रक
Regional Controller of Mines
भारतीय खान ब्यूरो, उदयपुर
Indian Bureau of Mines, UDAIPUR

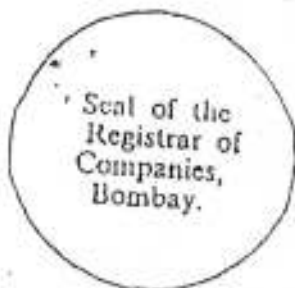


SECTION 18(1) OF COMPANIES ACT, 1956)
Certificate of Registration
OF ORDER OF COURT CONFIRMING
ALTERATIONS OF OBJECTS.

THE TATA CHEMICALS LIMITED, having by special resolution altered the provisions of its Memorandum of Association with respect to its objects such alterations having been confirmed by an order of THE HIGH COURT OF JUDICATURE AT BOMBAY, bearing date the TWENTY-SECOND day of MARCH One thousand nine hundred and FIFTY-SEVEN.

I hereby Certify that certified copy of the said order together with the printed copy of the Memorandum of Association as altered has this day been registered.

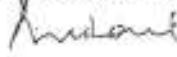
Given under my hand at BOMBAY this day of ELEVENTH JUNE, One thousand nine hundred and FIFTY-SEVEN.



Sd/- S. VENKATRAMAN,
Registrar of Companies,
BOMBAY.

S. J. J. Pandu
(Chief Medical Officer
& D. Dispy Ranavav)

CERTIFIED TO BE A TRUE COPY
of Tata Chemicals Limited



S. L. Sahi
Company Secretary



Certificate of Incorporation

No. 2893 OF 1938—1939

I hereby Certify that TATA CHEMICALS LIMITED is this day incorporated under the Indian Companies' Act, VII of 1913, and that the Company is Limited.

Given under my hand at Bombay this Twenty-third day of January One Thousand Nine Hundred and Thirty-nine.



(Sd.) BEHRAMJI M. MODI,
Registrar of Companies

Industries, Mines and Energy Department,
Sachivalaya, Gandhinagar,
Dated the 9th September, 1986.

Re:- Letter No. 4-(7)-85-MV, dated 26th August, 1986 of
Government of India, Ministry of Steel & Mines
Department of Mines, New Delhi.

O R D E R:-

No. MCR-1583-(T-4) COL- 184.Ghb1 :- In exercise of the
powers conferred by Section 8 of the Mines and Minerals
(Regulation and Development) Act, 1957, Government of
Gujarat is pleased to sanction the renewal to M/s. TATA
CHEMICALS LTD., Mithapur of a Mining Lease for Lime Stone
for twenty years with effect from 29th October 1984 in
respect of the area in the Junagadh District detailed
below:-

Taluka	Village	Survey Number	Area in Hect.
Hanavav	Aniyali	207 / Part upto	16.21

2. The renewal of the above lease is subject to the terms
and conditions mentioned below:-

- (A) Mining Lease shall be in respect of Limestone only.
If any other minerals are found in association with
this mineral, they should be brought to the notice
of Government and if the lessee desires to mine these
minerals along with the mineral for which lease is
granted, he should do so only, after the consent of
the State Government is obtained in writing.

1
/M

2....

- (b) Royalty at the rate specified for the mineral lime stone in Schedule IInd of the Mines and Minerals (Regulation and Development) Act 1957 as amended from time to time and dead rent at the rates mentioned in the IIIrd Schedule of the said Act, as amended from time to time whichever is greater shall be charged provided that the dead rent shall not be payable for the first year of the lease.
- (c) Surface rent and water rate at such rate not exceeding land revenue, water rate and cesses assessable in the land shall be charged.
- (d) If beryl or any other substances prescribed under section 3 of the Atomic Energy Act, 1948 (XXIX of 1948) is found to occur in the property under the lease, the lessee shall make available such mineral to the Government.
- (e) The lease shall be subject to the provisions of the Mines and Minerals (Regulation and Development) Act, 1957 (67 of 1957) the Mineral Concession Rules, 1960, and the Mineral Conservation and Development Rules, 1958, as amended from time to time.
- (f) The lessee shall furnish to the Collector of District an accurate map of the area sanctioned under the lease together with the description giving the situation and boundaries duly attested by the District Inspector of Land Records. The Collector shall cause to be marked the area demarcated before

execution of the Mining Lease and recover the cost from the deposit of Rs. 500/- paid for preliminary expenses.

- (g) The lessee shall pay to the Collector, necessary security deposit of Rs. 1000/- for the observance of the terms and conditions of the lease in accordance with rule 32 of the Mineral Concession Rules, 1968, before the lease is issued to him.
- (h) The lessee shall submit confidentially from time to time or when required progress report to the Director of Geology and Mining, Gujarat State, Ahmedabad-16 or to an officer authorised by him along with the samples of the ores collected during mining operations together with the analysis report.
- (i) The lessee shall not use or sell the said Mineral or deal with it in whatsoever manner or knowingly allow any one to use or sell the said mineral or deal with it in whatsoever manner as a minor mineral.
- (j) The lessee also undertakes that if the limestone won from the lease area is not required for an industrial unit to be set up by himself, he shall deliver the limestone for utilisation in any industrial plant set up by any other party within Gujarat to whom the State Government (on notice of not less than six months) may direct the lessee to deliver the limestone and in such event the price and other terms of such supply arrangement on long term basis shall be mutually agreed upon,

4....

between the lessee and such other party, in the event of a dispute arising between the lessee and such other party in regard to the said supply arrangements, the point at dispute shall be settled by the State Government and in case the lessee is still aggrieved by the decision of the State Govt. on such point, the lessee shall have the right to appeal to the Central Government.

(k) The lessee shall use all the Lime stone excavated from the said area for captive use in his existing/ proposed Soda Ash plant in Junagadh District in Gujarat State.

3. The following clause 21-A over and above pre-emption clause in favour of the State Government contained in the clause 21 of part VII of the model form of the Mining lease (Form K) shall be introduced in the mining lease deed.

"21-A Subject to the rights of the State Government and the obligations of the lessee under clause-21, above the lessee hereby undertakes that in respect of all flux or fettling grade limestone" (that is with acid insolubles of Alumina and silica less than 15 percent) he shall win from the leased area, the lessee shall,

(v) offer the first option of purchase to the Government at a price to be fixed by the Government, which shall be agreed upon between the

5....

lessee and the said Hindustan Steel Limited, in advance from year to year (such price and terms being not less favourable than those prevalent in the particular year in the market) and

- (b) To the extent, the said Hindustan Steel Limited do not exercise that first option in the particular year offer the second option of purchase to any other steel plant in the country, at such price and other terms as may be agreed upon between the lessee and such other steel plant before otherwise disposing of such limestone.
- (c) In the event of any disagreement or dispute arising between the lessee and the said Hindustan Steel Limited (or other steel plant) relating to the price or any other terms or any other matters relating to the exercise of the options aforesaid, the point at dispute shall be referred to the State Government for decision provided further that, in case the lessee or the said Hindustan Steel Limited (or other Steel Plant), ^{is} still aggrieved by the decision of the State Government on such point the matter shall be referred to the Secretary to the Government of India in the Ministry of Steel and Mines, Department of Mines and the decision of the said Secretary or any officer nominated by him for the purpose, as the case may be shall be final and binding on all concerned.

G....

5. The State Government is also pleased to accord under Rule 27(3) of the M.G. Rules, 1960, for incorporation of the following conditions in the lease deed.

- (i) The fines and siliceous limestone generated during mining has to be stacked separately for use in the other industries like cement plants. Alternatively, the Company should develop the requisite technology to use these fines (around 20% of the Run-of Mines ore) and also the siliceous limestone occurring below.
- (ii) The excavation due to mining should be suitable reclaimed/rehabilitated for proper land use keeping in view of environment. A scheme of such reclamation should be submitted to the appropriate authority for approval.
- (iii) Out of the 9 lease holders in Jamnagar District 8 lease holders are still virgin where no mining has been started. These areas should be thoroughly explored to augment the reserve.

6. This, and subsequent renewals, if any will be governed by the current Act and Rules and the terms of the lease deed should conform to the Act and Rules.

By Order and in the name of the Governor of Gujarat,


(R.D. Parmar)

Joint Secretary to the Government of Gujarat,
Industries, Mines and Energy Department.

To

M/s. Tata Chemicals Ltd., Mithapur.

With a request to approach the Collector of Junagadh District, Junagadh for execution of mining lease deed. If mining lease is not executed within six months of the date of order sanctioning it, the order sanctioned it may be revoked under the provision of rule 31 of the Mineral Concession Rules, 1960.

Copy to:-

*By Regd. A. D.

- * 1. The Collector of Junagadh District, Junagadh, with a request to take further necessary action in the matter. The case papers are returned herewith.
2. The Director of Geology and Mining, Gujarat, Ahmedabad-16.
3. The Director, Government of India, Ministry of Steel and Mines, Department of Mines, New Delhi with reference to his letter No. 4(7)-85-MV, dated 26th August, 1986.
4. The Assistant Geologist, Director of Geology and Mining, Porbandar.
5. The Revenue Department.
6. The District Inspector of Land Records, Junagadh District, Junagadh.
7. The Accountant General, Gujarat, Ahmedabad.
8. The Accountant General, Gujarat, Rajkot.
9. The Controller General, Indian Bureau of Mines, New Secretariat Building, Nagpur-1.
10. The Director General of Mines Safety, Bhanbad.
11. The Director of Mines Safety, Udaipur Region 56, Shastri Marg, Udaipur-313001 (Rajasthan).
12. Copy for select file.
13. Copy for Personal file.

/m

34-83/9929

Junagadh District, Junagadh

Date:- 1/9/1987

To,
The Controller,
Indian Bureau of Mines,
N A G P U R .

TATA CHEMICALS LTD.
7 SEPI987
MITHAPUR.

TATA CHEMICALS LTD.
7 SEPI987
MITHAPUR.

renewal
Subject:- Grant of Mining Lease/Prospecting
Licence for *L.T. MESTONG* to
Shri M/s. Tata Chemicals Ltd.
Area Acre. - *Gantha./H. 16-21* Acre.
Survey No. *207/P.* Village. *...*
..... Taluka. *...* Junagadh
District.

Of Junagadh District vide Government Of Gujarat, Industries, Mines and Energy Department order No. MCR-1883/7-9/1981/.....dated...9-9-86...

A copy of the lease deed alongwith a delineated plan is submitted herewith for record.

For
For COLLECTOR
JUNAGADH DISTRICT JUNAGADH

Copy F. W. c.s. to:-
(with copy of lease deed and sketch)

1. The Under Secretary, Industries, Mines & Energy Dept., Sachivalaya, Gandhinagar.
2. The Director, Geology & Mining Dept., New Kanta Hospital Bldg Asharwa, Ahmedabad.
3. The Mamlatdar. *Ranuvan*. He is requested to handover the possession of the land to the party as per rules & regulations & immediately the date of giving possession to this office.
4. The Assistant Geologist/2 Royalty Inspector... *P.O. Bhandar*
5. The Mines Supervisor.....
6. The Mining Lease Statical File.
7. The Assistant Director, F.S. RAJKOT.

To,
Shri M/s. Tata Chemicals Ltd.
..... *Mith pur*

FORM K -

MODEL FORM OF MINING LEASE

(See Rule 31)

THIS INDENTURE made this 21st day of August 1987 between the Governor of Gujarat (hereinafter referred to as "the State Government" which expression shall where the context so admits be deemed to include the successors and assigns) of the one part and

When the lessee is an individual.

(Name of person with address and occupation) (hereinafter referred to as "the lessee" which expression shall where the context so admits be deemed to include his heirs, executors, administrators, representatives and permitted assigns).

When the lessee are more than one individual.

(Name of person with address and occupation) and

(Name of person with address and occupation) (hereinafter referred to as "the lessee" which expression shall where the context so admits be deemed to include their respective heirs, executors, administrators, representatives and their permitted assigns).

When the lessee is a registered firm.

(Name and address of partner) son of of style of

(Name and address of son of all carrying on business in partnership under the name and

(Name of their firms) registered under the Indian Partnership Act, 1932 (9 of 1932), and having their registered office at (hereinafter referred to as "the lessees") which expression where the context so admits be deemed to include all the said partners, their respective heirs, executors, legal representatives and permitted assigns .

When the lessee is a registered company.

M/s. TATA CHEMICALS LIMITED. (Name of company) a company registered under Companies Act. (Act under which incorporated) and having its registered office at Bombay House, 24 Homi Mody Street, Fort, BOMBAY (400 023) (Address) (here-

inafter referred to as the lessee which expression shall where the context so admit be deemed to include its successors and permitted assigns) of the other part.

WHEREAS THE lessee/lessees has/have applied to the State Government in accordance with the Mineral Concession Rule, 1960 (hereinafter referred to as the said rules), for a mining lease for LIMESTONE in respect of the lands described in Part-I of the Schedule hereunderwritten and has/have deposited with the State Government the sum of Rs. 2000-00 as security and the sum of Rs. 500-00 for meeting the preliminary expenses for a mining lease (and WHEREAS the Central Government has approved the grant of the lease) * (No. M-II-152 (57) 61, dated 15th October 1963).

WITNESSETH that in considerations of the rents and royalties covenants and agreements by and in these presents and the schedule hereunder written reserved and contained and on the part of the lessee/lessees to be paid observed and performed the State Government with the approval of the Central Government) * hereby grants and demises into lessee/lessees. All those the mines beds/veins seams of LIMESTONE (herestate be mineral or minerals) (hereinafter and in the schedule referred to as the said minerals) situated lying and being in or under the lands which are referred to in Part-I of the said schedule together with the liberties, powers, and privileges to be exercised or enjoyed in connection herewith which are mentioned in Part-II of the said schedule subject to the restrictions and conditions as to the exercise and enjoyment of such liberties powers, and privileges which are mentioned in Part-III of the said schedule EXCEPT and reserving out of this demise upto the State Government the liberties, powers and privileges mentioned in Part-IV of the said schedule TO HOLD the premises hereby granted and demised upto the lessee/lessees from the

29th day of October 1984 for the term of 20 years thence next ensuring YIELDING AND PAYING therefore upto the State Government the several rents and royalties mentioned in Part-V of the said Schedule at the respective times therein specified subject to the provisions contained in Part VI of the said Schedule and the lessee/lessees hereby covenants/convenant with the State Government as in Part-VII of the said schedule is expressed and the State Government hereby covenants with the lessee/lessees as in Part VIII of the said Schedule as expressed AND it is hereby mutually agreed between the parties hereto as in Part-IX of the said Schedule is expressed.

Jan No. 98
19.2.1987



PART-I

The Area of this lease
Survey No. 207/Part Village: Aniali

All that tract of lands situated at
in (Pargana) in Ranavav
Junagadh Sub-District
Cadastral Survey Nos. 207/Part
thereabouts delineated on the plan hereto annexed and thereon coloured and bounded as follows :

the
Description of area or areas)
Registration District of
and Thana Ranavav bearing
containing an area of / or
and bounded as

Location and
area of the
lease.

16.21 Hectars
/ 1000 2 1/2

- On the North by :
 - On the South by :
 - On the West by :
 - and
 - On the East by :
- } Bounded by Survey No. 207
(As shown in enclosed plan)

hereinafter referred to as "the said Lands".

PART-II

Liberties, Powers and Privileges to be exercised and enjoyed by the lessee/lessees subject to the restrictions and conditions in Part-III

1. Liberty and power at all times during the term hereby demised to enter upon the said lands and to search for, mine, bore, dig, drill for, win, work, dress, process, convert, carry away and dispose of the said mineral/minerals.

To enter upon land and search for win work etc.

No. bul etc., certain pl.

Permission surface o tions in a got airc- etc.

To cut tree or reserve lands.

To enter Reserved

Compensat for damag, recovered fo

mi tion in 5/8 m of pu works etc.

2. Liberty and power for or in connection with any of the purposes mentioned in this part to sink, drive, make, maintain and use in the said lands and pits, shafts, inclines, drifts, levels, water-ways, air-ways and other works (and to use, maintain deepen or extend any existing work of the like nature in the said lands).

To sink drive and make pits shafts and inclines etc.

3. Liberty and power for or in connection with any of the purposes mentioned in this part to erect, construct, maintain and use in the said lands any engines, machinery plant, dressing floors, furnaces, coke, oven brickkilns, workshops, store-houses, bungalows, godowns, sheds and other building and other works and conveniences of the like nature on or under the said lands.

To bring and use machinery equipment etc.

4. Liberty and power or in connection with any of the purpose, mentioned in this part to make any tramways, railways, roads, aircraft landing grounds and other ways in or over the said lands and to use, maintain and go and repass with or without horses, cattle, wagon, aircrafts, locomotives or other vehicles over the same (or any existing tramways, railways, roads and other ways in or over the said lands) on such conditions as may be agreed to.

To make roads and ways etc., and use existing roads and ways.

5. Liberty and power for or in connection with any of the purposes mentioned in this part to quarry and get stone, gravel and other buildings and road materials and clay and to use and employ the same and to manufacture such clay in to bricks or tiles and to use such bricks or tiles but not to sell any such material, bricks or tiles.

To get building and road materials etc.

6. Liberty and power for or in connection with any of the purposes mentioned in this part but subject to the rights of any existing or future lessee and with the written permission of Collector to appropriate and use water from any streams, water-courses, springs or other sources in or upon the said lands and to divert, step up or dam any such stream or water course and collect or impound any such water and to make construct and maintain any water-course, culverts, drains or reservoirs but not as so to deprive any cultivated lands, villages, buildings, or watering place for livestock of a reasonable supply of water as before accustomed nor in any way to foul or pollute any streams or springs. Provided that the lessee/lessees shall not interfere with the navigation in any navigable stream nor shall divert such stream without the previous written permission of the State Government.

To use water from streams etc.

7. Liberty and power to enter upon and use a sufficient part of the surface of the said lands for the purpose of stacking, heaping, storing or depositing there in any produce of the mines or works carried on and any tools, equipment, earth and materials and substances dug or raised under the liberties and powers mentioned in this part.



To use for stacking heaping depositing purposes.

8. (a) Liberty and power to enter upon and use a sufficient part of the said lands to beneficiate any or produced from the said lands and to carry away such beneficiated or.

Beneficiation and conveying away of production.

(b) Liberty and power upon the said lands to convert into coke any coal or coal dust produced from the said lands and to carry away such coke.

To make coke (To be used in case of coal only).

Facilities for joining Government and local...

To clear brush-wood and to fell and utilise trees etc.

9. Liberty and power for or in connection with any of the purposes mentioned in this part and subject to the existing rights of others and save as provided in clause 3 of Part-III of this Schedule to clear under-growth and brushwood and to fell and utilise any trees or timber standing or found on the said lands provided that the State Government may ask the lessee/lessees to pay for any trees or timber felled and utilised by them/him at the rates specified by the Collector or the State Government.

PART-III

Restrictions and Conditions as to the Exercise of the liberties, Powers and Privileges Part-II.

No. building etc., upon certain places.

1. No building or thing shall be erected, set up or placed and no surface operations shall be carried on in or upon any public pleasure ground, burying or burial ground or place held sacred by any class of persons or any house or village site, public road or other place which the State Government may determine as public ground nor in such a manner as to injure or prejudicially affect any buildings, works, property or rights of other persons and no land shall be used for surface operations which is already occupied by persons other than the State Government for work or purposes not included in this lease. The lessee /lessees shall not also interfere with any right of way well or tank.

Permission for surface operations in a land not already in use.

2. Before using for surface operations any land which has not already been used for such operations, the lessee/lessees shall give to Collector of the District two calendar months previous notice in writing specifying the name or other description of the situation and the extent of the land proposed to be so used if objection is issued by the same is required and the said land shall not be so used if objection is issued by the Collector within two months after the receipt by him of such notice unless the objections so stated shall on reference to the State Government be annulled or waived.

To cut trees in unreserved lands.

3. The lessee/lessee shall not without the express sanction of the Collector cut down or injure any timber or trees on the said lands but may without such sanction clear away any brushwood or undergrowth which interferes with any operations authorised by these presents. The Collector or the State Government may require the lessee/lessees to pay for any trees or timber felled and utilised by him/them at the rates specified by the Collector of the District.

To enter upon Reserved forests

4. Notwithstanding anything in this schedule contained the lessee/lessees shall not enter upon any reserved forest included in the said lands without previous sanction in writing of the District Forest Officer nor fell cut and use any timber or trees without obtaining the sanctioned in writing of that Officer not otherwise than in accordance with such conditions as the State Government may prescribe.

Compensation for damage to reserved forest

4-A. The lessee/lessees shall pay such compensation as may be assessed by the Chief Conservator of Forest for damage caused to the land in any area of the reserved forest on account of the mining operation carried out in such area. The compensation for such damage shall be based on the value of the standing trees in the said area and twenty times the sum of annual revenue derived by the Government from such land immediately before the grant of lease.

No mining operation within 50 meters of public works etc.

5. The lessee/lessees shall not work or carry on or allow to be worked or carried on any mining operations at or to any point within a distance of 50 meters from any railway line except with the previous written permission of the Railway Administration "concerned or under or beneath any ropeway or any ropeway trestle or station, except, under and in accordance with the written permission of the authority owing the ropeway" or from any reservoir, canal or other public works such as public roads and buildings or inhabited site except with the previous written permission of the Collector or any other officer authorised by the State Government in this behalf and otherwise than in accordance with such instructions, restrictions and conditions either general or special which may be attached to such permission. The said distance of 50 meters shall be measured in the case of railway, reservoir or canal horizontally from the outer toe of the bank or the outer edge of the cutting as the case may be and in case of a building horizontally from the plinth thereof. In the case of village roads no working shall be carried out within a distance of 10 meters of the outer edge of the cutting except with the previous permission of the Collector or any other officer duly authorised by the State Government in this behalf and otherwise than in accordance with such directions, restrictions and additions, either general or special, which may be attached to such permission (No. 1 (51)/65-M-II, dated 26th February 1969).

Explanation.—For the purpose of this clause the expression "Railway Administration" shall have the same meaning as it is defined to have in the Indian Railway Act, 1980, by clause (6) of section 3 of that Act. "Public Road" shall mean a road which has been constructed by artificially surfaced as district from a track resulting from repeated use. Village road will include any track shown in the revenue record as village road.

Facilities or adjoining Government licences and lessees.

6. The lease/lessees shall allow existing the future holders of Government licences or leases over any land which is comprised in or adjoins or is reached by the land held by the lessee/lessees reasonable facilities of access thereto :

Hects Bla

upon sea-wis

drive pits

and chimney

roads etc., existing and

also



depositing

conveying of produce

make coke or be used case of coal

PROVIDED THAT no substantial hindrance or interference shall be caused by such holders of licences or leases to the operations of the lessee/lessees under these presents and fair compensation (as may be mutually agreed upon or in the event of disagreement as may be decided by the State Government) shall be made to the lessee/lessees for all loss or damage sustained by the lessee/lessees by reason of the exercise of this liberty.

PART-IV

Liberties, powers and privileges reserved to the State Government

1. Liberty and power for the State Government or to any lessee or persons authorised by it in that behalf to enter into and upon the said lands and to search for win, work, dig, get, raise, dress process, convert and carry away minerals other than the said minerals and any other substances and for these purpose to sink, drive, make, erect, construct, maintain and use such pits, shafts, inclines, drifts, levels and other lines waterways, airways, water courses, drains reservoirs, engines, machinery, plant, buildings, canals, tramways, railways, roadways, and other works and conveniences as may be deemed necessary or convenient :

To work other Minerals.

PROVIDED THAT in the exercise of such liberty and power no substantial hindrance or interference shall be caused to or with the liberties, powers and privileges of the lessee/lessees under these presents and that fair compensation (as may be mutually agreed upon or in the event of disagreement as may be decided by the State Government) shall be made to the lessee/lessees for all loss or damage sustained by the lessee/lessees by reason or in consequence of the exercise of such liberty and power.

2. Liberty and power for the State Government or any lessee or person authorised by it in that behalf to enter into and upon the said lands and to make upon over or through the same any railways, tramways, roadways, or pipelines for any purpose other than those mentioned in Part-II of these presents and to get from the said lands stones gravel earth and other materials for making, maintaining and repairing such railways, tramways and roads or any existing railways and roads and to go and repass at all times with or without horses, cattle or other animals, carts, wagons, carriages, locomotives or other vehicles over or along any such railways, tramways roads, lines and other ways for all purposes and as occasion may for require, provided that in the exercise of such liberty and power by such other lessee or person no substantial hindrance or interference shall be caused to or with the liberties, powers and privileges of the lessee/lessees under these presents and that fair compensation as may be mutually agreed upon or in the event of disagreement as may be decided by the State Government shall be made to the lessee/lessees for all loss or damage sustained by the lessee/lessees by reason or in consequence of the exercise by such lessee or person of such liberty and powers.

To make railways, ways and roads.

3. The lessee/lessees shall maintain a passbook in triplicate. He/they or his/their agent/s shall before the said mineral is removed from the mining site fill in blanks in all the three parts of the pass and detach two parts from the pass book and hand over to the truck driver or the person in charge of the vehicle. The truck driver or the person in charge of the vehicle shall on arrival at the Naka hand over one of the two parts of the pass to the Naka clerk. Mines Supervisor or any officer of Government in charge of the supervision of the mine who shall verify whether the mineral of the same description weight etc., as stated in the pass is loaded in the truck of the vehicles. The third part of the pass shall be handed over to the consignee alongwith the consignment.

To maintain Pass book for removal of mineral.

PART-V

Rents and Royalties reserved by this Lease

1. The lessee/lessees shall pay, for every year, except the first year of the lease; dead rent as specified in clause 2 of this part :

Provided that where the holder of such mining lease becomes liable under section 9 of the Act, to pay royalty for any mineral/minerals removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee from the leased area, he shall be liable to pay, either such royalty or the dead rent in respect of that area whichever is higher.

To pay dead rent or royalty which ever greater.

2. Subject to the provisions of clause 1 of this Part during the subsistence of the lease, the lessee/lessees shall pay to the State Government annual dead rent for the lands demised and described in Part I of this Schedule, at the rate for the time being specified in the third schedule to the Act, in such manners as may be specified in this behalf by the State Government.

Rate and mode of payment of dead rent.

The lessee shall pay royalty and dead rent in four quarterly instalment payable on First day of January, First day of April, First day of July, and First day of October every year in Sub-Treasury/Treasury. RANAVAV (name of the treasury).

3. Subject to the provision of clause I of this part, the lessee/lessees shall during the substance of this lease pay to the State Government at such times and in such manner as the

Rate and mode of payment of royalty.



W... and wor... mo... ent

work other
grants.

PART-V

Rate & Mode of
payment of
Dead Rent:

Subject to the provision of clause 1 of this part during the subsistence of the lease, the Lessee/Leases shall pay to the following rate/rates or at such revised rate/rates which may be communicated in writing to the Lessee/Leases by the State Government per mineral per hectares of the lands demised and described in part-1 of this schedule.

Name of Mineral	Dead rent fixed per Hects.	Area of demised land Hects.	Dead Rent payable Rs.	Total Dead rent payable Rs.
21st year upto 40th year.	90-00	16.21	1530-00	1530-00

(Here insert the manner in which and the time at which the Dead rent, Surface rent and water rent shall be paid)

(Dead rent, Surface Rent, etc. will be paid at the State Bank of Ranavav, every year).

h

within a year and work in a workman like manner.

here after as an independent contractor shall be responsible for the maintenance of the road and shall be bound to repair the said minerals without voluntary intermission in a skillful and workman like manner and prescribed under clause 12 hereinafter without doing or permitting to be done any unnecessary or avoidable damage to the surface of the said lands or the crops, buildings, structures or other property thereon. For the purposes of this clause operations shall include the erection of machinery laying of a tramways or construction of road in connection with the mine.

maintain
book for
val of
of



ad mode
ment of
int.

id mode
ment of

State Government may prescribe, royalty in respect of any mineral/minerals removed by him/ them from the leased area at the rate for the time being specified in the Second Schedule to the Mines and Minerals (Regulation and Development) Act, 1957.

Payment of surface rent and water rate.

4. The lessee/lessees shall pay rent and water rate to the State Government in respect of all parts of the surface of the said lands which shall from time to time be occupied or used by the lessee/lessees under the authority of this presents at the rate that may be specified by the State Government, per annum per hectare of the area so occupied or used and so in proportion for any area less than a hectare during the period from the commencement of such occupation or use until areas shall cease to be so occupied or used and shall as far as possible restore and the surface so used to its original conditions. The surface rent in respect of the area actually under mining operation and area utilised for machinery labour quarters and office, shall be equal to non-agriculture assessment i. e. at the rate of Rs. 01 15 as per Sq. Meter per annum and in respect of the areas occupied but unused i. e. for the remaining areas shall be equal to the agriculture assessment should be paid at the rate of Rs. 1. 30 16 per hectare or part thereof per annum from time to time :

PROVIDED THAT NO such rent/water rate shall be payable in respect of the occupation and use of the area comprised in any roads or ways to which the public have full right to access.

PART—VI

Provisions relating to the Rent and Royalties

not and royalties to be free from deduction etc.,

1. The rent, water rate and royalties mentioned in part V of this Schedule shall be paid free from any deductions to the State Government at and in such matter as the State Government may prescribe.

PROVIDED ALWAYS and it is hereby agreed that Rs. 500-00 the balance standing to the credit of the lessee/lessees on account of the deposit made by him/them as a licensee/licensees over an area which included the said lands shall be retained and accepted by the State Government in satisfaction of the rents and royalties mentioned in Part-V until they reach that amount.

Mode of Computation of royalties.

2. for the purposes of computing the said royalties the lessee/lessees shall keep a correct account of the mineral/minerals produced and despatched. The accounts as well as the weights of the mineral/minerals in stock or in the process of export may be checked by an officer authorised by the Central or State Government. The computation of royalties shall be decided by the Director of Geology and Mining of the State.

Amount of interest if rents and royalties not paid in time.

3. Should any rent, royalty or other sums due to the State Government together with simple interest due thereon at the rate of ten percent per annum under the terms and conditions of these presents be not paid by the lessee/lessees within the prescribed time, the same may be recovered on a certificate of such officer as may be specified by the State Government by general or special order, in the same manner as an arrear of land revenues.

1/11/57

PART—VII

The covenants of the Lessee/Lessees

Amount to Pay for taxes.

1. The lessee/lessees shall pay the rent, water rate and royalties reserved by this lease at such times and in the manner provided in PARTS V and VI of these presents and shall also pay and discharge all taxed, rates, assessments and impositions whatsoever being in the nature of public demands which shall from time to time be charged, assessed or imposed by the authority of the Central and State Government upon or in respect of the premises and works of the lessee/lessees in common with other premises and works of a like nature except demands for land revenue.

maintain and keep boundary marks in good order.

2. The lessee/lessees shall at his/their own expense erect and at all times maintain and keep in repair boundary marks and pillars according to the demarcation to be shown in the plan annexed to this lease. Such marks and pillars shall be sufficiently clear of the shrubs and other obstructions as to allow easy identification.

Commence operation with this year and work in a workman like manner.

3. Unless the State Government for good cause permits otherwise, the lessee/lessees shall commence operation within one year from the date of execution of the lease and shall as there after at all times during the continuance of this lease search for, win work and develop the said minerals without voluntary intermission in a skilful and workman like manner and prescribed under clause 12 hereinafter without doing or permitting to be done any unnecessary or avoidable damage to the surface of the said lands or the crops, buildings, structures or other property thereon. For the purposes of this clause operations shall include the erection of machinery laying of a tramways or construction of road in connection with the

7/11/57

4. The lessee/lessees shall make and pay such reasonable satisfaction and compensation as may be assessed by lawful authority as in accordance with the law in force on the subject for all damage, injury or disturbance which may be done by him/them in exercise of the powers granted by this lease and shall indemnify and keep indemnified fully and completely the State Government against all claims which may be made by any person or persons in respect of any such damage, injury or disturbance and all costs and expenses in connection therewith.

To indemnify Government against all claims.

To maintain Plans etc.

5. The lessee/lessees shall during the subsistence of this lease well and sufficiently secure and keep open with timber or other durable means all pits, shafts and workings that may be made or used in the said lands and make and maintain sufficient fences to the satisfaction of the State Government round every such pit, shaft or working whether the same is abandoned or not and shall during the same period keep all working in the said lands and make and maintain sufficient fences to the satisfaction of the State Government round every such pit, shaft or working whether the same is abandoned or not and shall during the same period keep all working in the said lands except such as may be abandoned accessible free from water and foul air as far as possible.

To secure and keep in good condition pits, shafts, etc.

6. The lessee/lessees shall strengthen and support to the satisfaction of the Railway Administration concerned or the State Government, as the case may be any part of the mine which in its opinion required such strengthening or support for the safety of any railway, reservoir canal, road and any other public works or structures.

To strengthen and support the mine to necessary extent.

7. The lessee/lessees shall allow any officer authorised by the Central Government or the State Government in that behalf to enter upon the premises including any building, excavation or land comprised in the lease for the purpose of inspecting, examining, surveying, prospecting and making plans thereof sampling and collecting a data and the lessee/lessees shall with proper person employed by the lessee/lessees and acquainted with the mines and work effectually assist the officer, agents, servants, and workmen in conducting every such section and shall afford them all facilities, information, connected with them the working of the mines which they may reasonably require and also shall and will conform to and observe all orders and regulations which the Central and State Governments as the result of such inspection or otherwise may from time to time see fit to impose. (No. M-II(69)/44/61, dated 7th September 1961).

To allow inspection of working.

8. The lessee/lessees shall without delays send to the Collector a report of any accident causing death or serious bodily injury or serious injury to property or seriously affecting or endangering life or property which may occur in the course of the operations under this lease.

To report accident.

9. The lessee/lessees shall report to the State Government the discovery in the leased area of any mineral not specified in the lease within sixty days of such discovery along with full particulars of the nature and position of each such find. If any mineral not specified in the lease is discovered in the leased area, the lessee/lessees shall not win and dispose of such mineral unless such mineral is included in the lease or a separate lease is obtained therefor.

To report discovery of other minerals.

10. The lessee/lessees shall at time during the said term keep or cause to be kept at an office to be situated upon or near the said lands correct and intelligible books of accounts which shall contain accurate entries showing from time to time —

(1) Quantity and quality of the said mineral/minerals realised from the said lands.

(2) Quantity of the various qualities of or beneficiated or converted (for example coal converted into coke).

(3) Quantities of the various qualities of the said mineral/minerals sold and exported separately.

(4) Quantities of the various qualities of the said mineral/minerals otherwise disposed of and the manner and purpose of such disposal.

(5) The prices and all other particulars of all sales of said mineral/minerals.

(6) The number of persons employed in the mines or work or upon the said lands specifying nationality, qualifications and pay of the technical personnel.

(7) Such other facts, particulars and circumstances as the Central or the State Government may from time to time require and shall also furnish free of charge to such officers and at such times as the central and State Government may appoint true and correct abstract of all or any such books of accounts and such information and returns to all or any of the matters, aforesaid as the State Government may prescribe and shall at all reasonable time allow such officers as the Central Government or State Government shall in that behalf appoint to enter into and have free access to the said books for the purpose of examining and inspecting the said books of accounts, plans and records and to make copies thereof and make extracts therefrom.

To pay compensation injury of the parties.

Not to obstruct work of other officials.



is demerit
government
against all
aims.

to secure and
keep in good
condition pits,
hafts, etc.

To strengthen
and support
the mine to
necessary extent.

allow inspect
working.

To report acci-
dent.

To report dis-
covery of other
minerals.

FORM 'K' PART VII AFTER CLAUSE 11,

- "11A The lessee shall pay a wage not less than the minimum wage prescribed by the Central or State Government from time to time.
- 11B The lessee shall comply with provisions of the Mines Act, 1952.
- 11C The lessee shall take measure for protection of environment like planting of trees, reclamation of land, use of pollution control devices; and such other measures as may be prescribed by the Central or State Government from time to time at his own expense.
- 11D The lessee shall pay compensation in the occupier of the land on the date and in the manner laid down in these rules."

MINES
TREASURY

To indemnify Government against all claims.

To maintain Plans etc.

11. The lessee/lessees shall at all times during the said term maintain at the mine office correct intelligible upto date and complete plans and sections of the mines in the said lands. They shall show all the operations, and working and all the trenches pits and drillings made by him/them in the course of operations carried on by him/them under the lease, faults and other disturbances encountered and geological data and all such plans and sections shall be amended and filled up by and from actual surveys to be made for that purpose at the end of twelve months or any period specified from time to time and the lessee/lessees shall furnish free of charge to the Central and State Government true and correct copies of such plans and sections whenever required. Accurate records of all trenches, pits and drillings shall show:—

- (a) The sub-soil and strata through which they pass;
- (b) Any mineral encountered,
- (c) Any other matter of interest and all data required by the Central and State Government from time to time.

The lessee/lessees shall allow any officer of the Central or the State Government, authorised in this behalf by the Central Government, to inspect the same at all reasonable times. He/they shall also supply when asked for by the State Government/the Coal Controller/the Director, Geological Survey of India/the Director, Indian Bureau Mines, a composite plan of the area showing thickness, dip, inclination etc., of all the seams as also the quantity of reserves quality-wise.

Act 67 of 1957.

12. The lessee/lessees shall be bound by such rules as may be issued from time to time by the Government of India under section 18 of the Mines and Minerals (Regulation and Development) Act, 1957 (Act 67 of 1957), and shall not carry on mining or other operations under the said lease in any way other than as prescribed under these rules.

To provide weighing machine.

13. Unless specifically exempted by the State Government the lessee/lessees shall provide and at all times keep at or near the pit head or each of the pit heads at which the said minerals shall be brought to bank a properly constructed and efficient weighing machine and shall weigh or cause to be weighed thereon all the said minerals from time to time brought to bank, sold, exported and converted and also the converted products and shall at the close of each day cause the total weights, ascertained by such means of the said minerals, ores, products raised, sold, exported and converted during the previous twenty-four hours to be present at the weighing of the said minerals as aforesaid and to keep accounts thereof and to check the accounts kept by the lessee/lessees. The lessee/lessees shall give seven days previous notice in writing to the Collector of every such measuring or weighing in order that he or some officer on his behalf may be present there at.

To allow test of weighing machine.

14. The lessee/lessees shall allow any person or persons appointed in that behalf by the State Government at any time or times during the said term to examine and test every weighing machine to be provided and kept as aforesaid and the weights used there with in order to ascertain whether the same respectively are correct and in good repair and order and if upon any such examination or testing any such weighing machine or weights shall be found incorrect or out of repair or order; the State Government may require that the same be adjusted, repaired and put in order by and at the expenses of the lessee/lessees and if such requisition be not complied with within fourteen days after the same shall have been made, the State Government may cause such weighing machine or weights to be adjusted, repaired and put in order by and the expense of so doing shall be paid by the lessee/lessees to the State Government on demand and if upon any such examination or testing as aforesaid any error shall be discovered in any weighing machine or weights to the prejudice of the State Government such error shall be regarded as having existed for three calendar months previous to the discovery thereof or from the last occasion of so examining and testing the same weighing machine and weight in case such occasion shall be within such period of three months and the said rent and royalty shall be paid and accounted for accordingly.

To pay compensation for injury of third parties.

15. The lessee/lessees shall make and pay reasonable satisfaction and compensation for all damage, injury or disturbance of person or property which may be done by or on the part of lessee/lessees in exercise of the liberties and power granted by these presents and shall at all times save harmless and keep indemnified the State Government from and against all suits, claims and demands which may be brought or made by any person or persons in respect of any such damage, injury or disturbance.

Not to obstruct working of other minerals.

16. The lessee/lessees will exercise the liberties and powers hereby granted in such a manner as to offer no unnecessary or reasonably avoidable obstruction or interruption to the development and working within the said lands of any minerals not included in this lease and shall at all times afford to the Central and State Government and to the holders of prospecting licence or mining lease in respect of any such minerals or any minerals within any land adjacent to the said lands as the case may be reasonable means of access and safe and convenient passage upon and across the said lands to such minerals for the purpose of getting working developing and carrying away the same provided that the lessee/lessees shall receive reasonable compensation for any damage or injury which he/they may sustain by reason or in consequence of the use of such passage by such lessees or holders of prospecting licences.



17. (1) The lessee/lessees shall not, without the previous consent in writing of the State Government :

Transfer of lease

(a) assign, sublet, mortgage, or in any other manner transfer the mining lease, or any right title or interest therein, or

(b) enter into or make any arrangement, contract or understanding whereby the lessee/lessees will or may be directly or indirectly financed to a substantial extent, by or under which the lessee's operations or undertakings will or may be substantially controlled by any person or body of persons other than the lessee/lessees :

"Provided that the State Government shall not give its written consent unless.

(a) the lessee has furnished an affidavit alongwith his application for transfer of the mining lease specifying therein the amount that he has already taken or proposes to take as consideration from the transferee :

(b) the transfer of the mining lease is to be made to a person or body directly undertaking mining operations [No.1 (33) 67-M-II dated 30th March 1968].

(2) Without prejudice to the above provisions, the lessee/lessees may, subject to the conditions specified in the proviso to rule-35, of the said rules transfer this lease or any right, title or interest therein, to a person holding a certificate of approval an income-tax clearance certificate from the Income-Tax Officer concerned, and the said valid clearance certificate on payment of a fee of rupees one hundred to the State Government. [No. 1 (25) 73 MVI dated 28th November 1974].

Provided that the lessee/lessees shall make available to the transferee the original or certified copies of all plans of a bounded working in the area and in a belt 65 meters wide surrounding it :

Provided further that where the mortgage is an institution or a Bank or a corporation specified in Schedule V, it shall not be necessary for any such institution or Bank or Corporation to hold the said certificate of approval the said Income-Tax clearance certificate and said valid clearance certificate.

(3) The State Government may, by order in writing, determine the lease at any time if the lessee/lessees has/have in the opinion of the State Government, committed a breach of any of the above provisions or has/have transferred the lease of any right, title or interest therein otherwise than in accordance with clause (2) :

Provided that no such order shall be made without giving the lessee/lessees a reasonable opportunity of stating his/their case.

18. The lease shall not be controlled and the lessee/lessees shall not allow them selves to be controlled by any Trust, Syndicate Corporation, Firm or person except with the written consent of the Central Government. The lessee/lessees shall not enter into or make any arrangement compact or understanding whereby the lessee/lessees' operations or undertaking will or may be carried on directly or indirectly by or for the benefit of or subject to the control of any Trust, Syndicate, Corporation Firm or person unless with the written sanction given prior to such arrangement compact or understanding being entered into or made of the Central Government and any or every such arrangement compact or understanding as aforesaid (Entered into or made with such sanction as aforesaid) shall only be entered into or made and shall always be subject to an express condition binding upon the other party or parties thereto that on the occasion of a state of emergency of which the President of India in his discretion shall be the sole judge it shall be terminable if so required in writing by the State Government and shall in the event of any such requisition being made be forthwith thereafter determined by the lessee/lessees accordingly.



Recovery of expenses incurred by the State Government

19. Whenever the security deposit of Rs. 4,000/- or any part thereof or any further sum hereafter deposited with the State Government in replenishment thereof shall be forfeited or applied by the Central or State Government pursuant to the power in hereinafter declared in that behalf the lessee/lessees shall deposit with the State Government such further sum as may be sufficient with the unappropriated part thereof to bring the amount in deposit with the State Government up to the sum of Rs. 4,000. 2000/-

Lessee shall deposit any additional amount necessary.

Furnishing geological

20. The lessee/lessees shall at the expiration or sooner determination of the said term or any renewal thereof deliver up to the State Government all mines, pits, shafts, inclines, drifts, levels, waterways, airways and other works now existing or hereafter to be sunk or made on or under the said lands except such as have been abandoned with the sanction of the State Government and in any ordinary and fair course of working all engines, machinery, plant, buildings, structures, other works and conveniences which at the commencement of the said term were upon or under the said lands and all such machinery set up by the lessee/lessees below ground which cannot be removed without

Delivery of workings in good order to State Government after determination of lease.

causing injury to the mines or works under the said lands (except such of the same as may with the sanction of the State Government have become disused) and all buildings and structures of bricks or stone erected by the lessee/lessees above ground level in good repair, order and condition and fit in all respects for further working of the said mines and the said minerals.

21. (a) The State Government shall from time to time and all times during the said term have the right (to be exercised by notice in writing to the lessee/lessees) of pre-emption of the said minerals (and all products thereof) lying in or upon the said lands hereby deminised or elsewhere under the control of the lessee/lessees and the lessee/lessees shall with all possible expedition deliver all minerals or products or minerals purchased by the State Government under the power conferred by this provision in the quantities as the times in the manner and at the place specified in the notice exercising the said right.

(b) Should the right of pre-emption conferred by this present provision be exercised and a vessel chartered to carry the minerals or products thereof procured on behalf of the State Government or the Central Government be detained or demurrage at the port of loading the lessee/lessees shall pay the amount due for demurrage according to the terms of the charter party of such vessel unless the State Government shall be satisfied that the delay is due to causes beyond the control of the lessee/lessees.

(c) The price to be paid for all minerals or products of minerals taken in pre-emption by the State Government in exercise of the right hereby conferred shall be the fair market price prevailing at the time of pre-emption PROVIDED THAT in order to assist in arriving at the said fair market price the lessee/lessees shall if so required furnish to the State Government for the confidential information of the Government particulars of the quantities descriptions and prices of the said minerals or products thereof sold to other customers and of charters entered into for freight for carriage of the same and shall produce to such officer or officers as may be directed by the State Government original or photostatic copies of contract and charter parties entered into for the sale, freightage of such minerals or products.

(d) In the event of the existence of a state of war or emergency (of which existence the President of India shall be the sole judge and a notification to this effect in the Gazette of India shall be conclusive proof), the State Government with the consent of the Central Government shall from time to time and all times during the said term have the right (to be exercised by a notice in writing to the lessee/lessees) forthwith take possession and control of the works, plant machinery and premises of the lessee/lessees on or in connection with the said lands or operations under this lease and during such possession or control the lessee/lessees shall conform to and obey all directions given by or on behalf of Central Government or State Government regarding the use or employment of such works, plants premises and mineral PROVIDED THAT fair compensation which shall be determined in default of agreements by the State Government shall be paid to the lessee/lessees for all loss or damage sustained by him/them by reason or in consequence of the power conferred by this clause and PROVIDED ALSO that the exercise of the such power shall not determine the said term hereby granted or affect to terms and provisions of this presents further than may be necessary to give effect to the provisions of this clause.

22. The lessee/lessees shall not employ, in connection with the mining operation any person who is not an Indian national except with the previous approval of the Central Government.

23. If any of the works or matters which in accordance with the covenants of that behalf herein before contained are to be carried or performed by the lessee/lessees be not so carried out or performed within the time specified in that behalf, the State Government may cause the same to be carried out or performed and the lessee/lessees shall pay the State Government on demand all expenses which shall be incurred in such carrying out or performance of the same and the decision of the State Government as to such expenses shall be final.

24. The lessee/lessees shall furnish

(a) all geophysical data relating to mining fields or engineering and ground water surveys, such as anomaly maps, section plans structures, contour maps, loggia, collected by him/the during the course of mining operations the Director Geological Survey of India, Calcutta,

(b) All information pertaining to investigations of radio active minerals collected by him/the during course of mining operations to the Secretary, Department Atomic Energy, New Delhi.

The lessee shall submit from time to time or when required progress reports to Director of Geology and Mining Gujarat State or to an officer authorised by him alongwith the samples of ores collected during Mining operation together with the analysis report

Transfer of
lease



Recovery of
expenses in-
curred by the
State
Government.

Furnishing of
geophysical data.

Lessee shall
deposit any
additional
amount necessary.

Delivery of
workings in
good order to
State Govern-
ment after
determination
of lease.

Data or information referred to above shall be furnished every year reckoned from the date of commencement of the period of the mining lease.

25. The lessee/lessees shall not use sell the said mineral or deal with it in whatsoever manner or knowingly allow any one to use or sell the said mineral or deal with it in whatsoever manner as minor mineral ;

Provided that on an application made to it in this behalf by the lessee/lessees the State Government is satisfied that having any regard to the inferior quality or such mineral, it cannot be used for any of the purposes by reasons of which it cannot be called a major mineral or that there is no market for such mineral as a major mineral, the State Government by order permit the lessee/lessees to dispose of the mineral in such quantity and on such terms and in such manner as may be specified therein as a minor mineral.

PART—VIII

The covenants of the State Government

1. The lessee/lessees paying the rents, water rate and royalties hereby served and observing and performing all the covenants and agreements here in contained and on the part of the lessee/lessees to be observed and performed shall and may quietly hold and enjoy the rights and premises hereby demised for and during the term hereby granted without any unlawful interruption from or by the State Government, or any person rightfully claiming under.

lessee/lessees may hold and enjoy rights quietly.

Refund of security deposit.

2. If in accordance with provisions of Clause 4 of Part VII of this Schedule the lessee/lessees shall offer to pay to an occupier of the surface of any part of the said lands compensation for any damage or injury which may arise for the proposed operations of the lessee/lessees and the said occupier shall refuse his consent to the exercise of the right and powers reserved to the State Government and demised to the lessee/lessees by these presents and the lessee/lessees shall report the matter to the State Government and shall deposit with it the amount offered as compensation and if the Central/State Government are satisfied that the amount of compensation offered is fair and reasonable or if it is not so satisfied and the lessee/lessees shall have deposited with it such further amount as the State and Central Governments shall consider fair and reasonable the State Government shall order the occupier to allow the lessee/lessees to enter the land and to carry out such operations as may be necessary for the purpose of this lease. In assessing the amount of such compensation the State Government shall be guided by the principles of the Land Acquisition Act.

Acquisitional and of third parties and compensation thereof.

Obstruction inspect

3. Where the mining lease relates to any mineral not specified in the First Schedule to the Act it shall be renewable for one period not exceeding the period specified in subsection (2) of section 8, at the option of the lessee/lessees;

Provided that the State Government may for reasons to be recorded in writing reduce the area applied for.

If the lease is in respect of minerals specified in the First Schedule to the Act, renewal will be subject to the prior approval of the Central Government.

If the lessee/lessees be desirous of taking a renewed lease of the premises hereby demised or any part or parts of them for a further terms from the expiration of the term hereby granted and is otherwise eligible, he/they shall prior to the expiration of the last mentioned term give to the State Government Twelve calendar months previous notice in writing and shall pay the rents, rates and royalties hereby reserved and shall observe and perform the several covenants and agreements herein contained and on the part of the lessee/lessees to be observed and performed upto the expiration of the term hereby granted. The State Government on receipt of application for renewal, shall consider it in accordance with rule 28 of the said rules and shall pass orders as it deems fit. In renewal is granted, the State Government will at the expense of the lessee/lessees, and upon his executing and delivering to the State Government if required a counterpart thereof execute and deliver to the lessee/lessees a renewed lease of the said premises or thereof for the further term of 20 years at such rents, rates and royalties and on such terms and subject to such rents, rates and royalties and on such terms and subject to such covenants and agreements, including this present covenant to renew as shall be in accordance with the Mineral Concession Rules, 1960, applicable to Limestone. (Name of minerals) on the day next following the expiration of the terms hereby granted. (No.1 (19) 71 MVI, dated 9th September 1971)



Pealty repated breaches covenants.

Failure fulfil the te of leases to "Force Majeur"

Liberty determine th clause.

Lessee/lessee to remove their propo on the exp of lease.

lx

provided that the lessee/lessees shall upon such expiration tender and pay all rents, rates, royalties, compensation for damages and other moneys which may then be due and payable under these presents to the lessor or any other person or persons and shall deliver these presents to the State Government; and that this lease and the said term and the liberties powers and privileges hereby granted shall absolutely cease and determine but without prejudice to any right or remedy of the lessor in respect of any breach of any of the covenants or agreements contained in these presents.

4.A. The State Government may on an application made by the lessee/lessees permit him them to surrender one or more minerals from his/their lease which is for a group of minerals on the ground that deposits of that mineral have since exhausted or depleted to such an extent that it is no longer possible to work the mineral economically, subject to the condition that the lessee-

(a) makes an application for such surrender of mineral at least six months before the intended date of surrender; and

(b) gives an undertaking that he will not cause any hindrance in the working of the mineral so surrendered by any other person who is subsequently granted a mining lease for that mineral. (No. M-LI-152(18)/61, dated 4th December, 1962).

5. On such date as the State Government may elect within 12 calendar months after the determination of this lease or of any renewal thereof, the amount of the security deposit paid in respect of this lease and then remaining in deposit with the State Government and not required to be applied to any of the purpose mentioned in this lease shall be refunded to the lessee/lessees. No interest shall run on the security deposit.

PART-IX

General Provisions

In case the lessee / lessees of his / their transferee / assignee does / do not allow entry of inspection by the officers authority by the Central or State Government under clauses (1) (f) of sub-rule (1) of rule 27 of said rule the State Government shall give notice in writing to the lessee/lessees requiring him/them to show cause within such times as may be specified in the notice why the lease should not be determined and his/their security deposit forfeited and if the lessee/lessees fails/fail to show cause within the aforesaid time to the satisfaction of the State Government, the State Government may determine the lease and forfeit the whole or part of the security deposit.

2. If the lessee/lessees or his/their transferee or assignee makes/make any default in payment of rent or water rate or royalty as required by section 9 of the Act or commits a breach of any of the conditions and covenants other than those referred to in covenant above the State Government shall give notice to the lessee/lessees requiring him/them to pay the rent, water rate royalty or remedy the breach, as the case may be, within sixty days from the date of receipt of the notice and if the rent, water rate and royalty are not paid of or the breach is not remedied within such period, the State Government may without prejudice to any proceedings that may be taken against him/them, determine the lease and forfeit the whole or part of the security deposit.

3. In case of repeated breaches of covenants and agreements by the lessees/lessees for which notice has been given by the State Government in accordance with clause (1) and (2) aforementioned on earlier occasion, the State Government without giving any further notice may impose such penalty not exceeding twice the amount of annual dead rent specified in clause 2 Part V.

4. Failure on the part of the lessee/lessees to fulfil any of the terms and conditions of this lease shall not give the Central or State Government any claim against the lessee/lessees or be deemed a breach of this lease, in so far as such failure is considered by the said Government to arise from force majeure, and if through force majeure the fulfilment by the lessee/lessees of any of the terms and conditions of this lease be delayed, the period of such delay shall be added to the period fixed by this lease. In this clause the expression, "Force Majeure" means Act of God, war, insurrection, riot, civil commotion, strike, earthquake, tide, storm, tidal, wave, flood, lightning explosion, fire earthquake and any other happening which the lessee/lessees could not reasonably prevent or control.

5. The lessee/lessees having first paid and discharged the rents, rates, and royalties payable by virtue of these present may at the expiration or sooner determination of the said term or within six calendar months thereafter (unless the lease shall be determined under clauses 1 and 2 of this part and in that case at any time not less than three calendar months nor more than six calendar months after such determination take down and removed for his/their own benefit all or any engines, machinery plants, buildings, structures, tramways railways, and other works erections and convenience which may have been erected, set up or placed by the

lessee/lessees may hold and enjoy rights strictly.

Additional no. of third parties and information thereof.

Refund of security deposit.

Obstructions to inspection.



Penalty of delay and royalty breach of covenants.

Penalty for repeated breaches of covenants.

Failure to fulfil the terms of leases due to "Force Majeure".

Liberty determine the lease.

Lessee/lessees to remove his/their properties on the expiry of lease.

Handwritten initials.

lessee/lessees in or upon the said lands and which the lessee/lessees is/are not bound to deliver to the State Government under clause 20 of part VII of this Schedule and which the State Government shall not desire to purchase.

6. If at the end of six calendar months after the expiration or sooner determination of the said term under the provision contained in clause 4 of Part VII of this Schedule become effective there shall remain in or upon the said land any engines, machinery, plant buildings, structures, tramways, railways and other works, erection and conveniences or other property which are not required by the lessee/lessees in connection with operations in any other lands held by him/them under prospecting Licence or mining lease, the same shall, if not removed by the lessee/lessees within one calendar months after notice in writing requiring their removal has been given to the Lessee/lessees by the State Government be deemed to become the property of the State Government and may be sold or disposed of in such manner as the State Government shall deem fit without liability to pay any compensation or to account to the lessee/lessees in respect thereof.

Property left more than six months after determination of lease.

of the S. provision agreed & dispute in the use of relations be filled is hereby to file of other tha

7. Every notice by these presents required to be given to the lessee/lessees shall be given in writing to such person resident on the said lands as the lessee/lessees may appoint for the purpose of receiving such notice and if there shall have been no such appointment then every such notice shall be sent to the lessee/lessees by registered post addressed to the lessee/lessees at the address recorded in this lease or at such other address in India as the lessee/lessees may from time to time in writing to the State Government designate for their receipt of notices and every such service shall be deemed to be proper and valid service upon the lessee/lessees and shall not be questioned or challenged by him.

Notice.

8. If any event the order of the State Government are revised reviewed, or cancelled by the Central Government in pursuance of proceedings under chapter VII of the Mineral Concession Rules, 1960, the lessee/lessees shall not be entitled to compensation for any loss sustained by the lessee/lessees in exercise of the powers and privileges conferred upon him/ them by these present.

Immunity of State from Government liability to pay compensation.

9. For the purpose of stamp duty the anticipation royalty from the demised land in Rs. 70, 200-00 per year.

IN WITNESS WHEREOF these present have been executed in the manner hereunder appearing the day and year first above written.

Signed by *Shri B.K. Shrinani, Collector,*
for and on behalf of the Governor of Gujarat.

[Signature]
COLLECTOR
Junagadh Dist. Junagadh
[Signature]
Asst. Director,
Geology and Mines

In the presence of
1. *Shri H.R. Talwalkar Asst. Commr. STD*
2. *M.D.P. Madhavan*
Shri. M.P. Taha. Chemicals Ltd.
Mithapur
for and on behalf of (Name of lessee/lessees)

FOR AND ON BEHALF OF
SEVA CHEMICALS LIMITED
[Signature]
S. B. WADVA
POWER OF ATTORNEY HOLDER

In presence of
1. *Shri. K.L. Shukla - Porbandar*
2. *N. Chokhani - Narasiphan - Porbandar*
Junagadh

"(P) the lessee shall, in the matter of employment give preference to the tribals and to the persons who become displaced because of the taking up of mining operations."

-(8A) The lease is executed at JUNAGADH the Capital town of the State of GUJARAT (name of the State) and subject to the provision of Article 226 of the Constitution of India, it is hereby agreed upon by the lessee and the lessor that in that event of any dispute in relation to the area under the lease, condition of lease the use realisation under the lease and in respect of all matter touching relationship of the lease and the lessor, the suits (or appeals) shall be filled in the Civil Courts at Junagadh (Name of the city) and it is hereby expressly agreed that neither party shall be competent to file a suit or bring any action or file any petition at any place other than the courts named above.

to the
of
mc
igs,
her
any
all,
ting
be
r, in
tion

Property left more than six months after determination of lease.

be
oint
nent
the
their
p

Notice.

lied
eral
loss
him/

Immunity of State from Government liability to pay compensation.

nder
COLLECTOR
in Dist. Junagadh
[Signature]
Director,
y and Mining

[Handwritten mark]

[Handwritten mark]



Orig. Ref. No. AW/G/2558/2003.
October, 21, 2003

To,
The Secretary,
Industries and Mines Department,
Government of Gujarat,
Block No. -5, 4th Floor,
New Secretariat,
Gandhinagar.

Through: The Collector Porbandar District,

Dear Sir,

RE: Application for renewal of Mining Lease of Limestone - Survey No. 207/Part of village Aniyali, Taluka Ranavav District Porbandar. Area covered 16.2100 hectares.

We enclose in triplicate our application for renewal of mining lease for an area measuring 16.2100 hectares of survey No. 207/part in Aniyali village of Taluka Ranavav of Porbandar District.

We have deposited an amount of Rs. 2500/- (rupees two thousand five hundred only) being the fees for ML renewal application. Original Challan No. 29 Dated, October, 19, 2003 is enclosed. We also enclose our Drawing No T-50925, showing the area with red boundary.

Considering our future requirement of chemical grade limestone, we request you to grant relaxation of section 6(1)(b) of the Mines and Minerals (Development and Regulation) Act, 1957 for this area.

Thanking you,

Yours faithfully,
For Tata Chemicals Ltd,

**FOR AND ON BEHALF OF
TATA CHEMICALS LIMITED**

(KISHORE. M. CHAUHAN)
POWER OF ATTORNEY HOLDER

Encl.. Form J with necessary annexures,

22/10/03

22/10/03

TATA CHEMICALS LIMITED



- e) a co-operative the nationality of non-Indian members, if any alongwith place of registration and a copy of the certificate of registration. Does not apply
- (iv) Profession or nature of business of applicant Manufacturing salt, Heavy Chemicals, Soda Ash & Cement.
- (v) (Omitted)
- (vi) (Omitted)
- (via) No. & date of the valid clearance certificate of payment of mining dues (copy enclosed). Xerox of mining dues Clearance certificate No. GJ-ML-4773 Dtd. 11 /09 /03 for Jamnagar distt. and No. GP/STC/NDC/128 Dtd. 18/10/03 for Porbandar distt. are enclosed
- (vii) An affidavit that the up-to-date income tax returns, as prescribed under the Income Tax Act, 1961, have been filed & the tax due including the tax on account of self-assessment has been paid. Xerox copy of Income Tax clearance certificate dtd. 25 /08 /03 valid upto 24 /08 /04 is enclosed.

(viii) (a) Particular of the mining lease of which renewal is desired.

District	Taluka	Village	Survey No.	Area in Hects.	Drawing No.
Porbandar	Ranavav	Aniyali	207/P	16.2100	T-50925

- (b) Details of the previous renewal granted if any. Applying for First renewal
- (ix) Period for which renewal of mining lease is required 20 years with option to renew for a further period of 20 years.
- (x) Whether renewal is applied for the whole or part of the leasehold. Whole area of leasehold.
- (xA) a) Does the applicant continue to have surface rights over the area of the land for which he requires renewal of the mining lease. Yes.
- b) If not, has he obtained the consent of the owner, and the occupier for undertaking mining operations. If so, the consent of the owner and the occupier of the land be obtained in writing and be filed. Not applicable



- (xiii) Manner in which the mineral raised is to be utilised:
- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| a) for manufacture in India, | For manufacturing soda ash and cement in our works at Mithapur. |
| b) for export to foreign countries, | Not to be exported |
| c) in the former case the industries in connection with which it is required, should be specified. | M/s Tata Chemicals Limited, Mithapur (Okhamandal) |
- In the latter case, the countries to which the mineral will be exported and whether the mineral is to be exported after processing or in raw form should be stated.
- (xiv) Details of output during the last three years and phased programme for production during the next three years along with a layout plan for development, if any.
- | Year | Output of limestone |
|---------|---------------------|
| 2000-01 | Nil |
| 2001-02 | Nil |
| 2002-03 | Nil |
- Production of limestone after renewal will be 10,000 Tonnes per year for next three years.
- (xv) In case of coal, details of existing railway transport facility available and additional transport facility, if any, required. Does not apply
- (xvi) Any other particulars which the applicant wishes to furnish. Nil.

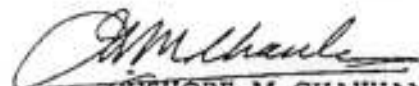
We do hereby declare that the particulars furnished above are correct and we/are ready to furnish any other details, including accurate plans as required by you before the grant of renewal of the lease.

Yours faithfully,

Place: Mithapur
Date: 21/1/03

Signature and designation of the applicant.

FOR AND ON BEHALF OF
TATA CHEMICALS LIMITED


(RISHORE. M. CHAUHAN)
POWER OF ATTORNEY HOLDER

N.B. if the application is signed by an authorised agent of the applicant, Power of Attorney should be attached.

TATA CHEMICALS LIMITED

13.21 - 12002

Pr. M. Az.
4/12/03

-: FORM - D :-

RECEIPT OF APPLICATION FOR PROSPECTING LICENSE / MINING LEASE

**RENEWALS (See Rules-10 (4) & 23 (4).
No.GP/MI/RENEW/35/**

**COLLECTOR OFFICE, 93 (r)
MINING BRANCI, PORBANDAR
DATE :- 2/11/2003**

-: GOVERNMENT OF GUJARAT :-

Sr.No.GP/MI/RENEW/35

Received the application with following enclosures for a Prospecting License/Mining Lease/Renewal for Mining Lease of Shri Tata Chemicals Ltd.on dated 03/11/2003 for about 16.21.00Hectares of land located in village Aniyari S.No.207 Government Forest / Govt. Land / Private Land Taluka Ranavav, District-Porbandar for Prospecting /Mining Lime Stone & Chalk Minerals.

ENCLOSURES :-

1. M.I. Renewal application form in triplicate.
2. No Mining dues clearance certificate of Affidavit true-copy in triplicate.
3. Income-Tax Clearance Certificate/or Affidavit true-copy in triplicate.
4. Original Challan of Rs.2500/- Challan No.21 Dated:-18/10/2003
5. Original Challan of Rs. -Challan No, Dated:-
6. 7/12 Statement in triplicate
7. Map of the area application for in triplicate

નોંધ:- અરજી એકમ ની 5 ની યુદ્ધ સ્તરી માન્યતાવાળી લીટીની કોપીઓ આજરવાવે આવશે.

[Signature]
**FOR COLLECTOR
PORBANDAR DIST.PORBANDAR**

✓ TO,
Shri Tata Chemicals Ltd.
Taluka Ranavav, At : Ranavav.

COPY F.W.C. :-

1. The Secretary, Industries & Mines Department, Sachivalaya, Gandhinagar.
2. The Commissioner of Geology & Mining, Gandhinagar.

(Sodha)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

No 682(23)MS-228/2003-MCCM(N)Udp

Sector No. 11, Hiran Magari,
Udaipur-313002 (Raj.)
Dated the 29th January, 04

From : The Regional Controller of Mines
Indian Bureau of Mines

To : M/s Tata Chemicals Ltd.,
At & Post Mithapur,
Tal. Okhamandal,
DISTT. JAMNAGAR (GUJ)

Sub.- Approval of Scheme of Mining submitted under Rule 12 of MCDR, 1988, for Aniali Limestone Mine (Sr.No.207/P) over an area of 16.21 Hects. Village Aniali, Tal. Ranavav, Distt. Porbandar (Guj)

Ref. - Your references dated:- 5.11.2003, 22.1.2004, 27.1.2004
Our references of even no. dated:- 10.12.2003.

Sir,

In exercise of the powers conferred on the undersigned by Sub-rule (4) of Rule 12 of the Mineral Conservation and Development Rules, 1988, the Scheme of Mining in respect of your Aniali Limestone Mine (Sr.No.207/P), situated in Porbandar district of Gujarat State is hereby Approved. This approval is subject to the following conditions:-

- i) that the Scheme of Mining is approved without prejudice to any other laws applicable to the mine/ area from time to time whether made by the Central Government, State Government or any other authority.
- ii) that this approval of the Scheme of Mining does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development & Regulation) Act, 1957 or the Mineral Concession Rules, 1960, or any other laws including Forest (Conservation) Act, 1980, Environment Protection Act, 1986 and the rules made there under. It is clarified that this approval of Scheme of Mining is subject to the Forest (Conservation) Act, 1980, Forest Conservation Rules, 1981 and other relevant statutes, orders and guidelines as may be applicable to the lease area from time to time.
- iii) that the Scheme of Mining is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- iv) Provisions of the Mines Act, 1952 and Rules and Regulations made thereunder including submission of notice of opening, appointment of manager and other statutory officials as required by the Mines Act 1952, shall be complied with.

- vi) If anything is found to be in violation of the provisions of the Mines Act in the contents of the mining plan/scheme of mining and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.
- vii) A copy of EIA-EMP approved by MoEF should be submitted to IBM immediately after approval by MoEF.
- viii) The lessee shall submit the financial assurance under Rule 23F of Mineral Conservation and Development Rules, 1988 by end of February, 2004.

Yours faithfully,

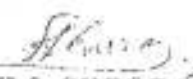
Encl. One copy of approved
Scheme of mining.

-sd-

(H.S. SHEORAN)
Regional Controller of Mines
Indian Bureau of Mines

Copy for information to

- 1 The Commissioner, Commissionerate of Geology & Mining, Govt. of Gujarat, Block No.13/3, Old Sachivalaya, Gandhinagar-382030 (Gujarat) with a copy of approved scheme of mining
- 2 The Director, Directorate General of Mines Safety, Tirupati Bhawan, Bohra Ganesh Road, Udaipur (Raj.) with a copy of approved scheme of mining
- ✓ 3 Shri S.S. Bist, RQP, Udaipur Min-Tech Pvt.Ltd., Apeksha Complex, 206, 2nd Floor, Opp Indian Oil Depot, Sector-11, Hiran Magri, Udaipur (Raj).


(H.S. SHEORAN)
Regional Controller of Mines
Indian Bureau of Mines

भारत सरकार
खनिज भंडालय
भारतीय खान पुरा
राष्ट्रीय खान नियंत्रक का कार्यालय

स 632(23)/(MIS-437)/2008- खानखरा(उ)उदय

हिरणमगरी, सेक्टर 11,
उदयपुर (राज.)
दिनांक 21/9/08

प्रेषित :- सर्वश्री टाटा कनिक्लस लि.,
मौडापुर- 361345,
तालुका- ओखामण्डल
जिला- जामनगर (गुजरात)

विषय :- खनिज संरक्षण एवं विकास नियमावली, 1968 के नियम 12 के अंतर्गत प्रस्तुत निकट
ग्राम अनियाली, तालुका- सभमवाय, जिला- पोरबन्दर (गुज.) में स्थित अनियाली
चुनापत्थर खान (क्षेत्रफल- 16.21 हे.) की खनन स्कीम का अनुमोदन।

सन्दर्भ :- 1. आपके अतिरिक्त पत्र दिनांक, 28.07.2008, 10.10.2008
2. इस कार्यालय का समसंख्यक पत्र दि. 22.9.2008

महोदय,

खनिज संरक्षण एवं विकास नियमावली, 1968 के नियम 12 के उपनियम 4 के अंतर्गत प्रदत्त
अधिकारों का प्रयोग करते हुए मैं एतद्वारा उल्लेखित खनन स्कीम का अनुमोदन करता हूँ। यह
अनुमोदन निम्नलिखित शर्तों के अधीन हुआ है -

1. इस खनन स्कीम का अनुमोदन केन्द्र सरकार अथवा अन्य किसी प्राधिकारी द्वारा
खान पर समय- समय पर लागू किए गए कानूनों पर प्रतिकूल प्रभाव डाले बिना
किया गया है।
2. यह भी स्पष्ट किया जाता है कि इस खनन स्कीम के अनुमोदन में खान एवं खनिज
(विकास और विनियमन) अधिनियम, 1957 या खनिज रियायत नियमावली, 1960 या
और किसी अन्य कानून विनियमन (संस्थापन) अधिनियम 1980, पर्यावरण संरक्षण
अधिनियम, 1986, या किसी अन्य कानून के किसी अन्य प्रावधान की शर्तों के
अनुसार किसी भी प्रकार से सरकार का अनुमोदन समाविष्ट नहीं हुआ है।
3. इस खनन स्कीम का अनुमोदन किसी भी न्यायालय के सक्षम क्षेत्राधिकार के किसी
आदेश या निर्णय पर प्रतिकूल प्रभाव डाले बिना किया गया है।
4. खान अधिनियम 1952 के अंतर्गत खान को बालू करने की सूचना, खान प्रबंधक एवं
अन्य वैधानिक नियुक्तियों को अधिसूचित करने सहित उक्त अधिनियम के सभी नियमों
एवं उपनियमों की पालना की जाएगी।
5. खनन स्कीम का निष्पादन/क्रियान्वयन, निबंधनों/अधिसूचनाओं, यदि कोई हो तो
उक्त कंडन के अधीन होगा।

पृ.प.उ.

By Speed Post

No. J-11015/308/2012-IA.II (M)

Government of India

Ministry of Environment and Forests

751, Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110 003
Telefax: 011-24364067

Dated: 19th March, 2013

To

M/s Tata Chemicals Ltd.
Mithapur, District-Jamnagar
Gujarat-361345
Tel. 02892-665267, Email-rbuch@tatachemicals.com

Subject: Limestone Mine of M/s Tata Chemicals Ltd., with production rate of 0.093 million tonnes/annum at Survey No. 207/ part, Village Aniali, Taluka Ranavav, District Porbandar, Gujarat (16.21 ha)-TOR Regarding

This has reference to your letter no. A/WG/0584/2012, dated 07-07-2012, received in the Ministry on 12-07-2012. The Proposal is to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the Proponent had submitted information in the prescribed format (Form-1) along with a Pre-feasibility Report. The proposal was considered by the Reconstituted Expert Appraisal Committee in its 3rd meeting held during 16th -18th January, 2013.

2. The proposed Limestone Mine Lease Area is located at Survey No. 207/part, Village: Aniali, Taluk: Ranavav, District - Porbander in Gujarat State between 21° 42' 18" to 21° 42' 31" N 69° 49' 13" to 69°49' 29" E. The project activity falls under category 'A' (Activity 1 A - Mining of Minerals) because the lease area is located within 10 km from the boundary of Barda Wildlife Sanctuary, notified under the Wild Life (Protection) Act, 1972 as per General Condition 1 of the Environmental Clearance notification 2006, as amended from time to time. The land use of the mine lease area is government waste land (barren land). The original lease deed was executed on 29.10.1964 for a period of 20 years and thus, expired on 29.10.1984. The First renewal was executed on 21.08.1987 vide letter MCR-1583(T-4) GOI-184-CHH dated 09.09.1986 for 20 years and expired on 29.10.2004. The Tata Chemicals Ltd (TCL) has applied for 2nd renewal vide letter No AW/G/2558/ 2003 dated 21.10.2003 for 20 years and the lease renewal is pending with the Gujarat Govt. This mine has been worked during the years 1985-1994, when the maximum production during year 1987-88 was 55,065 metric tonnes. The mining scheme with progressive mine closure plan was approved by Indian Bureau of Mines, Udaipur vide letter no. 682(23) MS-228/2003 MCCM (N) UDP dated 29.01.2004 for period of 2003-04 to 2007-08. This

Mining Scheme has expired on 31st March, 2008 without the mine being working and TCL has further submitted their next Mining scheme, which stands approved by the Regional Controller of Mines, Indian Bureau of Mines, Udaipur vide letter no. 682 (23) (MS-437/2008 MCCM (N) UDP Dated 21.10.2008 for period ending 2012-13. This mine is closed since 1994. The proposed rate of production is 0.093 million tonnes per annum. Total life of the mine is 5 years. The mine will be worked by fully mechanized opencast method. Water requirement for human consumption, plantation and dust suppression is 30 KLD, which shall be met from the ground water sources. Small amount of domestic waste water generation will be disposed in soak pits. The existing mine lease area is designated as government waste land and has no human settlements and hence, no R & R is envisaged.

3. Based on the information furnished, presentation made and discussions held, the Committee prescribed the TORs for undertaking detailed EIA study which are as follows:

1. Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
2. A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
3. All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
4. All corner coordinates of the mine lease area superimposed on High Resolution
5. Imagery/toposheet should be provided.
6. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
7. Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
8. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions? Details of this system may be given.
9. Does the company have a system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
10. Issues relating to mine safety based on subsidence study should be detailed. The proposed safeguard measure in this regard should also be provided.
11. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.

12. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
13. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted.
14. Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
15. High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
16. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
17. Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
18. Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
19. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
20. The vegetation in the RF / PF area with necessary details should be given.
21. A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
22. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
23. A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
24. Impact, if any, of change of land use should be given.
25. R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation

& Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.

26. One season (non-monsoon) primary baseline data on ambient air quality (PM10, SO2 and NOx), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
27. The mineralogical composition of PM10 particularly for free silica should be given.
28. Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
29. The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
30. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
31. Details of water conservation measures proposed to be adopted in the project should be given.
32. Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
33. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
34. Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
35. Details of rainwater harvesting proposed, if any, in the project should be provided.
36. Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
37. Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology

- planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
38. The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
 39. Impact on local transport infrastructure due to the project should be indicated.
 40. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
 41. Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
 42. Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
 43. Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
 44. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
 45. Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
 46. Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
 47. Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
 48. Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
 49. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
 50. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.


Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH process again with the revised documentation.

4. The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

5. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

6. After preparing the draft EIA (as per the generic structure prescribed in Appendix- III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.


(Dr. Saroj)
Director

Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi-110 001.
2. The Secretary, Department of Mines & Geology, Government of Gujarat, Secretariat, Gandhinagar.
3. The Secretary, Department of Environment, Government of Gujarat, Secretariat, Gandhinagar.

4. The Secretary, Department of Forests, Government of Gujarat, Secretariat, Gandhinagar.
5. The Chief Wildlife Warden, Government of Gujarat, Dr. Jivaji Mehta Bhavan, Block No. 14, 1st Floor, Old Sachivalaya, Gandhinagar-382 010.
6. The Chief Conservator of Forests, Regional Office (WZ), Kendriya Paryavaran Bhawan, Link Road No.3, Ravi Shankar Nagar, Bhopal - 462 016.
7. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
8. The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
9. The Chairman, Gujarat State Pollution Control Board, Sector 10-A, Gandhi Nagar - 382043, Gujarat.
10. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
11. The District Collector, Porbander District, Gujarat.
12. Guard File


(Dr. Saroj)
Director



**CERTIFIED TRUE COPY OF THE RESOLUTION
PASSED BY THE BOARD OF DIRECTORS AT
THEIR MEETING HELD ON NOVEMBER 26, 2008**

Appointment of "Owner/Occupier" under various statutes

(b) **Mines Act - 1952 and Metalliferous Mines Regulation - 1961:**


RESOLVED THAT, Mr. R. Mukundan - Managing Director of the Company be and is hereby appointed as "Owner/Occupier" of the Company's mines and quarries with effect from 15th December, 2008 and he shall have the powers and ultimate control over all aspects of mining quarries and empower to comply the various provisions of the Mines Act and rules framed thereunder and that the Company shall be responsible for all actions and deeds done by him in discharge of his duties as a "Owner/Occupier" under the Limitations and Dolomite Mines Labour Welfare Fund Rules - 1973.

RESOLVED FURTHER THAT, the aforesaid appointment be notified to the relevant Statutory Authorities.

RESOLVED LASTLY THAT, any one of Mr. P. K. Ghose, Mr. Kaji Mehra, Mr. M. Jacob, Mr. B. Sudheer, Mr. Satish Anand and Mr. Rajiv Chandra - Executives of the Company, be and are hereby severally authorized to take appropriate steps to give effect to this resolution.

CERTIFIED TRUE COPY

For Tata Chemicals Limited


(Rajiv Chandra)
Company Secretary & Head-Legal

Date: January 07, 2009

Place: Mumbai

बनाएँ

आपके पास होने वाली यात्रा के लिए आपको यह पत्र लेना होगा। यह पत्र आपको अपने देश के पासपोर्ट अधिकारी से लेना होगा।

आपको

आपके पासपोर्ट अधिकारी से लेना होगा। यह पत्र आपको अपने देश के पासपोर्ट अधिकारी से लेना होगा।

आपके पासपोर्ट अधिकारी से लेना होगा। यह पत्र आपको अपने देश के पासपोर्ट अधिकारी से लेना होगा।

आपके पासपोर्ट अधिकारी से लेना होगा। यह पत्र आपको अपने देश के पासपोर्ट अधिकारी से लेना होगा।

REGISTRATION

INDIAN CITIZENS RESIDENT ABROAD ARE ADVISED TO REGISTER IMMEDIATELY AT THE NEAREST INDIAN CONSULATE.

CAUTION

THE HOLDER OF THE PROPERTY OF THE GOVERNMENT OF INDIA MUST COMMUNICATE RECEIVED BY THE HOLDER, FROM A FOREIGN AUTHORITY REGARDING THE PASSPORT, INCLUDING IMMEDIATELY

THIS PASSPORT SHOULD NOT BE SENT OUT OF ANY COUNTRY BY POST. THIS SHOULD BE IN THE CUSTODY EITHER OF THE HOLDER OR OF A PERSON AUTHORIZED BY THE HOLDER. IT MUST NOT BE ALTERED OR COUNTERFEITED IN ANY WAY.

LOSS, THEFT OR DESTRUCTION OF THIS PASSPORT SHOULD BE IMMEDIATELY REPORTED TO THE NEAREST INDIAN CONSULATE AUTHORITY IN INDIA OR IF THE HOLDER IS ABROAD TO THE NEAREST INDIAN CONSULATE AND TO THE LOCAL POLICE OR OTHER AUTHORITIES IN COUNTRIES WHERE A REPLY TO THE PASSPORT IS ISSUED.

BANKERSHMAN PALGODHARI
RANBAGANI
SHELA HUNDAN
FLAT NO 1301/1302, POST FLEMINGOES
SNOWFLAKE CTS 5/209 C TOKESHI
LIVRA MARG SEWREE HUMBAL 400 033
71892083
19/11/2008
BOMK00291810 - OLD PPT. CLD & RETURNED



Analab (India) Pvt Ltd

P-8 Phase III, Kishu Industrial Area, Kolkata-700107
 Phone : (91-33) 4004-3637 3635 : Fax : (91-33) 2442-4666
 E-mail : analab@gemindia.com

ANALAB

40 YEARS' OF TRUST
 Member of ASTM

Certificate No : T-2480
 NABL ISO 17025 : 2005
 ACCREDITED LABORATORY

SSI Regn. No : 19 017 22 13223

TEST REPORT

Test Report No	: LS/5R/390	Date of Issue	: 02/08/13
Name of the Customer	: Tata Chemicals Ltd	Date	: 25/06/13
Customer letter Ref. No	: RQG/155/13		
Sample Description	: Powdered Limestone Sample		
Product Specification	: --		
Test Required	: 5 Radicals		
Method of Test	: XRF / Wet Analysis Method		
Date of Receipt of Sample	: 15/07/13	Date of performance of Test	: 31/07/13

TEST RESULTS (in %)

Sl. No.	Sample No	Observed value					Empirically estimated			
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	LOI	R ₂ O ₃	CaCO ₃	MgCO ₃
01	MOKH/1/13	2.76	0.54	0.66	53.70	0.46	41.71	1.20	95.85	0.97
02	ADI/1/13	3.41	0.65	0.68	52.95	0.57	41.24	1.33	94.52	1.20
03	ANIALI/1/13	1.73	0.17	0.32	54.51	0.50	42.37	0.49	97.30	1.05
04	RNV/1/13	1.75	0.34	0.59	54.46	0.47	42.30	0.93	97.21	0.99
05	ISH/13.15/13	1.75	0.39	0.64	54.33	0.47	42.20	1.03	96.98	0.99
06	ISH/26.10/13	1.59	0.33	0.55	54.51	0.47	42.34	0.88	97.30	0.99
07	Dev/13.44/13	1.93	0.39	0.51	54.18	0.46	42.07	0.90	96.71	0.97

Aniali
16.21 Hg

(Authorized Signatory)

Here R.O. is the sum of Al₂O₃ & Fe₂O₃ contents.
 values of CaO have been derived from the values of CaO percentages
 values of MgO have been derived from the values of MgO percentages

1. This Report refers to the values obtained at the time of testing and results related to the items tested.
2. It is the property of the Laboratory to reproduce in part or full without written permission of the management.
3. Liability for return of samples ceases after 15 days from the date of the test report.



(A Govt. of Rajasthan Regd. Unit)
ISO/IEC 17025:2005 & ISO 9001:2008 Certified Laboratory
NABL Accredited by DST (Govt. of INDIA)

B. A. Chitrakut Nagar, Bypass Road, Udaipur (Ra) PIN 313 001, INDIA Tel : +91 294 2440317, 2440612
Cell : +91 98290 43949 Telefax : +91 294 2440317, E mail : lpaneri@yahoo.co.in, lpaneri@indialines.com, www.rahulengineers.com

Report No.- 10/918/01

Date :- 09.09.13

TEST REPORT

1. Received from	:	M/S Tata Chemicals Ltd. Sample Received Through Udaipur Min-Tech Pvt. Ltd.
2. Reference No.	:	Aniali mine (16.21 Ha.)
3. Date of Sample Receipt	:	28.08.13
4. Lab. Job No.	:	10/918/01
5. Name of Work	:	Chemical Analysis of Limestone Sample

Test Results:-

Lab Job No.	Material	Location	Bulk Density g/cc After 100 Drops	Remarks
10/918/01	Limestone	Aniali Mine	2.016

Note:-

1. The test results are refers only to the samples received in the Laboratory.
2. Rahul Engineers Laboratory shall not in any way be involved in any action following the interpretation of test results.
3. Any discrepancy in test results should be reported within 15 days.
4. This report shall not be reproduced except in full without written approval from Rahul Engineers Laboratory.
5. Subject to Udaipur Jurisdiction only.

Tested By:
[Signature]

Checked By:

[Signature]

T.M.



Certified By:

[Signature]

(Lalit Paneri)
C.E.O./Q.M.

End of Report

Page 1 of 1



Ref: RQG/ 163 /2012-13
Date: 30th June, 2012

To,
The District Inspector of Land Records,
Sevasadan - 2
PORBANDAR-

Dear Sir,

Sub : Preparation of Geo-referenced Cadastral Map.

Ref : GR from Office of the Chief Controller of Mines, Government of India, IBM Nagpur No. N- 11013/3/MP/90-CCOM Vol-VII dtd 06/04/2010.

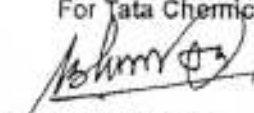
Tata Chemicals Ltd. is holding Mining lease for limestone over hectares (16.21 Ha area) in S.No.207/P of Aniyali village (16.21 Ha area) of Ranavav Taluka of Porbandar District. A Mining Plan as per requirement of the Mineral Conservation and Development Rules- 1988 of the mines has been prepared and it is to be submitted to the Indian Bureau of Mines, Udaipur for its approval.

As required by the above referred notification of the IBM (copy attached), the lessee is required to submit cadastral map of Mining lease (tippan) on a scale of 1:3960 scale cadastral Map. On such cadastral map along with relevant Survey. Nos, each boundary pillar is required to be given its ground position - surveyed by using DGPS (at least 2 Hours observations). You are therefor requested to kindly provide us the certified cadastral map of mining lease map fulfilling above requirement to be submitted to the IBM.

We herewith enclose copy Lease Map of the Mining Lease Tippan provided by you, for your ready reference please.

Thanking You,

Yours Sincerely
For Tata Chemicals Ltd.,


(S K Bhakta)
Sr. Manager Mining Operations and Agent Mines

Received
09/06/12

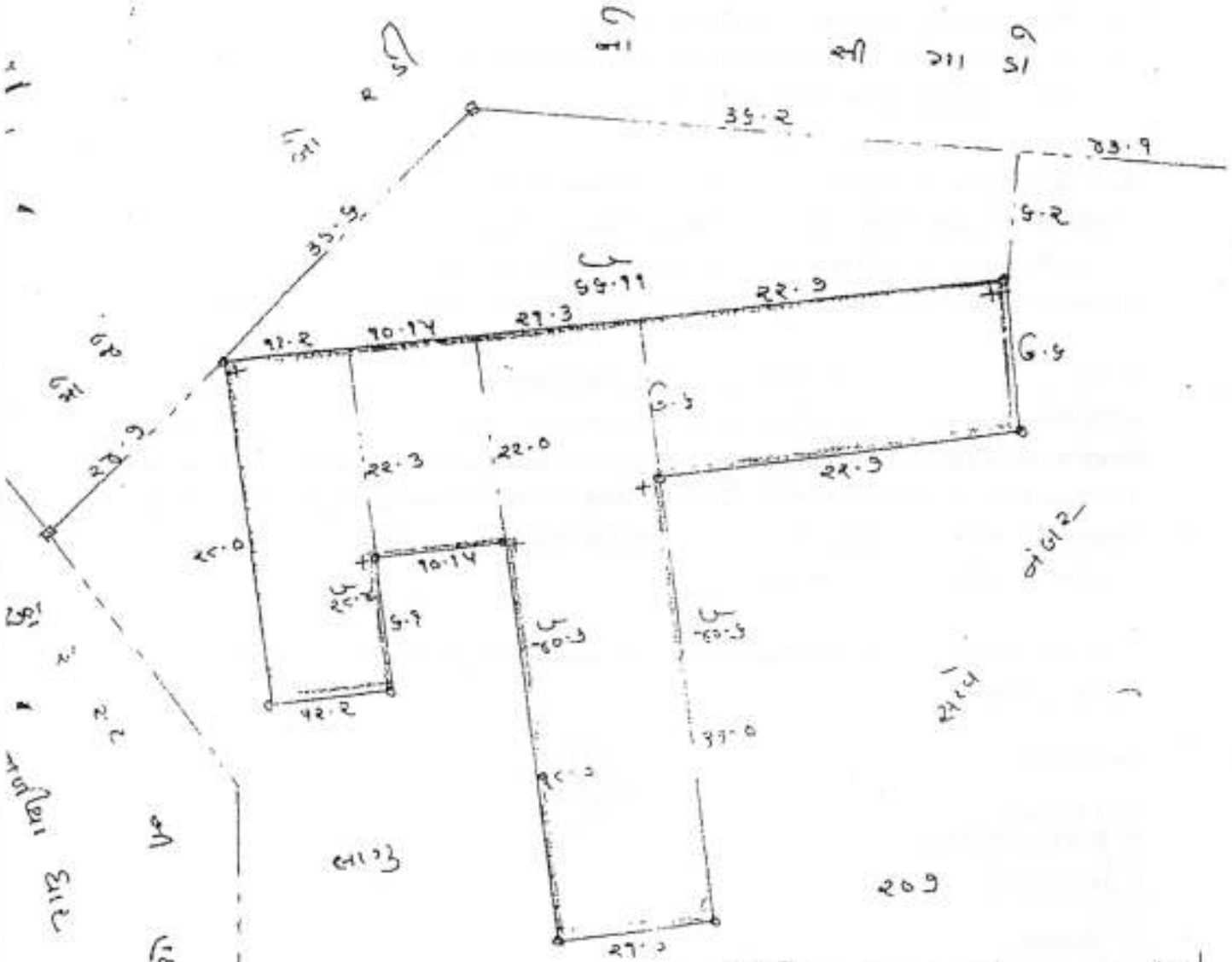
Encl: DILR Map of the lease

TATA CHEMICALS LIMITED

Ranavav Quarries, PO - Ranavav, Dist. - Porbandar, Gujarat - 360 550
Tel (02801) 236381, Fax (02801) 236320
Works - Milthapur, Okhamandal, Gujarat
Registered Office: "Bombay House", 24 Homi Mody Street, Fort, Mumbai 400 001.



ಶಿಗರ



ಶಿಗರ ಗುಡ್ಡದ ವ್ಯಾಪ್ತಿಯಲ್ಲಿರುವ
 ಸ್ಥಳೀಯ ಸರ್ಕಾರಿ ಶಾಲೆ
 (ಶಿಗರ) ಜಿ.ನಾ. ೨೨೭೭
 ಕೆ.ಎ.ಎ. ಕಟ್ಟಡ
 ೨೪

ಸರ್ಕಾರ ನಂಬರ ೨೨೭ ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಸ್ಥಳೀಯ

ಸರ್ಕಾರ ನಂಬರ ೨೨೭ ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಪ್ರಮಾಣಿತ ರೀತಿ ಇರುವ ನಿಯಮಿತ ಪದ್ಧತಿ.
 ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಪ್ರಮಾಣಿತ ರೀತಿ ಇರುವ ನಿಯಮಿತ ಪದ್ಧತಿ.
 ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಪ್ರಮಾಣಿತ ರೀತಿ ಇರುವ ನಿಯಮಿತ ಪದ್ಧತಿ.

ಸರ್ಕಾರ ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಪ್ರಮಾಣಿತ ರೀತಿ ಇರುವ ನಿಯಮಿತ ಪದ್ಧತಿ.
 ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಪ್ರಮಾಣಿತ ರೀತಿ ಇರುವ ನಿಯಮಿತ ಪದ್ಧತಿ.
 ನಿಯಮಿತ ಪದ್ಧತಿ ೧ ರಲ್ಲಿ ಸುಳಿವಿನ ಪದ್ಧತಿ ಇರುವ ಪ್ರಮಾಣಿತ ರೀತಿ ಇರುವ ನಿಯಮಿತ ಪದ್ಧತಿ.

ગામી વાહુવાની ઇ-સર્વિસ નંબર ૧૨ No. 4561562

સર્વિસ નંબર : ૨૦૭ પીકી -૧
 સરકાર : સરકારી પસાર
 મેલરના નામ : વિજાપુરનું
 સરકાર વિભાગ

પાનું : ૧ નો ૧
 મોડેલ : અણીપારી
 તાલુકો : રાણપાલ
 જિલ્લો : પોરબંદર

વસ્તુ નામ	લેખક્રમ કે.એ.સી.નો.નો.	ખાસ નંબર	લેખક્રમ ૧, એસી કે.એ.સી.નો.નો.	વૈભવ નંબરો/પાનું કે.એ.સી.નો.નો.
પીકી નં	૨૫૮-૧૫-૨૧			૫૪૦, ૧૦૭૫, ૧૦૭૬, ૧૦૮૦, ૨૧૦૪, ૨૧૦૫
કે.એ.સી. નં	૨૫૮-૧૫-૨૧			
કે.એ.સી. નં	૦.૦૦	૨૦૭	૨૫૮-૧૫-૨૧	૦.૦૦
કે.એ.સી. નં	૦.૦૦			શ્રી સરકાર<1000>
કે.એ.સી. નં	૦.૦૦			

ગામી વિગત

બીજા હકો અને બીજાની વિગતો
 ૨૦૨૨, ૨૧૦૪, ૨૧૦૫

૨૦૨૧-૨૨-૦૦ થી ૨૦૨૨-૨૩-૦૦ સુધી કમીસનનું માસિક લીઝની, ૧૫.૦૦-૦૦-૨૧ થી ૨૦-૨૧-૦૦
 ૨૦ વર્ષ માટે આપવામાં આવેલ છે.૨૨૧૦૪
 ૨૧-૦૧-૦૦ થી ૨૦૨૨-૦૨-૦૦ સુધી કમીસનનું માસિક લીઝની, ૨૦-૧૨-૦૪ થી ૨૦-૨૨-૦૦
 ૨૧ વર્ષ માટે આપવામાં આવેલ છે.૨૨૧૦૫

ગામી વાહુવાની ઇ-સર્વિસ નંબર ૧૨

સંક્રાન્તિ નામ	પોસ્ટલ કોડ	સરકાર કે.એ.સી.નો.નો.	સંક્રાન્તિ રીઝ	વિગતો સા/સા/સા	કુલ અને સેલી સંખ્યા	નોંધ
શ્રી સરકાર	૫૪૦	૨૫૮-૧૫-૨૧				

ઇ-સર્વિસ ઓફ ગામી વાહુવા

ગામી વાહુવાની ઇ-સર્વિસ
 ઇ-સર્વિસ રાણપાલ

ગામી વાહુવાની ઇ-સર્વિસ
 ગામી વાહુવાની ઇ-સર્વિસ
 ગામી વાહુવાની ઇ-સર્વિસ

1200047

Ver:2.4.0

મ. પ્રેક્ષ. સંખ્યકોટ-૨૪૮૨-૨, ૧૦,૦૦૦-૫-૫૮

મેન્ડ સ્વણીયાળી તાલુકે જાલાવાવ જિલ્લો ખુજાગઠ ગામની માપણીની જંગલ છુક તારીખ ૮ માઠે ૮ સને ૧૯૬૪ વાર ના રેલ વગડામાં જરીફ સાથે આસામી

નંબર	જેતરનું નામ			જમીનની ઉપજ ખાતર તથા મેકુતનું નામ	પાલક વેરકાઠર	વહીવટના પ્રકાર સરકારી ખાલસા ઈનામી ખેતરી વીગેરે	જમીનની વત બારેત પીત મેડવા લાપક બીડ નહીં મેડવા લાપક બીડ મેડવા લાપક પડતર કે ખસણો	માપણી વખત જમીન સાવે-તર કે પડતર	કુવાના કોસની સંખ્યા તથા કુવા ક્યા નંબરમાં છે.
	સાવતો	જરેવ	પીત						
	૨૦૭			મેગર્મી ૨૧૬૯૧ કેમી ૩૯૨. ૯૧૩					

ઉરરની વકીકત અગરા જલુવા પ્રમાણે ખરી રીતે વગડામાં લાખલ રહી વખાવી છે તથા જેતરની લઠ પ્રમાણે માપણી કરાવી છે.

મેકુ મજલુરને પચ્ચર દીવસ ની મુદરે ઉભા કરવા તાકીલ આપી છે.

સહી _____ મેકુ સહી _____ સહી _____

તપાસણી થઈ બેકર કાલમ થયા તે

પીત નંબર	બારેત		પીત		મેડવા લાપક બીડ		નહીં મેડવા લાપક બીડ		મેડવા લાપક પડતર		ખસણો		કુવા	
	બેકર	ગુલ	બેકર	ગુલ	બેકર	ગુલ	બેકર	ગુલ	બેકર	ગુલ	બેકર	ગુલ	બેકર	ગુલ
													૪૦	૨

કુવા કેવા પ્રકારનો તથા તેની ઉંચાઈ લાખ-

આ નંબરમાં બાક કોલના અને કઈ જાનના છે તે.

हिन्दी अनुवाद

ग्राम नमूना नं० 7 और 12

नं० 4561562

प्लॉक / सर्वे नं० 207 पैकी 1

सरकारी पडतर

खेठ का नाम विन्जाधार

प्रोजा - अनिपाली

तालुका - रानावाव

जिला - धोरबन्दर

अन्य विवरण

लायक जमीन	क्षेत्रफल	खता नं०	नोथ नं० कच्चे टाटा का नाम
फे ख व	258-15-21	407 / 258-15-21 / 0.0	854, 1075, 1077, 1884, 2164, श्री सरकार
कुल क्षेत्रफल	258-15-21		

अन्य लीजों का विवरण

- 1603, 2164, 2165
 ए० 45.00 कालजी खेडा कारैगा की लीज
 16.21 हेक्ठ० टाटा केमिकल्स की लीज
 20 वर्ष के लिये 9-9-86 से
 21.04 हेक्ठ० टाटा केमिकल्स की लीज
 20 वर्ष के लिये 28-12-04 से

ग्राम नमूना नं० 12

वर्ष	कृषक नाम	प्रोसम	कसल	क्षेत्रफल	कृषि का तरीका
2008-2009	श्री सरकार	खरीफ	खेरी 34	258-15-21	

कम्युचर वकल प्रमाणित

Sd/-

नायब मामलतदार

इ० धरा रानावाव

FEASIBILITY REPORT

INTRODUCTION

M/s Tata Chemicals Ltd. is world's second largest producer of Soda ash and most geographically diversified Soda ash company. It has manufacturing facilities in the U.K., the US and Kenya. The company has a global capacity of around 5.5 million tones of soda as per annum. The company has 5 star rating from British Safety Council.

M/s Tata Chemicals limited is a public limited company registered under Company's Act. They had put their first Soda Ash plant at Mithapur in 1939 with 50 tpd capacity & have gradually expanded their capacity & widened their product line over the years to become one of the most important national center for integrated production of basic chemicals in the country.

Tata Chemicals Ltd. have in due course expanded the capacity of their chemical plant to 8,75,000 t.p.a., which is about 34% of the country's capacity. Company has also established a cement plant at Mithapur with an annual rated capacity of 4,40,000 t.p.a. with a view to utilizing the fines (-50 mm) left behind after screening the ROM to obtain sized material for Soda Ash Plant along with other sub grade limestone obtained as overburden or interburden during mining of chemical grade limestone. TCL now propose to expand the capacity of the Soda Ash Plant to 10,00,000 t.p.a and of the Cement Plant to 8,80,000 t.p.a. in future.

Soda ash product line consists of four categories i.e. Soda ash light, dense, medium dense and granular. Soda ash is used in glass, soap & detergent, chemicals, pulp & paper industry.

The chemical grade limestone is one of the basic raw materials used in soda ash manufacturing process in the form of CaO and CO₂. To manufacture one tone of soda ash 1.55 tonne of limestone is required. Sized limestone of (+50mm to 100mm) is fired in lime kiln. The lime is used for disengaging fixed ammonia from mother liquor and carbon dioxide also known as kiln gas is required for carbonating ammonia brine.

Company is operating number of mines and details of the leases held by the company are given below:

Sr. no.	Survey No.	Village	Taluka	District	Area in Hect
1	60/1 & 71/2	Godhana	Porbander	Porbander	86.65
2	A1, F & D Plots, -5/6 & 602/P	Adityana	Ranavav	Porbander	42.90
3	602/P	Adityana	Ranavav	Porbander	16.8755
4	602/P	Adityana	Ranavav	Porbander	2.14
5	22/P	Boricha (Zinzerka)	Porbander	Porbander	14.27
6	5/6/P	Adityana naviline	Ranavav	Porbander	12.62
7	5/6/P	Adityana naviline	Ranavav	Porbander	9.21
8	QP-209	Adityana	Ranavav	Porbander	1.0995
9	78/P	Ranavav Govalani	Ranavav	Porbander	25.45
10	207/P	Aniali	Ranavav	Porbander	21.04
11	207/p	Aniali	Ranavav	Porbander	16.21
12	21/P	Aniali	Ranavav	Porbander	15.9953
13	207/P	Aniali	Ranavav	Porbander	12.27
14	94/P	Aniali	Ranavav	Porbander	6.07
15	180/P	Ishwariya	Kutiyana	Porbander	26.10
16	448/P	Ishwariya	Kutiyana	Porbander	21.04
17	180/P	Ishwariya	Kutiyana	Porbander	14.37
18	221	Ishwariya / Devda	Kutiyana	Porbander	13.44
19	437/P	Ishwariya	Kutiyana	Porbander	13.15
20	399/P	Ishwariya	Kutiyana	Porbander	8.7
21	437/P	Ishwariya	Kutiyana	Porbander	3.4
22	211/216	Ranpur	Bhanwad	Jamnagar	232.10
23	160/P	Pachlitar	Bhanwad	Jamnagar	116.05544
24	51/P	Mokhana	Bhanwad	Jamnagar	107.69
25	77/P	Pachlurdi	Bhanwad	Jamnagar	76.19
26	209/P	Ranpur	Bhanwad	Jamnagar	28.85
27	209/P	Ranpur	Bhanwad	Jamnagar	14.16

Presently out of 27 leases, 11 leases are active others are dormant due to some legal problem. Only the chemical-grade limestone is being produced from these leases and after sizing, the sized material (+50 to 100 mm) is fed to the company's Soda Ash plant at Mithapur. The under size (Chemical grade) is fed to company cement plant, situated near the Soda Ash plant, for cement manufacture. From the

production figure of previous years that over-all production of plant feed is about 50% of the plant from captive mines and rest is being procured from open market. Now company has made strategy to increase production from captive mines and reduce to procured from open market.

The mining lease for limestone in respect of Aniali mine was granted over a total area of 16.21 hect. & the lease was executed on 29.10.1964 for a period of 20 years. This was expired on 29.10.1984. First renewal was executed on 21/08/1987 with effect from 29/10/1984 for period of 20 years(i.e. up to 29.10.2004) and TCL again applied for second renewal(20 years) before one year of expire of lease period and which is pending with State Govt.

The mining scheme with progressive mine closure plan was approved by Indian Bureau of Mines, Udaipur vide letter no. 682(23)MS-228/2003 MCCM(N) UDP Dated 29/01/2004 for period of 2003-04 to 2007-08.

The subsequent mining scheme with progressive mine closure plan was approved by Indian Bureau of Mines, Udaipur vide letter no. 682(23)MS-437/2008 MCCM(N) UDP Dated 21/10/2008 for period ending 31.03.2013..

The company has further applied for Environment clearance and the TOR has been issued by MoEF.

No mining plan was submitted for renewal of lease hence this Mining Plan is submitted under Rule 24A of MCR 1960.

The five years implementation period of mining plan has expired on 31.03.2010. Therefore, Scheme of Mining along with Progressive Mine Closure Plan is submitted under the Rules 12 & 23(B) of MCDR 1988 for approval.

1.0 GENERAL MINE DESCRIPTION

1.1 NAME AND ADDRESS OF THE LESSEE:

Tata Chemicals limited

Registered office:

M/S Tata Chemicals Limited,

Bombay House,

24, Homi Mody Street, Fort, Mumbai - 40001.

Phone +91 22 6665 8282, 6665 8143/44

Works:

P.O.Mithapur,

Taluka : Okhamandal,

District : Jamnagar,

Gujarat. - 361345

Phone: +91 2892 223792, 223793

Fax: +91 2892 223227

E-Mail:

1.2 STATUS OF THE LESSEE :

The lessee M/S Tata Chemicals Limited, is a Public Limited Company, operations of the company are controlled by Board of Directors. List of Board of Directors along with their addresses is given below:

Mr. R Mukundan, Managing Director is nominated owner of the company.

S.No.	Name	Address
1	Mr. Ratan N. Tata (Chairman Emeritus)	Bombay House, 24 Homy Mody Street, Fort, Mumbai
2	Mr. Cyrus P. Mistry (Chairman)	Bombay House, 24 Homy Mody Street, Fort, Mumbai
3	Mr. R. Goplakrishnan (Vice Chairman)	Bombay House, 24 Homy Mody Street, Fort, Mumbai
4	Mr. Nusli N. Wadia	Neville House, J.N. Heredia Mard, Mumbai-38
5	Mr. Prasad R. Menon	Bombay House, 24 Homy Mody Street, Fort, Mumbai
6	Mr. Nasser Munjee	Bombay House, 24 Homy Mody Street, Fort, Mumbai
7	Dr. Yoginder K. Alagh	Bombay House, 24 Homy Mody Street, Fort, Mumbai
8	Dr. E.A. Kshrisagar	Bombay House, 24 Homy

		Mody Street, Fort, Mumbai
9	Dr. Y.S.P Thorat	Bombay House, 24 Homy Mody Street, Fort, Mumbai
10	Dr. Vijay L. Kelkar	Bombay House, 24 Homy Mody Street, Fort, Mumbai
11	Mr. R. Mukundan (MD)	Bombay House, 24 Homy Mody Street, Fort, Mumbai
12	Mr. P.K. Ghose	Bombay House, 24 Homy Mody Street, Fort, Mumbai

1.3 LOCATION OF MINE

District & State	Porbandar, Gujarat
Taluka	Ranavav
Village	Aniali
Survey No.	207/p
Type of Land	Non - Forest, Govt. Barren land

The mine is located about 4.5 km. North of Aniali Village and connected with kuccha road. Aniali Village is 10 Km. interior from Varvala Village connected with a tar road. Varvala is situated on the NH No. 8B (Porbander-Rajkot-Ahemdabad) in between Kutiyana and Porbander segment.

The lease area can be approached from Porbander or Ranavav by N.H. -8B and further on Single tar road at a total distance of 20.0 Kms from Ranavav and 38.0 Kms from Porbander (Location plate No. 1). The area is marked on Topo Sheet maps showing lease area with Village, Road, Type of Land & Other lease area of same lessee within 5 Km. radius.

2.0 EXPLORATION:

Exploration already carried out

The area has been explored with the help of core drilling over the entire lease area, 17 number of bore holes were drilled on grid pattern having 100 meters interval to study the depth behavior of the limestone deposit properly.

Total 92.50 mtrs. were drilled. Depth-wise limestone core samples were collected. Core were split into equal halves and samples were powdered. After coning and quartering, half of the powder of all samples were sent to company central laboratory at Mithapur for complete analysis. Total 118 core samples were collected from 17 numbers of Bore-holes core and analyzed.

Future Exploration Programme

From the nature & extent of the deposit, the quantum and intensity of exploration already carried out in the area is considered adequate since the reserves & the quality have been proved with adequate degree of reliability. No additional exploration, therefore, is considered necessary in the area.

3.0 RESERVE ASSESSMENT

BLOCKWISE GEOLOGICAL RESERVES HAVE BEEN TABULATED BELOW:

BLOCK No.	LIMESTONE RESERVES		
	CHEMICAL GRADE	MARGINAL GRADE	CEMENT GRADE
BLOCK-I	1,13,400	1,100	45,900
BLOCK-II	3,22,200	4,000	5,31,000
TOTAL	4,35,600	5,100	5,76,900

SPECIFICATION OF DIFFERENT GRADE OF LIMESTONE PRESCRIBED BY TCL

Sr No	Grade	Characteristics
1.	Chemical grade	Total Carbonate \geq 92% & SiO ₂ <4%
2.	Marginal grade	Total Carbonate \geq 92% & SiO ₂ <4 to 5%
3.	Inferior grade	Total Carbonate <92% or SiO ₂ >5%

Mineable Reserves (In tonnes) :

Block	CG Proved 111	MG Blendable Proved 111	IG Blendable Proved 111	Total CG Proved 111	Reserves Blocked in Barriers	Losses @ 5%	Total Deduction	Net Mineable Proved 111
	A	B	C	D=A+B+C	E	F	G=E+F	H=D-G
Block I	113400	-	400	113800	20200	4700	24900	88900
Block II	322200	4000	63700	389900	16200	18700	34900	355000
	435600	4000	64100	503700	36400	23400	59800	443900

4000 MT of Marginal Grade and 64100 of Cement grade (IG) limestone which occur within the chemical grade limestone bands have been considered blendable as the average quality (taking weighted average) worked out to be chemical grade limestone.

4.0 PRODUCTION SCHEDULE

Year wise production of limestone / inferior grade limestone during the plan period will be as follows:

Year	ROM Limestone	Inferior grade limestone	Chemical Grade limestone
2014-15	86845	13818	73027
2015-16	86928	7380	79548
2016-17	87628	16206	71422
2017-18	87394	27598	59796
2018-19	83932	6604	77328
Total	432727	71606	361121

5.0 MINING METHOD

Salient features are described below:

- No overburden removal.
- Chemical grade limestone mined for manufacturing Soda Ash at company's own plant
- Benches of 4.0 m height will be mined.
- Blast holes to be of 110 mm dia. using wagon drill.
- ANFO with cap sensitive explosive.
- 1.54 cu.m. capacity excavator / loader for loading of blasted material.
- 10 tonnes tippers (Non HEMM) for transportation of limestone to crusher.
- Haulage roads maintained at the gradient not exceeding 1:16.
- Secondary blasting to be carried out as and when required.
- Blasted ROM is loaded into tippers and shifted to a nearby sizing yard pit inside the lease hold area where sizing of limestone is done manually using contract labourers , and final sized material is sent to soda ash plant.

- Alternatively in the event of Labour shortage, a MMD mobile sizer & screening equipment will be deployed at Aniali 16.21 Ha. mining lease for sizing of limestone.
- Some part of inferior (cement) grade limestone is to be mined with chemical grade limestone for systematic mining. Overall chemical grade will be maintained from mineral conservation point of view
- Provisions of MMR 1961 will be strictly be adhered. Lessee will obtain necessary permission from DGMS for deep hole drilling and blasting and use of HEMM.

In future also it is proposed to continue with same method of mining.

Requirement of Machinery

Operating Parameters

No. of working Days	300
No. of Shifts per day	2
Limestone Production per Year (Max)	87000
Waste Generation in tonnes per year	Nil
ROM Limestone	290 tpd
Waste / OB (Max)	Nil
Total ROM + Waste	2808 tpd
ROM per shift	145 t

Drill Machine Requirement:

Calculation for drill machine requirement is given in table below:

Drill machine in use	Wagon Drill
Hole dia	110 mm
Bench Height	4.0 m
Hole burden	1.5 m
Hole spacing	2.0 m
Tonnes per hole	$1.5 \times 2.0 \times 4.0 \times 2.00 = 24 \text{ t}$
Tonnes to be blasted per day	290t
No. of holes to be blasted per day	$290 / 24 = 12$
Inclined length of hole (Inclination of hole 70°)	4.1m
Length of hole including Sub grade drilling @ 10%	$4.1 \times 1.1 = 4.51 \text{ m}$
Total drilling meters per day	$4.51 \times 12 = 54 \text{ m}$
Drilling rate per hour	12 m
Meters per shift = 12 x 6 hrs.	72 m
Meters per day	144 m
No. of machines required $54 / 144 = 0.375$	0.38
Actual requirement @ 85 % Availability & 75 % Utilisation = $0.38 / (0.85 \times 0.70) = 0.63$	1 wagon drills

One wagon drills are required to meet the targeted production.

Excavator requirement:

Particulars		Tipper
Model		
Bucket capacity (struck) in cum	1.54	
Bucket fill factor	0.9	

Bulk Density of Limestone situ	2.0	
Bulk Density broken rock	1.54	
Broken rock per load of bucket in cu.m.	1.386	
Tonnes per pass of bucket	2.14	
Cycle time for one bucket in sec	28	
Efficiency of machine considering 10 m loading distance	75%	-
No of cycle per hour	96	
Limestone loaded per hour	205 t	
Say, tph	205 t	
Operating hours per shift	6	
Tonnes handled per shift	1230	
Tonnes per day	2460	
Excavators required	$290 / 2460 =$ 0.11(say 1)	
Tipper capacity		5.7 cu.m.
Fill factor		0.9
Tipper Capacity in tones		10
No. of passes required to fill the tipper		5
Spotting (in minute)		1
Loading time (minute) @ 28sec/load		2.5
Average speed in kmph		25.00
Distance in km for both way		24.00
Hauling time in minute		58.00
Unloading time in minute		1.00
Cycle time in minute		63
Nos. of trips per hour (N)		0.95
Handling per / hr. = NxT,		6.15
Daily working hours available	6.5 hrs	6.5 hrs
Handling per shift		61.5
Average handling per tipper per shift		62
Handling per tipper per day		124 t
Tipppers Required		$290/124 = 2.35$
Availability		75%
Tipppers Required		3
Standby		0
Total required		3

One excavators of 1.54 cu.m. bucket capacity and 3 tipper of 10 t (5.7 cu.m.) capacity will be required to meet the production target of 290 t per

day.

Compressor & Jack hammer drill

Name	Make	Capacity	No. of Units
Compressor	Atlas Copco	450cfm	One
Drill	Atlas Copco	32 mm dia.	One

Summary:

Equipment	Capacity	Nos.	Make	Motive power HP
Excavator	1.54 cu.m.	01	HM-2021	Diesel 110 HP
Tipper	10 t	03	Tata	Diesel 110 HP
Air Compressor	450 cfm	01	Atlas Copco	Diesel 125 HP
Wagon Drill	110mm dia	01	Atlas Copco BVB 25	Compressed Air
Explosive van	1 ton	01	Tata 407	Diesel 60 HP
Water Sprinkler	5000 litre	01	Mahindra Tractor	Diesel 45 HP
Jeep		01	Mahindra	Diesel 40 HP
Tractor		01	Mahindra	Diesel 45 HP
Diesel pump		01	Local	Diesel 7.5 HP

5.6 Explosive;

(a) Blasting Parameters (Primary Blasting)

Mineral / OB (Max)	290 t
Depth	4.0 m
Depth of hole including sub grade drilling	4.1 m
Burden	1.5 m
Spacing	2.0 m
Volume blasted per hole	12.0 cu.m.
Tonnes blasted per hole	25.2 t
Powder Factor t / kg of explosive	6
Explosive per hole	4.2 kg
Explosive per day (300 /6 = 50 kg)	50 kg
Booster Charge 25%	12.5 kg / day
ANFO @ 75 %	37.5 kg/ day

b) Secondary Blasting:

Secondary blasting is ruled out. Hired rock breaker will be used to break big boulders.

(c) Explosive Requirement :

Powder Factor t / kg of explosive	6
Explosive per hole	4.2 kg
Explosive per day (300 /6 = 50 kg)	50 kg
Booster Charge 25%	12.5 kg / day
ANFO @ 75 %	37.5 kg/ day

(d) Precautions to be taken during blasting.

As the mining area is in close proximity to human settlements , adequate precautionary measures will be taken as given below:

- Adequate siren system will be in operation.
- Legible warning sign in the language understood by the local people.
- Enough security guards, especially posted on roads etc.
- Before blasting the upper surface of the bench shall be cleaned off, of any stones lying on top, as it is a major source of flying stones.
- The trunk line of the detonating cord shall be covered with sand to reduce air over pressure, as it is major source of air blast noise.
- Controlled blasting shall be practiced and only during day time.
- All safety measures as prescribed under MMR 1961 and circulars issued by DGMS.
- The danger zone shall be distinctly demarcated (by means of red flags properly arranged and supported) at least 30 minutes before firing of holes is to commence..
- Ten minutes before firing, a siren installed for the purpose shall be blown three times for one minute each at interval of one minute.
- An effective record of instruction to guards given for working and clearance shall be maintained.
- No shots shall be fired when there is traffic on any road within danger zone.

=====*****=====

6.0 BENEFICIATION

As discussed earlier, a crusher similar to MMD sizer installed at Ishwariya 13.15 Ha mine is proposed to be set up when Aniali group of mines will come under operation. The plant details and crushing studies have been conducted earlier and shall be done for the current lease also before setting up the plant. The proposed site is at Aniali 21.04 site.

The proposed methodology for this is similar to the one at Ishwariya 13.15 Ha mine, where the RoM from individual mines is manually sized to 700 mm size. This material will be transported by trucks to the plant. When this material is subjected to the crushing, the end product is around 50-100 mm size. Oversized particles are re-fed to the hopper.

7.0 MARKETING

Mineral worked out from mines will be transported to the plant for captive use for manufacturing Soda Ash. So there is no direct marketing of mineral from mines is involved.

8.0 INFRASTRUCTURE

Office-cum-store is located within the lease hold area. A blasting shelter is also there in the lease area. A canal runs through the area. Office and blasting shelter will be re-located during second year of mining to other place.

Any other facility through underground like electric transmission line, water supply line, gas pipe line, sewer line, telephone cables etc, have not been observed in the lease area.

9.0 ENVIRONMENTAL REQUIREMENTS

1 Top soil storage, preservation and utilization

Any incidental soil generated will be used for plantation.

2 Land reclamation & rehabilitation

No proposal for either backfilling or reclamation during the period of Scheme of Mining, as the mining will not reach the ultimate depth of mining.

3 Waste dump management

As there is no overburden hence, no waste generation at this mine. Sub grade limestone mineral (Undersize i.e. $\cdot 25\text{mm}$) will be generated at the crusher. This undersize limestone will be used at the company's cement plant at Mithapur. Hence no waste management at the mine.

4 Afforestation programme with precautions proposed for survival & protection of plantation

Proposed plantation details for five year period are:

Year	Proposed
14-15	100
15-16	100
16-17	100
17-18	100
18-19	100
Total	500

Post Plantation Care:

1.(a) Protection from grazing :

Protection from grazing will be done by erecting tree guard around planted saplings.

(b) Protection from fire:

Protection from fire will be done by clearing the grass and bushes all-around the planted area.

(2) Watering During Dry Spell:

During the first year from January to June the watering will be done twice a day in each month in the plantation area . Thereafter, watering will be done only once every month from January to June every year.

(3) Manuring:

The manuring will be done while plantation work is taken up.

(4) Protection from pest like white ant etc.:

It will be done during the plantation and in the proposed pit 10gms of BHC powder will be sprinkled before plantation. After few months, liquid pesticide diluted 100 times will be sprinkled near the site of plantation.

(5) Replacement casualties:

The dead plant per year will be counted and will be again planted in subsequent year.

5 Quality of air

Water sprinkling. Use of dust masks. Wet drilling. Periodical monitoring of air quality. Development of green belt. Standards prescribed by the SPCB will be achieved.

6 Quality & make of water including surface & ground water

Mine water to pass through settlers and sumps before discharging it outside the lease area.

Periodical monitoring of water quality

7 Noise levels

Use of ear plugs.

Maintenance of machinery. Use of sharper drill bits.

Plantation

8 Treatment of mine water and affluent / toxic substances before discharged

Mine water to be discharged outside the lease area after passing through settlers and sumps.

10.0 ECONOMIC EVALUATION

(A) Capital investment

<i>CAPITAL EXPENDITURE (In Rs.)</i>			<i>Aniali Limestone Mine = 16.21 ha.</i>
Item	Cost		
Tools (shovels, pickaxes, etc)	1,00,000		
Excavator	45,00,000		
Dumpers	75,00,000		
Wagon drill	6,00,000		
Compressor	5,00,000		
Total	1,32,00,000		
Other Not specified 5% of 'A'	6,60,000		
Initial spares 5% of 'A'	6,60,000		
Bank Guarantee	11,65,000		
Total Capital Expenditure	1,56,85,000		
<i>DEPRECIATION</i>			
Item	Cost	Life	Depreciation
Tools (shovels, pickaxes, etc)	1,00,000	5	20,000
Excavator	45,00,000	10	4,50,000
Dumpers	75,00,000	10	7,50,000
Wagon drill	6,00,000	10	60,000
Compressor	5,00,000	10	50,000
Total	1,32,00,000		13,30,000

13.0 ECONOMIC VIABILITY

The anticipated cost of mining is Rs. 361.95 /- per tonne cost. Limestone will be used for making soda ash in own plant .

CASH FLOW STATEMENT

YEARS	1	2	3	4	5	6
Production	86,845	86,928	87,628	87,394	83,932	76,292
Revenue	1,56,32,100	1,56,47,040	1,57,73,040	1,57,30,920	1,51,07,760	1,37,32,560
Cost of Prod.including depreciation	1,04,35,532	1,04,45,506	1,05,29,619	1,05,01,501	1,00,85,498	91,67,455
OH, Royalty, Transport etc.,						
Total operating Cost	1,04,35,532	1,04,45,506	1,05,29,619	1,05,01,501	1,00,85,498	91,67,455
Gross operating Income	51,96,568	52,01,534	52,43,421	52,29,419	50,22,262	45,65,105
Balance Income	51,96,568	52,01,534	52,43,421	52,29,419	50,22,262	45,65,105
Project cash flow	51,96,568	52,01,534	52,43,421	52,29,419	50,22,262	45,65,105

DISCOUNTED CASH FLOW STATEMENT

YEAR	Cash flow		Discounted Cash Flow @ 10%			Discounted Cash Flow @ 12%		
	Out	In	P.V.Factor	Out flow	Inflow	P.V.Factor	Out flow	Inflow
1	1,56,85,000	51,96,568	0.909	1,42,37,665	47,23,680	0.893	1,40,06,705	46,40,535
2	-	52,01,534	0.826	-	42,96,467	0.797	-	41,45,623
3	-	52,43,421	0.751	-	39,37,809	0.712	-	37,33,315
4	-	52,29,419	0.683	-	35,71,693	0.636	-	33,25,910
5	-	50,22,262	0.621	-	31,18,825	0.567	-	28,47,623
6	-	45,65,105	0.564	-	25,74,719	0.507	-	23,14,508
Total	1,56,85,000	3,04,58,309		1,42,37,665	2,22,23,193		1,40,06,705	2,10,07,515
Excess of PV over Capital Cost					79,65,528			70,00,810

<i>Internal Rate of Return</i>						
	<i>Discount</i>	<i>20.00%</i>	<i>Discount</i>	<i>30.00%</i>		
<i>Year</i>	<i>Cash Inflow</i>	<i>P V Factor</i>	<i>Present Value</i>	<i>P V Factor</i>	<i>Present Value</i>	
1	51,96,568	0.833	43,30,473	0.769	39,97,360	
2	52,01,534	0.694	36,12,177	0.592	30,77,831	
3	52,43,421	0.579	30,34,387	0.455	23,86,627	
4	52,29,419	0.482	25,21,903	0.350	18,30,965	
5	50,22,262	0.402	20,18,334	0.269	13,52,641	
6	45,65,105	0.335	15,28,844	0.207	9,45,781	
Total	3,04,58,309		1,70,46,119		1,35,91,206	
Less Investment			1,56,85,000		1,56,85,000	
Net Present Value			13,61,119		(20,93,794)	
Actual Rate of						
Of Discount =	<i>Discount rate of Low trial + Excess PV of low trial / (Excess PV of Low trial over deficit PV of High trial) x Difference between high & low discount rates 10%</i>					
Internal Rate of Return			23.9396619		%	

Cash Flow

All the expenses are being met by the revenue generated by selling of Soda ash, salt yarn sodium bi carbonate and wind generators & cash flow is being maintained by Plant.

Feasibility assessment of mineral resources:-

Mining of limestone from mineable reserves is economically feasible in view of the following:-

No marketing is needed for limestone as it is used for captive purpose.

Govt. waste Land has been acquired. NOC from Private land owner is under process.

Lower sensitivity of limestone mining cost with respect to Soda ash cost.

No village/ Hutment are displaced due mining operation.

Environmental clearance for mining will be obtained from MoEF.

Consent to establish and Consent to operate will be obtained from State Pollution Control Board.

License for diesel storage will be obtained under petroleum Act.

Prepared and Signed by


B L Mod

RQP/UDP/100/93A

Address :- M/S UDAIPUR MIN - TECH PVT. LTD.

206 "APEKSHA COMPLEX"

SECTOR NO. - 11, HIRAN MAGRI,

UDAIPUR - 313001, PHONE - 2489672

Email :- ssbist@udrmintech.com

खजाना बाजना तयार करण हेतु
सामान्य व्यक्तिके रूप में
मान्यता का प्रमाणपत्र

(सामान्य विधायक नियमावली, 1960 के विधम 22(सी) के अंतर्गत)

M/s UDAIPUR MIN-TECH PVT. LTD.,

पंजीकरण संख्या-17-08522, पंजीकृत कार्यालय: 206-अपेक्षा कॉम्प्लेक्स,
सेक्टर नं.11, पोस्ट एवं जिला-उदयपुर (राज), द्वारा अपनी योग्यताओं
और अनुभव का संतोषपद प्रमाण प्रस्तुत करने के फलस्वरूप सामान्य
विधायक नियमावली, 1960 के विधम 22 (सी) के अंतर्गत उन्हें एतद्द्वारा
खजाना बाजना तयार करने हेतु योग्य संस्था के रूप में मान्यता प्रदान
की जाती है.

उक्तका पंजीयन क्रमांक

आर.व्यू.पी./उदय/ 354/2009/B

यह मान्यता दिनांक 20-08-2019 को समाप्त होने वाली दस
वर्षों की अवधि के लिये वैध है.

स्थान : उदयपुर
दिनांक : 21.08.2009



(Handwritten signature)
(एन.पी. सहस्रबुद्धे)
क्षेत्रीय प्रान्त नियंत्रक
क्षेत्रीय प्रान्त नियंत्रक
भारतीय प्रान्त भूरो
आचार्य राम भूरो
Indian Bureau of Mines
उदयपुर
UDAIPUR

सम्बन्धित मान्यता प्राप्त व्यक्तिके -

1. श्री सीतेश्वर सिंह सिन्हा पुत्र श्री बलराम सिंह सिन्हा
2. श्री सुरपाल सिंह मादन पुत्र श्री एन.एल.मादन

(Handwritten signature)
(एन.पी. सहस्रबुद्धे)
क्षेत्रीय प्रान्त नियंत्रक
भारतीय प्रान्त भूरो

दिनांक 10.02.2010 से सम्बन्धित (Key person) :-

1. श्री सीतेश्वर सिंह सिन्हा पुत्र श्री बलराम सिंह सिन्हा
2. श्री सुरपाल सिंह मादन पुत्र श्री एन.एल.मादन
3. श्री अरुण कुमार पुत्र श्री एन.एल.मादन



(Handwritten signature)
(सुरेश चोपड़ा)
क्षेत्रीय प्रान्त नियंत्रक
क्षेत्रीय प्रान्त नियंत्रक
भारतीय प्रान्त भूरो
आचार्य राम भूरो
Indian Bureau of Mines
उदयपुर
UDAIPUR

दिनांक 5-10-2012 से सम्बन्धित व्यक्तिके (Key person):

1. श्री सीतेश्वर सिंह सिन्हा पुत्र श्री बलराम सिंह सिन्हा - *(Handwritten signature)*
2. श्री सुरपाल सिंह मादन, पुत्र श्री एन.एल.मादन
3. श्री अरुण कुमार मोड, पुत्र श्री शिवरी लाल मोड

(Handwritten signature)

TATA CHEMICALS LIMITED
LIMESTONE MINING LEASE S.NO.-207/PARTS
LITHOLOGICAL LOG OF BORE HOLES DRILLED
ANIAL(16.21 HECTS)

CHEMICAL ANALYSIS %

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %			GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	R ₂ O ₃		
A-16 SRL-54.65 BRL-53.41	A-16/1	0.00-0.03	96.83	94.90	0.70	5.63	C	White fine to medium grained soft Limestone (gradual) (C)
	A-16/2	0.63-0.98	102.43	90.51	2.62	1.20	C	Pink, fine, granular Limestone
	A-16/3	0.98-1.37	62.45	94.90	1.66	0.70	C	White soft - medium gr. Limestone
	A-16/4	1.37-2.45	78.37	94.10	0.67	2.52	C	Light grey, medium gr. Limestone
	A-16/5	2.45-2.95	78.37	92.39	1.34	2.36	C	Dark grey, medium gr. Limestone
	A-16/6	2.85-4.85	77.46	93.90	0.84	3.13	C	Dark grey, medium gr. Limestone
	A-16/7	4.65-4.72	77.71	79.91	1.08	34.09	CEM	Reddish, fine gr. siliceous Limestone
	A-16/8	4.72-5.48 5.48-6.25	0.00 49.35	83.91	1.68	9.47	CAV	Reddish, hard, compact fine grained siliceous Limestone
				94.90	0.70	5.63	98.48	
				94.90	0.70	5.63	97.10	
				94.90	0.70	5.63	98.48	
				94.90	0.70	5.63	96.38	
				94.90	0.70	5.63	97.11	
				94.90	0.70	5.63	99.18	
				94.90	0.70	5.63	99.90	
				94.90	0.70	5.63	98.06	

B. H. NO. A-16 Closed AT 6.25 Mts

Note:

- C - CHEMICAL GRADE LIMESTONE
CaCO₃ + MgCO₃ % - 92 % & above
SiO₂ % - 4 % & below
- CEM - CEMENT GRADE LIMESTONE
CaCO₃ + MgCO₃ % - Less than 92 %
SiO₂ % - Above 5 %

- M - MARGINAL GRADE LIMESTONE
CaCO₃ + MgCO₃ % - 92 % & above
SiO₂ % - Strictly between 4 - 5 %
- CL - CLAY
- CAV - CAVITY



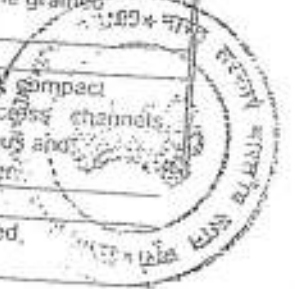


APPROVED



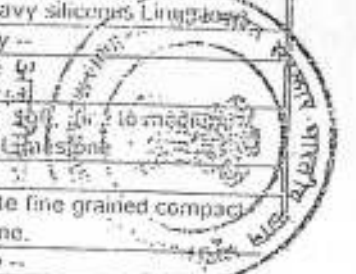
BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 20 SRL-65.80 BRL-58.78	A-20/1	0.00-0.68	92.64	94.30	0.66	2.01	0.88	98.69	C	Dull white, soft, medium grained Limestone.
	A-20/2	0.68-0.86	84.05	95.90	0.34	2.97	0.79	99.60	C	Dull white, soft, medium grained Limestone.
	A-20/3	0.86-1.37	84.05	95.90	0.34	2.47	0.92	99.63	C	Dull white, soft, fine to medium grained Limestone.
	A-20/4	1.37-1.72	98.48	95.90	0.67	2.18	0.86	99.61	C	-- Do --
	A-20/5	1.72-2.64	98.48	95.10	0.67	2.93	0.95	99.65	C	Buff, soft, fine grained Limestone.
	A-20/6	2.64-3.35	98.48	95.10	0.67	2.78	1.03	99.58	C	-- Do --
	A-20/7	3.35-3.73	98.48	92.30	0.34	5.44	1.60	99.68	CEM	Dull white, hard, compact Limestone with irregular cavities filled with siliceous and ferrogenous matter.
	A-20/8	3.73-4.12	0.00	--	--	--	--	--	CAV	-- Cavity --
	A-20/9	4.12-4.65	66.03	94.90	0.50	3.27	1.00	99.67	C	Buff, fine grained, hard Limestone.
	A-20/10	4.65-5.50	89.41	95.10	0.34	2.86	1.39	99.69	C	-- Do --
	A-20/11	5.50-5.65	0.00	--	--	--	--	--	CAV	-- Cavity --
	5.65-6.15	96.00	92.90	0.84	4.32	1.39	99.45	M	Buff, fine grained, hard Limestone.	
	6.15-6.32	0.00	--	--	--	--	--	CAV	-- Cavity --	
	6.32-7.02	61.42	88.71	1.01	6.46	3.29	99.47	CEM	Brown, hard, compact siliceous Limestone with irregular cavities coated with ferrogenous matter.	

B. H. NO. A-20 Closed AT 7.02 Mts



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-21 SRL-62.42 BRL-57.19	A-21/1	0.00-1.37	93.84	95.10	0.34	3.23	1.00	99.67	C	White, soft, fine to medium grained Limestone
	A-21/2	1.37-2.28	76.92	93.90	0.50	3.68	1.02	99.10	C	-- Do --
		2.28-2.66	0.00	---	---	---	---	---	---	C
	A-21/3	2.66-3.15	0.00	91.94	0.17	6.32	1.26	99.65	CEM	Dull white soft medium to coarse grained Limestone.
	A-21/4	3.15-4.00	84.61	90.50	0.67	7.25	1.13	99.55	CEM	Buff, hard fine grained Limestone with cavities.
	A-21/5	4.00-4.72	71.42	76.92	0.84	17.29	4.66	98.71	CEM	Dull, brown, hard compact fine, heavy siliceous Limestone.
4.72-5.23		0.00	---	---	---	---	---	---	CAV	-- Cavity --
B. H. NO. A-21 Closed AT 5.23 Mts										
A - 22 SRL-62.56 BRL-56.61	A-22/1	0.00-0.63	87.30	94.10	1.51	2.47	0.25	98.33	C	White, soft, fine to medium grained Limestone
	A-22/2	0.63-1.37	91.89	93.90	1.35	2.90	0.82	98.97	C	-- Do --
	A-22/3	1.37-2.13	89.47	92.30	1.01	4.80	1.12	99.13	M	Dull white fine grained compact Limestone.
		2.13-2.60	0.00	---	---	---	---	---	---	CAV
	A-22/4	2.60-4.35	93.33	89.10	1.68	7.29	1.31	99.38	CEM	Brown, hard, compact, heavy siliceous to coarse grained Limestone.
	A-22/5	4.35-4.65	100.00	90.50	1.35	6.39	1.46	99.70	CEM	Buff, medium grained, hard Compact Limestone.
		4.65-4.80	0.00	---	---	---	---	---	---	CEM
A-22/6	4.80-5.95	13.04	76.31	1.16	18.78	2.73	99.00	CEM	Conglomeratic Limestone. Brown, hard, compact, fine grained Limestone, igneous rock pieces found embedded in Calcareous matrix.	
B. H. NO. A-22 Closed AT 5.95 Mts										

APPROVED



१ २ ३ ४ ५ ६ ७ ८ ९ १० ११ १२ १३ १४ १५ १६ १७ १८ १९ २० २१ २२ २३ २४ २५ २६ २७ २८ २९ ३० ३१ ३२ ३३ ३४ ३५ ३६ ३७ ३८ ३९ ४० ४१ ४२ ४३ ४४ ४५ ४६ ४७ ४८ ४९ ५० ५१ ५२ ५३ ५४ ५५ ५६ ५७ ५८ ५९ ६० ६१ ६२ ६३ ६४ ६५ ६६ ६७ ६८ ६९ ७० ७१ ७२ ७३ ७४ ७५ ७६ ७७ ७८ ७९ ८० ८१ ८२ ८३ ८४ ८५ ८६ ८७ ८८ ८९ ९० ९१ ९२ ९३ ९४ ९५ ९६ ९७ ९८ ९९ १००



अनुमोदित
APPROVED



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₅	TOTAL		
				%	%	%	%	%		
A-23 SRL-62.20 BRL-57.48	A-23/1	0.00-0.38	90.90	92.10	0.50	5.94	1.13	99.67	CEM	Dull white, medium to coarse grained, soft Limestone.
	A-23/2	0.38-0.55	90.98	81.31	0.50	14.09	2.08	97.98	CEM	Dull, white medium to coarse grained soft Limestone.
	A-23/3	0.55-1.15	83.33	APPROVED	0.84	11.86	1.87	98.48	CEM	Buff, fine grained, hard compact Limestone with igneous rock fragments.
	A-23/4	1.15-1.75	100.00	91.90	0.50	5.18	1.97	99.55	CEM	Buff, fine grained Limestone with plenty of irregular small pieces of ferrous matter.
	A-23/5	1.75-2.14	94.28	89.71	1.51	6.49	1.78	99.49	CEM	Buff, fine grained hard compact Limestone with small pieces of ferrous matter.
	A-23/6	2.14-2.45	90.32	93.90	0.50	4.04	0.90	99.34	M	Buff, fine to medium grained compact Limestone.
	A-23/7	2.45-2.67 2.67-3.00	0.00 93.02	94.50	1.01	2.81	1.07	99.58	CAV C	-- Cavity -- Buff, fine to medium grained compact Limestone.
	A-23/8	3.00-3.25	92.59	88.10	0.84	8.31	1.80	99.05	CEM	Brown, fine to medium grained heavy Limestone.
	A-23/9	3.25-3.96	92.59	92.90	1.35	2.59	2.76	99.60	C	Brown, fine grained, hard compact Limestone with reddish ferrous matter in cavity.
	A-23/10	3.96-4.72	94.60	91.10	0.67	4.39	3.31	99.47	CEM	Brown, fine grained, siliceous Limestone.

B. H. NO. A-23 Closed AT 4.72 Mts.

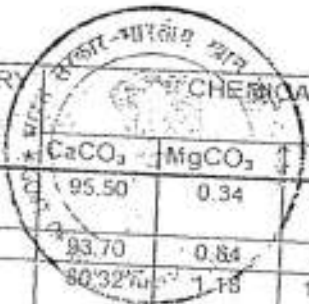


APPROVED

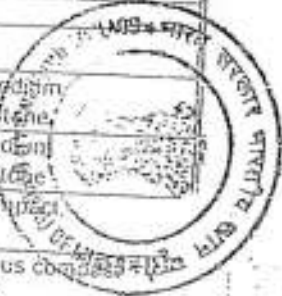
BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 24 SRL-66.12 BRL-59.87	A-24/1	0.00-0.63	92.05	96.89	0.34	2.08	0.78	99.50	C	White, fine to medium grained soft Limestone
	A-24/2	0.63-1.25	88.70	96.10	0.34	2.17	1.10	99.51	C	-- Do --
	A-24/3	1.25-1.93	98.58	96.10	0.50	2.39	0.74	99.73	C	-- Do --
	A-24/4	1.93-3.02	91.07	96.10	0.50	2.77	0.55	99.92	C	-- Do --
		3.02-3.05							CEM	Reddish hard compact siliceous Limestone.
		3.05-3.73							CL	Cavity filled with siliceous ferrogeneous clayey matter.
	A-24/5	3.73-4.22	90.69	91.10	0.84	5.79	1.24	99.15	CEM	Dull white, fine grained Limestone ferrogeneous matter (clay) and fractures.
	A-24/6	4.22-4.75	100.00	94.90	0.50	3.42	1.05	99.87	C	Buff, fine grained compact Limestone.
	A-24/7	4.75-5.05	79.10	94.90	0.34	3.38	1.33	99.05	C	Buff, fine grained compact Limestone.
	A-24/8	5.05-5.42	67.57	87.31	0.50	9.76	2.30	99.87	CEM	Reddish, ferrogeneous siliceous, soft Limestone with igneous rock fragments.
	5.42-5.87	0.00						CAV	-- Cavity --	
A-24/9	5.87-6.25	65.21	91.50	0.84	5.63	1.84	99.31	CEM	Brown, hard, compact fine grained heavy siliceous Limestone fractured surface coated with ferrogeneous and siliceous matter.	

B/H NO. A-24 Closed AT 6.25 Mts

BORE-HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 25 SRL-61.28 BRL-55.18	A-25/1	0.00-0.43	88.37	95.50	0.34	2.89	1.16	99.89	C	Brown, fine to medium grained hard compact Limestone.
	A-25/2	0.43-0.65	90.90	93.70	0.84	4.29	1.12	99.95	M	- Do - siliceous.
	A-25/3	0.65-1.67	90.91	80.32	1.18	14.90	3.30	99.73	CEM	0.65-1.12 Reddish, hard heavy, compact, fine grained siliceous Limestone with irregular Cavities.
	A-25/4	1.67-4.20	62.50	91.90	0.34	6.42	2.10	99.96	CEM	Hard, compact, heavy Limestone.
	A-25/5	4.20-4.47	66.67	85.51	0.67	9.87	3.85	99.90	CEM	Reddish, hard, compact heavy Limestone
	A-25/6	4.47-6.10	53.33	84.72	0.34	10.52	3.70	99.28	CEM	- Do -
B/H NO. A-25 CLOSED AT 6.10 Mts.										
A - 26 SRL-64.07 BRL-57.82	A-26/1	0.00-1.30	90.16	95.90	0.50	2.57	0.99	99.96	C	White, soft, medium grained Limestone.
	A-26/2	1.30-1.93	90.62	96.10	0.34	2.28	0.84	99.56	C	White, soft, medium grained, Limestone.
	A-26/3	1.93-2.84	100.00	95.30	0.50	3.05	1.03	99.93	C	White to Buff, compact fine Limestone.
	A-26/4	2.84-3.52	96.35	86.92	0.84	8.89	2.58	99.23	CEM	Brown, siliceous compact heavy Limestone.
	A-26/5	3.52-4.25	100.00	93.91	0.84	3.51	1.67	99.93	C	Brown, fine grained hard compact Limestone.
	A-26/6	4.25-4.79	13.16	86.72	0.84	9.27	2.37	99.20	CEM	Brown, hard compact heavy siliceous Limestone.
	A-26/7	4.79-6.25	95.96	89.52	0.50	7.23	2.35	99.20	CEM	Brown, fine grained compact heavy siliceous Limestone with irregular cavities coated with ferrogenous and siliceous matter.
B/H NO. A-26 CLOSED AT 6.25 Mts.										



अनुमोदित
APPROVED



MINISTRY OF GEOLOGICAL SURVEY OF INDIA

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-27 SRL-63.98 BRL-56.23	A-27/1	0.00-0.63	87.30	98.93	0.34	2.67	0.93	99.84	C	White, fine grained soft Limestone.
	A-27/2	0.63-1.62	84.85	95.90	0.50	2.57	0.94	99.91	C	White fine grained compact, hard Limestone.
	A-27/3	1.62-2.38	63.64	96.10	0.50	2.09	0.78	99.31	C	White fine grained soft Limestone.
	A-27/4	2.38-2.87	95.00	91.31	0.67	6.09	1.83	99.90	CEM	Brown, medium to coarse grained, hard, compact Limestone.
	A-27/5	2.87-3.18	100.00	95.70	0.34	2.64	1.14	99.82	C	Brown, fine grained compact Limestone.
	A-27/6	3.18-3.61	76.75	95.30	0.34	2.54	1.30	99.88	C	Buff, fine grained hard compact Limestone.
	A-27/7	3.61-3.91	66.65	94.30	0.84	3.15	1.52	99.61	C	Buff, fine to medium grained Limestone.
	A-27/8	3.91-4.37	92.68	91.90	1.35	3.26	2.85	99.38	C	Dark brown, fine grained compact Limestone with cavities coated with ferrogenous matter between 3.96 - 4.37 mts.
	A-27/9	4.37-4.92	91.48	90.10	1.35	4.90	3.43	99.98	CEM	Dark, brown, compact siliceous ferrogenous Limestone.
	A-27/10	4.92-5.30	87.90	87.91	1.35	6.49	3.74	99.49	CEM	Brown, fine grained hard, compact, siliceous, ferrogenous Limestone.
	A-27/11	5.30-6.40	94.28	90.86	0.84	4.76	3.21	99.67	CEM	Brown, fine grained, hard, compact Limestone.
	A-27/12	6.40-7.75	66.00	78.92	0.50	5.40	3.06	97.88	CEM	-do- with igneous rock pieces embedded in calcareous matrix.

B/H NO. A-27 CLOSED AT 7.75 Mts.

APPROVED



अनुमोदित
APPROVED



APPROVED



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	DESCRIPTION
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-28	A-28/1	0.00-0.63	92.85	96.10	0.84	2.08	0.72	99.74	C	White, fine to medium grained limestone.
SRL-65.60	A-28/2	0.63-1.32	100.00	95.30	0.57	2.02	0.82	99.81	C	Do -- compact hard limestone.
BRL-58.20	A-28/3	1.32-2.13	83.25	95.80	1.01	1.96	0.89	99.76	C	Do --
	A-28/4	2.13-2.82	0.00						CAV	Cavity --
	A-28/5	2.82-3.28	70.96	95.70	1.20	10.05	1.85	99.62	CEM	Dull white, siliceous limestone.
	A-28/5	3.28-3.80	87.95	95.70	0.15	2.55	1.18	99.93	C	Buff, fine grained hard, compact limestone.
	A-28/5	3.80-4.65	93.33	90.31	0.84	6.79	1.84	99.76	CEM	Dull white, compact, hard & siliceous limestone.
	A-28/7	4.65-6.10	89.18	83.12	0.84	12.18	3.37	99.41	CEM	Chocolate colour, buff, compact heavy limestone.
	A-28/8	6.10-6.40	50.00	80.72	1.01	14.14	3.52	99.39	CEM	Do --
	A-28/8	6.40-7.40	0.00						CAV	Cavity --
B/H NO. A-28 CLOSED AT 7.40 Mts.										
A-35	A-35/1	0.00-0.55	72.73	95.70	0.50	2.67	0.99	99.86	C	Dull white, fine to medium grained hard limestone.
SRL-66.04	A-35/2	0.55-1.40	100.00	92.30	0.84	4.61	1.69	99.64	M	Do -- with cavities at intervals.
BRL-59.18	A-35/3	1.40-1.60	83.33	94.30	0.84	3.91	1.42	99.75	C	Do --
	A-35/4	1.60-2.47	86.00	93.90	1.18	3.07	1.40	99.55	C	Buff, fine grained compact limestone.
	A-35/5	2.47-2.67	85.00	88.71	0.67	7.25	3.24	99.87	CEM	Buff, fine grained, heavy siliceous limestone.
	A-35/6	2.67-4.10	88.33	89.51	1.16	7.26	1.80	99.75	CEM	Brown, siliceous, compact heavy limestone.
	A-35/7	4.10-4.82	45.08	85.91	0.67	9.62	2.93	99.13	CEM	Reddish, medium grained siliceous ferrogeneous.
	A-35/8	4.82-6.58	34.55	84.91	1.01	9.97	3.86	99.75	CEM	Do --
	A-35/9	6.58-6.86	78.60	88.71	1.18	6.64	3.25	99.78	CEM	Do --
B/H NO. A-35 CLOSED AT 6.86 MTS.										



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS - %					GRADE	Description
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-36 SRL-64.33 BRL-60.23	A-36/1	0.00-1.15	90.56	94.91	0.84	1.15	2.22	99.41	C	White, fine grained Limestone.
	A-36/2	1.15-1.67	96.15	94.52	0.84	2.32	2.50	99.68	C	-- Do --
		1.67-2.43	0.00						CAV	-- Cavity --
	A-36/3	2.43-3.05	45.16	91.91	0.54	5.68	1.00	99.09	CEM	Brown, fine grained, compact siliceous Limestone.
	A-36/4	3.05-3.68	80.00	95.30	0.34	2.92	1.24	99.80	C	Brown, hard, compact, fine to medium, grained Limestone.
	A-36/5	3.68-4.87	100.00	83.12	1.18	11.82	3.58	99.70	CEM	Reddish, hard, compact, siliceous, ferrogenous Limestone.
	A-36/6	4.87-6.10	63.33	66.53	0.84	26.12	3.57	99.06	CEM	-- Do --
B/H No. A-36 CLOSED AT 6.10 MTS.										
A-43 SRL-68.62 BRL-65.04	A-43/1	0.00-0.35	80.00	96.30	0.50	2.08	0.68	99.56	C	Buff, fine to medium grained Limestone.
	A-43/2	0.35-0.84	81.63	95.30	0.50	2.71	0.98	99.79	C	-- Do --
	A-43/3	0.84-1.30	71.74	95.30	0.50	2.20	1.24	99.24	C	-- Do --
	A-43/4	1.30-2.20	70.00	95.30	0.50	2.84	1.24	99.88	C	Brown, medium to coarse grained, hard, compact Limestone.
	A-43/5	2.20-3.58	70.00	94.30	0.50	2.90	1.64	99.34	C	-- Do --
B/H No. A-43 CLOSED AT 3.58 MTS.										
A-44 SRL-68.14 BRL-64.34	A-44/1	0.00-0.38	89.58	96.29	0.50	2.30	0.71	99.80	C	White, fine to medium, grained, Limestone.
	A-44/2	0.38-1.85	58.44	96.29	0.34	2.24	0.76	99.63	C	-- Do --
	A-44/3	1.85-2.05	75.00	91.90	1.85	3.76	1.27	98.78	C	-- Do --
	A-44/4	2.05-3.80	63.95	81.51	1.66	1.90	3.52	98.61	CEM	Brown to reddish, siliceous, ferrogenous hard, compact Limestone with cavities.
B/H NO. A-44 CLOSED AT 3.80 MTS										

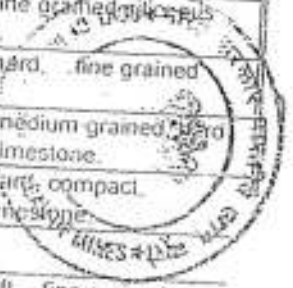
APPROVED

APPROVED

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-50 SRL-73.41 BRL-70.23	A-50/1	0.00-0.50	82.50	95.30	0.50	2.86	1.12	99.78	C	Buff, fine to medium grained Limestone.
	A-50/2	0.50-1.52	66.67	84.82	0.84	7.15	2.20	99.11	CEM	Brown to buff, hard, compact, siliceous ferrogenous Limestone.
	A-50/3	1.52-3.18	42.66	88.92	1.10	7.04	2.68	99.65	CEM	Chocolate to reddish colour very hard, compact, siliceous Limestone.
B/H NO. A-50 CLOSED AT 3.18 MTS.										
A-51 SRL-70.58 BRL-67.35	A-51/1	0.00-0.20	90.91	90.51	0.34	7.72	1.12	99.69	CEM	Buff, soft, fine grained Limestone.
	A-51/2	0.20-0.55	100.00	77.00	2.80	6.16	2.60	99.56	CEM	Reddish, hard, fine grained Limestone.
	A-51/3	0.55-1.30	90.91	94.13	0.84	3.08	1.66	99.89	C	Brown, medium grained, hard compact Limestone.
	A-51/4	1.30-3.23	29.19	90.72	0.50	6.29	2.40	99.91	CEM	Reddish, hard, compact, siliceous Limestone.
B/H NO. A-51 CLOSED AT 3.23 MTS.										
A-52 SRL-69.98 BRL-67.15	A-52/1	0.00-0.30	68.75	81.91	0.67	4.40	2.94	99.92	CEM	Brown, soft, fine grained siliceous Limestone.
	A-52/2	0.30-0.73	100.00	87.91	0.67	8.60	2.67	99.85	CEM	Brown, hard, compact, siliceous Limestone.
	A-52/3	0.73-1.30	100.00	84.61	0.17	2.41	2.70	99.89	CEM	-- Do --
	A-52/4	1.30-1.98	89.70	89.41	0.00	8.29	2.28	99.93	CEM	Chocolate colour, hard, compact siliceous, Limestone.
	A-52/5	1.98-2.83	64.70	86.40	4.31	6.07	2.62	99.40	CEM	Brown, hard, compact siliceous, Limestone.
B/H NO. A-52 CLOSED AT 2.83 MTS.										



APPROVED



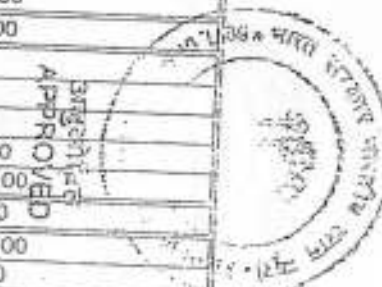
GREEN PENCIL ONLY TO BE USED FOR CORRECTIONS
 (DO NOT WRITE IN THESE SPACES)



TATA CHEMICALS LIMITED
 LIMESTONE MINING LEASE -S.NO -207/PART - ANALI(16.21 HECTS)
 STATEMENT SHOWING GEOLOGICAL RESERVE OF DIFFERENT CATEGORY LIMESTONE

ANNEXURE

SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE APPROVED (in m)	IN SITU VOLUME (in m ³)	SPECIFIC GRAVITY	INSITU RESERVE OF LIMESTONE		
					CHEMICAL GRADE (in MT)	MARGINAL GRADE (in MT)	CEMENT GRADE (in MT)
EE'	258.75 (C)	93.00	24063.75	2.06	49,600	---	---
	123.75 (CEM)	93.00	11508.75	2.06	---	---	---
	9.00 (CAV)	15.00	135.00	2.06	---	---	23,700
							(-) 300
FF'	312.00 (C)	100.00	31200.00	2.06	64,300	---	23,400
	8.80 (CEM)	22.00	193.60	2.06	(-) 400	---	---
	4.40 (CAV)	11.00	48.40	2.06	(-) 100	---	400
	112.50 (CEM)	100.00	11250.00	2.06	---	---	---
	16.00 (M)	32.00	512.00	2.06	---	---	---
						1,100	23,200
GG'	1510.65 (CEM)	70.00	1,05,745.50	2.06	63,800	1,100	(-) 1,100
	375.00 (CEM)	30.00	11250.00	2.06	---	---	22,500
	14.40 (C)	32.00	460.80	2.06	---	---	2,17,800
	31.80 (C)	60.00	1908.00	2.06	900	---	23,200
	194.00 (C)	70.00	13580.00	2.06	3,900	---	(-) 900
	67.50 (C)	30.00	2025.00	2.06	28,000	---	(-) 3,900
	7.50 (CEM)	25.00	187.50	2.06	4,200	---	(-)28,000
	12.95 (M)	37.00	479.15	2.06	(-)400	---	(-) 4,200
	11.20 (M)	28.00	313.60	2.06	---	---	400
	6.00(CAV)	10.00	60.00	2.06	---	1,000	(-) 1,000
	3.00(CAV)	10.00	30.00	2.06	---	600	(-) 600
						---	(-) 100
						---	(-) 100
						36,600	1,600



APPROVED

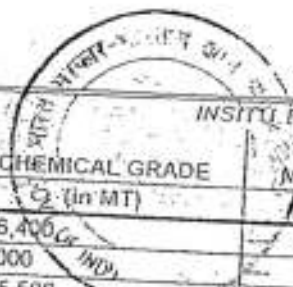


Annexure No 16.

SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE (in mt)	INSITU VOLUME (in m ³)	SPECIFIC GRAVITY	INSITU RESERVE OF LIMESTONE		
					CHEMICAL GRADE (in MT)	MARGINAL GRADE (in MT)	CEMENT GRADE (in MT)
HH'	710.45 (C)	100.00	71045.00	2.06	1,46,400	---	---
	236.20 (C)	39.00	9211.00	2.06	19,000	---	---
	220.80 (CEM)	100.00	22080.00	2.06	(-)45,500	---	---
	36.00 (CEM)	39.00	1404.00	2.06	(-) 2,900	---	45,500
	937.30 (CEM)	39.00	36554.70	2.06	---	---	2,900
	1931.60 (CEM)	100.00	193160.00	2.06	---	---	75,300
	3.00 (M)	12.00	36.00	2.06	---	---	397,900
	13.20 (CAV)	22.00	290.40	2.06	---	100	(-) 100
							(-) 600
II'	550.00 (C)	100.00	55000.00	2.06	1,17,000	100	5,20,900
	33.06 (M)	58.00	1917.48	2.06	(-)4,000	---	---
	131.04 (CEM)	100.00	13104.00	2.06	(-)27,000	4,000	---
	8.67 (CAV)	26.00	225.42	2.06	---	---	27,000
	839.16 (CEM)	100.00	83916.00	2.06	---	---	(-) 99,000
JJ'	597.64 (C)	100.00	59764.00	2.06	82,300	4,000	1,70,900
	423.70 (CEM)	100.00	42370.00	2.06	1,23,100	---	1,90,000
KK'	1027.18 (CEM)	72.00	73956.96	2.06	1,23,100	---	87,300
	225.06 (CEM)	45.00	10127.70	2.06	---	---	87,300
	12.60 (C)	42.00	529.20	2.06	1,100	---	1,52,400
	38.40 (C)	62.00	2380.80	2.06	4,900	---	20,900
							(-) 1,100
					6,000	---	(-) 4,900
					4,78,400	6,800	1,67,300
							12,23,400

Note :

- C = Chemical grade limestone
- M = Marginal grade limestone
- CEM = Cement grade limestone
- CAV = Cavity



APPROVED

APPROVED



KARNATAKA DEPARTMENT OF MINES AND GEOLOGY
 BANGALORE
 10/11/2011



APPROVED



ANNEXURE

TATA CHEMICALS LIMITED

LIMESTONE MINING LEASE -S.NO -207/PART - ANALI(16.21 HECTS)
STATEMENT SHOWING GEOLOGICAL RESERVES OF DIFFERENT CATEGORY(GRADE) LIME STONE IN MINING BLOCK I AND II

BLOCK	SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE (in mt)	INSITU VOLUME (in m ³)	SPECIFIC GRAVITY	RESERVES OF LIMESTONE			REMARKS	
						CHEMICAL GRADE (C) (in MT)	MARGINAL GRADE (M) (in-MT)	CEMENT GRADE (CEM) (in MT)		
I	EE'	258.75 (C)	93	24,063.75	2.06	49,600	---	---	Reserves figures have been rounded, upto nearest hundred.	
		123.75 (CEM)	93	11,508.75	2.06	---	---	---		
	FF'		9.00 (CAV)	15	135	2.06	---	---	23,700	Cavity-
			312.00 (C)	100	31,200.00	2.06	64,300	---	(-) 300	
			8.80 (CEM)	22	193.6	2.06	(-) 400	---	---	
			4.40 (CAV)	11	48.4	2.06	(-) 100	---	400	
			112.50 (CEM)	100	11,250.00	2.06	---	---	---	Cavity in chemical grade.
			16.00 (M)	32	512	2.06	---	---	23,200	
					Total=	1,13,400 MT	1,100 MT	(-) 1,100		
II	HH'	567.14 (C)	100	56,714.00	2.06	1,16,800	---	---	This thin band of cement grade limestone has been considered for blending with chemical grade limestone.	
		180.42 (CEM)	100	18,042.00	2.06	---	---	37,200		
		1025.24 (CEM)	100	1,02,524	2.06	---	---	2,07,100		
		550.00 (C)	100	55,000.00	2.06	1,13,300	---	---		
	II'	33.06 (M)	58	1917.48	2.06	(-) 4,000	4,000	---	Marginal grade limestone considered for blending.	

BLOCK	SECTION ALONG	GROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE (in mt)	INSITU VOLUME (in m ³)	SPECIFIC GRAVITY	RESERVES OF LIMESTONE			REMARKS
						CHEMICAL GRADE (C) (in MT)	MARGINAL GRADE (M) (in MT)	CEMENT GRADE (CEM) (in MT)	
		131.04 (CEM)	100	13,104.00	2.06	(-)27,000	---	27,000	Cement grade limestone considered for blending.
		8.67 (CAV)	26	225.42	2.06	---	---	(-) 500	
		839.16 (CEM)	100	83,916.00	2.06	---	---	1,72,900	
	JJ'	597.64 (C)	100	59,764.00	2.06	1,23,100	---	---	Cement grade limestone at the bottom of chemical grade limestone: APPROVED
		423.70 (CEM)	100	42,370.00	2.06	---	---	87,300	
Total						3,22,200	4,000	5,31,000	
Grand Total of block I & II.						4,35,600	5,100	5,76,900	

Special Note:

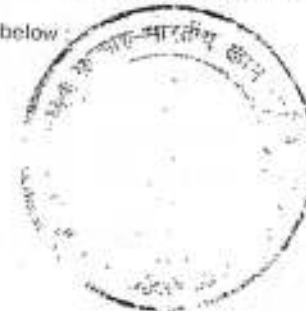
(i) 4000 MT Marginal grade and 64,100 MT cement grade limestone which occur with in the chemical grade limestone bands have been considered blendable as the average quality (taking weighted average) worked out to be chemical grade limestone.

(ii) Breakup of blendable chemical grade Limestone reserve is given below

(a) Block-I	1,13,400 + 400 = 1,13,800 MT ...I
(b) Block-II	3,22,200 MT (C) 4,000 MT (M) 37,200 MT (CEM) 26,500 MT (CEM)
Total->	3,89,900 MT ... 3,89,900 MT ...II
Gross Total -->	5,03,700 MT ...I+II

(iii)

C	=Chemical grade limestone
M	=Marginal grade limestone
CEM	= Cement grade limestone
CAV	= Cavity



अनुमोदित
APPROVED

अनुमोदित
APPROVED



TATA CHEMICALS LIMITED

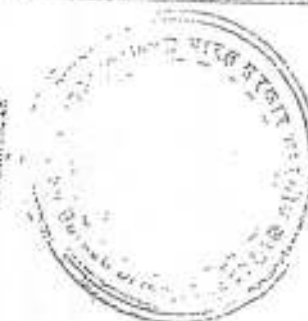
LIMESTONE MINING LEASE -S.NO -207/PART - ANIALI(16.21 HECTS)
STATEMENT SHOWING MINEABLE RESERVES OF CHEMICAL GRADE LIMESTONE IN MINING BLOCK I AND II

BLOCK	GEOLOGICAL (INSITU) RESERVES			TOTAL CHEMICAL GRADE LIMESTONE (BLENDED) RESERVES (in MT)	RESERVES TO BE LEFT FOR BENCHING AND BARRIORS (in MT)	DEDUCTION FOR GEOLOGICAL UNCERTAIN- ITIES AND MINING LOSSES @ 5% (in MT)	TOTAL DEDUCTION (in MT)	NET MINEABLE RESERVES (in MT)
	CHEMICAL GRADE LIMESTONE (in MT) (A)	MARGINAL GRADE LIMESTONE (TO BE BLENDED WITH CHEMICAL GRADE LIMESTONE) (in MT) (B)	CEMENT GRADE LIMESTONE (TO BE BLENDED WITH CHEMICAL GRADE LIMESTONE) (in MT) (C)					
	(A)	(B)	(C)	A+B+C= (D)	(E)	(F)	E+F= (G)	D-G= (H)
BLOCK I	1,13,400	-	400	1,13,800	20,200	4,700	24,900	88,900
BLOCK II	3,22,200	4,000	63,700	3,89,900	16,200	18,700	34,900	3,55,000
			TOTAL →	5,03,700	36,400	23,400	59,800	4,43,900



अनुमोदित
APPROVED

अनुमोदित
APPROVED





बैंक ऑफ बड़ौदा

Bank of Baroda

Annexure No.19

MITHAP/ ADV / 2013-14/368

Dated 28-01-2014

The Regional Controller of Mines
Indian Bureau of Mines
Udaipur Region - Udaipur

Dear Sir


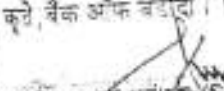
Sub : Issuance of of Bank Guarantee
A/c - M/s Tata Chemicals Ltd.

We enclose herewith the bank guarantee issued by us in your favour on request of
M/s Tata Chemicals Ltd. The details of bank guarantee is as under :

Bank Guarantee No. 0370IGFIN000214 dtd. 28-01-2014 for Rs.3,50,500/- valid upto
31-03-2019 & claim period upto 31-03-2019

Kindly acknowledge.

Yours faithfully

 **बैंक ऑफ बड़ौदा / For Bank Of Baroda**

(Vijay Kumar) Sr. Br. Manager
મિથાપુર બ્રાંચ, ડી. જામનગર / Mithapur Br., Di. Jamnagar
BRANCH MANAGER

Encl: As above



गुजरात गुजरात GUJARAT

AC 424105

अ. सं. १०५-६/२०१९
 प. सं. ११०१
 दि. २७/३/२०१९
 ५००००/-
 ५०,०००/-
 २७/३/२०१९
 ५०,०००/-

प्र. सं. ११०१
 दि. २७/३/२०१९
 ५०,०००/-

प्र. सं. ११०१
 दि. २७/३/२०१९
 ५०,०००/-

To:
 The Regional Controller of Mines
 Indian Bureau of Mines
 Udaipur Region - Udaipur

Dear Sir,

Guarantee No. & Date : 0370IGFIN000214 dated 28-01-2014
 Amount of Guarantee : Rs. 3, 50,500/- (Three Lakh Fifty Thousand Five Hundred Only)
 Guarantee Period from : 28.01.2014 to 31.03.2019
 Last date for lodgment of claim : 31.03.2019



This Deed of guarantee executed on 28th day of January, 2014 2014 by Bank of Baroda having its Head office at Mandvi, Baroda and its branch at Mithapur, Taluka- Dwarka District- Dev Bhoomi Dwarka - 361345 (hereinafter referred to as the bank) in favour of the Regional Controller of Mines, Indian Bureau of Mines Udaipur Region - Udaipur (hereinafter referred to as the Beneficiary) for an amount not exceeding Rs. 3,50,500/- (Three lakh fifty thousand five hundred Only) at the request of Tata Chemicals Limited having its registered office at Bombay House, 24 Homy Modi Street, Fort, Mumbai 400001, (hereinafter referred to as the Company).

This guarantee is issued subject to the condition that the liability of the bank under this guarantee is limited to maximum of Rs. 3, 50,500/- (Three Lakh Fifty Thousand Five Hundred Only) and the guarantee shall remain in full force up to 31 March 2019 (date of expiry) and cannot be revoked on or before 31 March 2019 (last date of claim) by the Bank or Applicant.

SUBJECT TO AS AFORESAID

BANK GUARANTEE AND CO-ACCEPTANCE BOND

1. Agreement on production of a Bank guarantee for - Rs. 3, 50,500/- (Three Lakh Fifty Thousand Five Hundred Only) under the rule 23 F of MCDR, 1988.
2. We, Bank of Baroda, at the request of Tata Chemicals Limited (lessee) do hereby undertake to pay to the Regional Controller of Mines, Indian Bureau of Mines, Udaipur Region - Udaipur or any other officer authority nominated by the Controller General, Indian Bureau of Mines an amount not exceeding Rs. 3, 50,500/- (Three Lakh Fifty Thousand Five Hundred Only) against any loss or damage caused to or suffered or would be caused to or suffered by the Government or towards non compliance of provisions of Rule 23A, B, 23E of MCDR, 1988 i.e. Mine closure plan / progressive mine closure plan approved in respect of the mining lease for Aniyari Limestone (ore / ores) over an area of 16.21 Hect. Granted by State Government to M/S Tata Chemicals Ltd. At & Post Mithapur, Taluka Okhamandal, distt Dev Bhumi Dwarka (then Jamnagar) (Guj.) (Lessee) situated in Village Aniyari, Taluka -Ranavav District- Porbandar Gujarat State by reason of any breach of the said lessee of any of the terms or conditions contained in the Mine Closure plan / progressive mine closure plan.
3. We Bank of Baroda do hereby undertake to pay the amount due and payable under this guarantee without any demure, to the authority merely on a demand from the Regional Controller of Mines, Indian Bureau of Mines Udaipur Region - Udaipur or any other authorized by the Controller General, Indian Bureau of Mines stating that the amount claimed is due by way of loss or loss of damage caused to or would be caused to or suffered by the government by reason of breach by the said lessee or any of the terms or conditions contained in the mining plan / mining scheme or by reason of lessee's failure to perform the said mine closure plan / progressive mine closure plan. Any such demand made on the bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. 3,50,500/- (Three lakh fifty thousand five hundred only)
4. We Bank of Baroda undertake to pay to the authority on a demand from the Regional Controller of Mines, Indian Bureau of Mines, and Udaipur Region - Udaipur or any other officer authorized by the Controller General, Indian Bureau of Mines or Govt. of India any officer



authorized by the Controller General, Indian Bureau of Mines or Govt. of India any money so demanded notwithstanding any dispute or disputes raised by the lessee in any suit or proceedings pending before any court or tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be valid discharge of our liability for payment there under and lessee shall have no claim against us for making such payment.

5. We, **Bank of Baroda** , further agree that the guarantee herein contained shall remain in full force and effect during the period upto the end of the Mining Plan / Scheme of Mining period of five years that would be taken for performance of the said agreement and that shall continue to be enforceable till all the dues of the Govt. under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged till **Regional Controller of Mines, Indian Bureau of Mines, Udaipur Region - Udaipur** Or any other officer authorized by the Controller General, Indian Bureau of Mines certifies that the terms and conditions of the said progressive mine closure plan / final mine closure plan have been fully and properly carried out by the said lessee and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before **31 March, 2019**. We shall be discharged from all liability under this guarantee thereafter.
6. We **Bank of Baroda** further agree that **Regional Controller of Mines, Indian Bureau of Mines, Udaipur Region - Udaipur** or any other officer authorized by the Controller General, Indian Bureau of Mines shall have fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said lessee from time to time or to postpone for any time or from time to time any powers exercisable by **Regional Controller of Mines, Udaipur Region - Udaipur** to the said lessee or any manner or thing whatsoever which under the law relating to sureties, would but this provision have effect of so relieving us.
7. This guarantee will not be discharged due to change in constitution of the bank or lessee.
8. We, **Bank of Baroda** , lastly undertake not to revoke this guarantee during its currency except with the previous consent of the **Regional Controller of Mines, Indian Bureau of Mines, Udaipur Region - Udaipur** in writing.
9. Notwithstanding anything contained herein:
 - (a) Our liability under this Bank Guarantee shall not exceed **Rs. 3, 50,500/- (Three Lakh Fifty Thousand Five Hundred Only)** The Bank Guarantee shall be valid up to **31 March 2019**.
 - (b) The period of bank guarantee submitted is valid for the period of the proposals given in the mining plan / scheme of mining / PMCP etc. We are liable to pay the guarantee amount or any part thereof under this Bank guarantee and only if served upon us a written claim or demand on or before **31.03.2019**.
10. If the bank guarantee is to be en-cashed through the court, in that case the (city where Regional office, IBM is located) court will have jurisdiction.

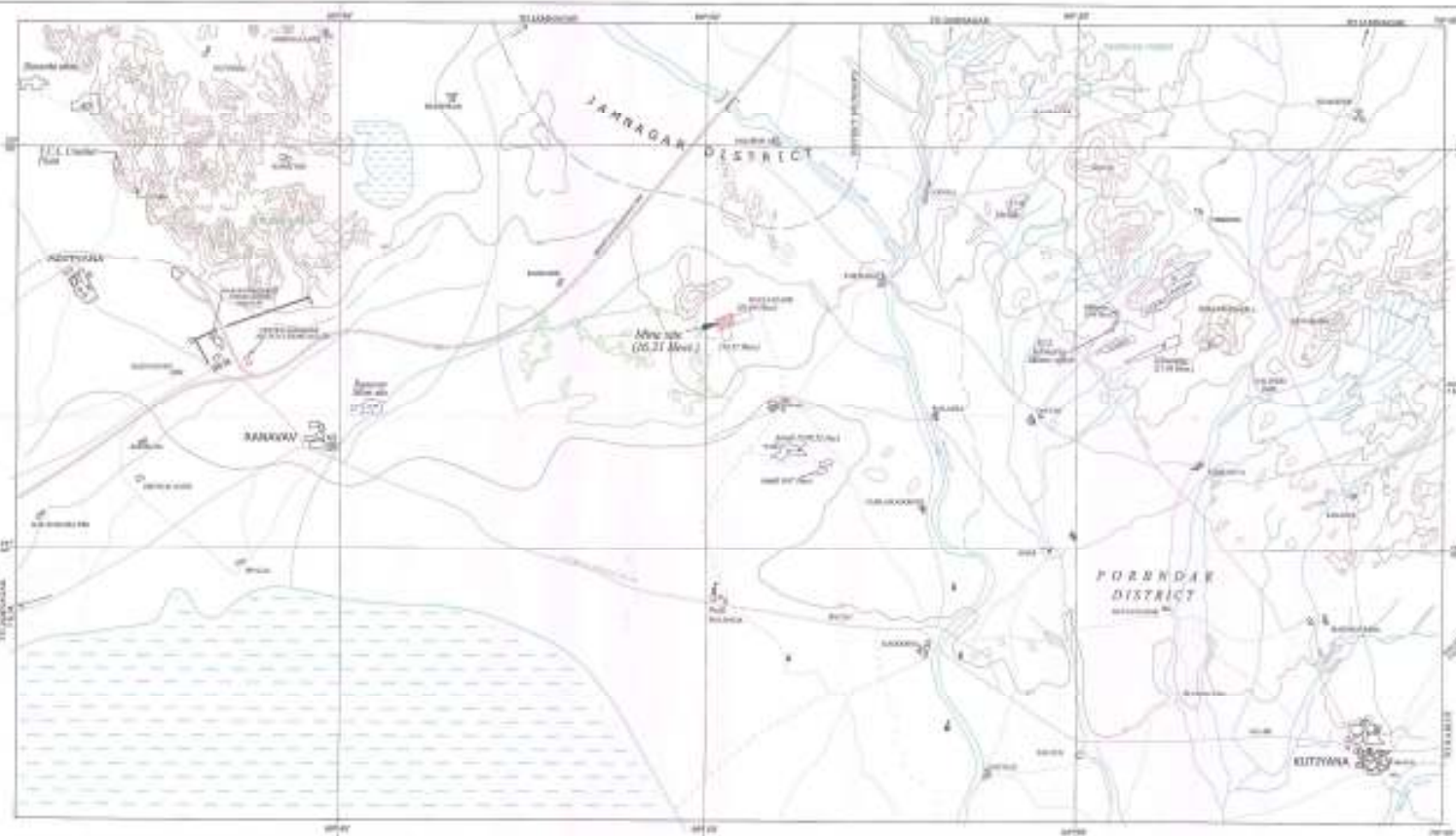


11. In witness whereof, the bank through its authorized officer has set its hand and stamp on this 28th Day of January 2014 at Mithapur.

Guarantee No : 0370IGFIN000214 Dated 28-01-2014

कृते, बैंक ऑफ बड़ौदा / For Bank Of Baroda
वरिष्ठ शाखा प्रबंधक / Sr. Branch Manager
मीठानुशाखा डि. जामनगर / Mithapur Br., Di. Jamnagar
(Vijay Kumar)
Sr. Branch Manager





KEY

1	STATE BOUNDARY
2	DISTRICT BOUNDARY
3	RAILWAY LINE
4	ROAD
5	RAILWAY STATION
6	RAILWAY CROSSING
7	RAILWAY BRANCH
8	RAILWAY JUNCTION
9	RAILWAY BRIDGE
10	RAILWAY TUNNEL
11	RAILWAY SIGNAL
12	RAILWAY PLATFORM
13	RAILWAY TRACK
14	RAILWAY OVERBRIDGE
15	RAILWAY UNDERPASS
16	RAILWAY GATE
17	RAILWAY WALL
18	RAILWAY FENCE
19	RAILWAY LIGHT
20	RAILWAY SIGN
21	RAILWAY POST
22	RAILWAY TELEPHONE
23	RAILWAY WATER TOWER
24	RAILWAY SIGNAL BOX
25	RAILWAY SIGNAL POST
26	RAILWAY SIGNAL POST WITH LIGHT
27	RAILWAY SIGNAL POST WITH LIGHT AND SIGN
28	RAILWAY SIGNAL POST WITH LIGHT AND SIGN AND TOWER
29	RAILWAY SIGNAL POST WITH LIGHT AND SIGN AND TOWER AND WALL
30	RAILWAY SIGNAL POST WITH LIGHT AND SIGN AND TOWER AND WALL AND FENCE

PERMANENT TO WOLVADA = 24 K.M.
WOLVADA TO MINE SITE = 07 K.M.



LOCATION PLAN

ANULLI LINGSTONE MINE
MUNICIPALITY - ANULLI
JAMNAGAR DISTRICT - GUJARAT

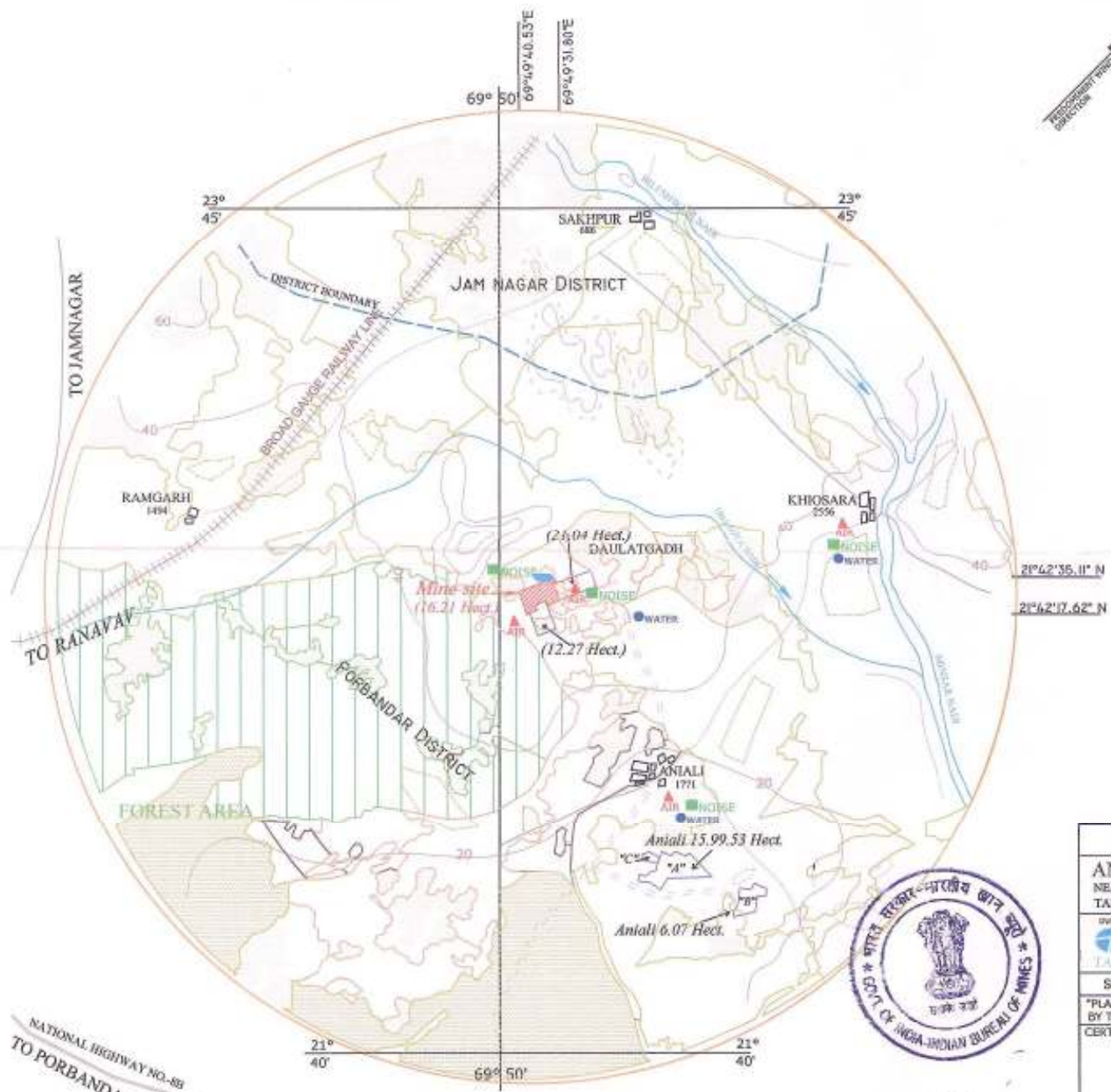
M/S TATA CHEMICALS LIMITED
HEAVY METALS DIVISION - CHEMICALS DIVISION

SCALE: 1:50,000
DATE: 15/01/2018

THIS LOCATION PLAN IS PREPARED BY THE PROJECT ENGINEER IN CHARGE AT THE MINE UNDER THE SUPERVISION OF THE PROJECT SUPERVISOR IN CHARGE AND APPROVED BY THE PROJECT SUPERVISOR IN CHARGE.

BY: *[Signature]*
PROJECT SUPERVISOR IN CHARGE

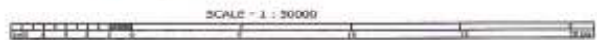
Annexure XI Plate No. 2



INDEX	
	M. I. AREA
	5 K.M. BUFFER ZONE
	TAR ROAD
	CONTOUR
	FOREST AREA
	RIVER / NALLAH
	RAILWAY LINE
	HOUSE
	TEMPLE
	OTHER MINING LEASE AREA
	AGRICULTURE LAND
	GOVT. WASTE LAND
	DISTRICT BOUNDARY
	AIR MONITORING STN.
	NOISE MONITORING STN.
	WATER MONITORING STN.

PLATE NO. - 2

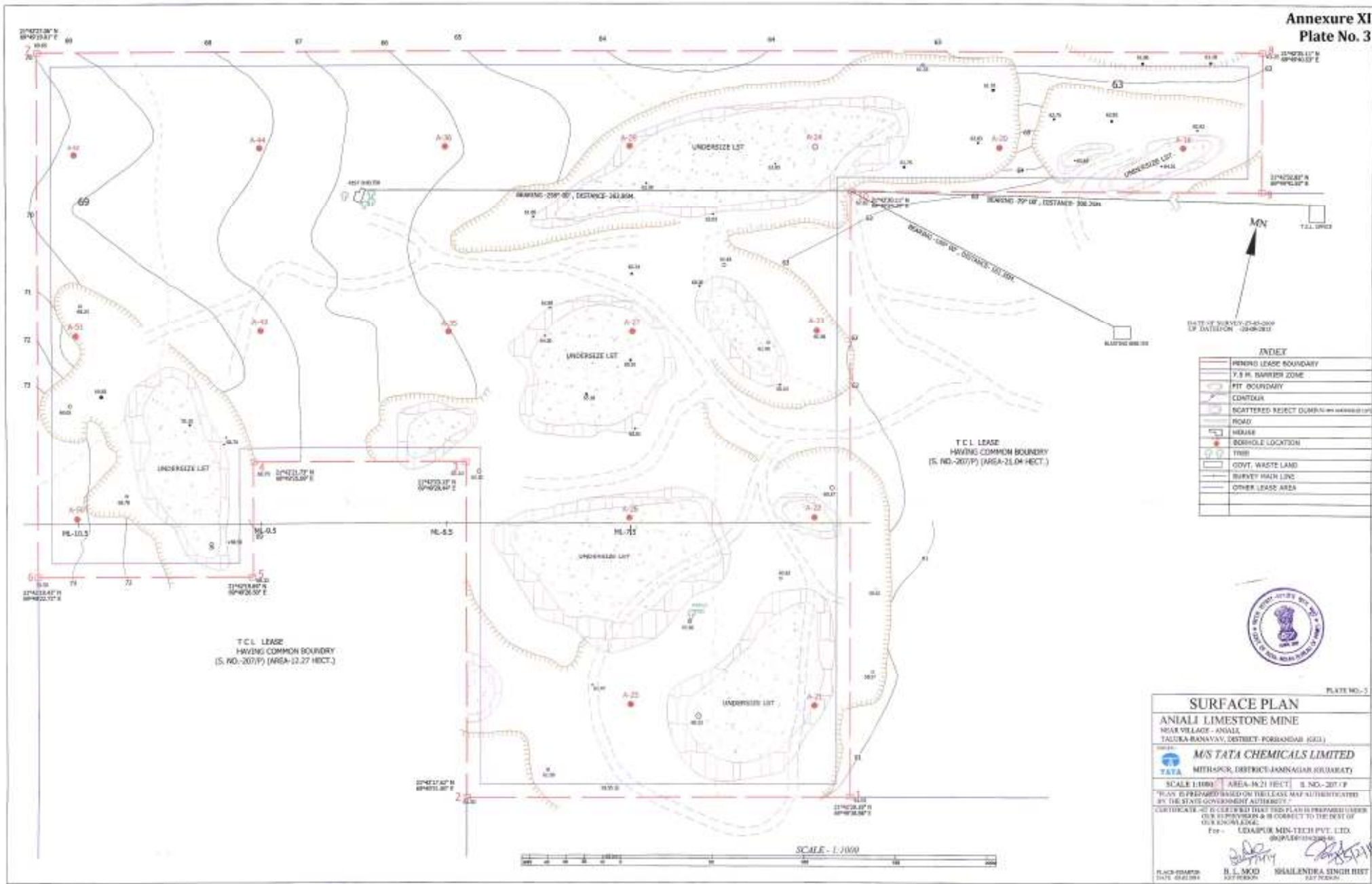
KEY PLAN		
ANIALI LIMESTONE MINE		
NEAR VILLAGE - ANIALI, TALUKA-RANAVAV, DISTRICT-FORBANDAR (GUJ.)		
	M/S TATA CHEMICALS LIMITED MITHAPUR, DISTRICT-JAMNAGAR	
SCALE 1:50000	AREA-16.21 HECT	SURVEY NO.-207/P
"PLAN" IS PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY THE STATE GOVERNMENT AUTHORITY."		
CERTIFICATE : IT IS CERTIFIED THAT THIS PLAN IS PREPARED UNDER OUR SUPERVISION & IS CORRECT TO THE BEST OF OUR KNOWLEDGE.		
For - UDAIPUR MIN-TECH PVT. LTD. (BOP/UDP/134000-8)		
PLACE-UDAIPUR DATE -05.02.2014	B. L. MOD KEY PERSON	SHAIKENDRA SINGH BIST KEY PERSON



NATIONAL HIGHWAY NO.-89
TO PORBANDAR

21° 40' 69° 50' 21° 40'

21° 42' 35.11" N
21° 42' 07.62" N



INDEX

[Symbol]	MINE LEASE BOUNDARY
[Symbol]	7.5 M. NARROW ZONE
[Symbol]	PIT BOUNDARY
[Symbol]	CONTOUR
[Symbol]	SCATTERED REJECT DUMP (WITH UNDER-SIZE LOT)
[Symbol]	ROAD
[Symbol]	HEDGE
[Symbol]	BOREHOLE LOCATION
[Symbol]	TREE
[Symbol]	GOVT. WASTE LAND
[Symbol]	SURVEY MAIN LINE
[Symbol]	OTHER LEASE AREA



PLATE NO.-2

SURFACE PLAN

ANJALI LIMESTONE MINE
NEAR VILLAGE - ANJALI
TAUKRA BANAVAV, DISTRICT - FORKHANDAR (G.G.)

M/S TATA CHEMICALS LIMITED
MITHAPUR, DISTRICT - JAMNAGAR (GUJARAT)

SCALE 1:1000 AREA-16.21 HECT. S. NO.-207/P

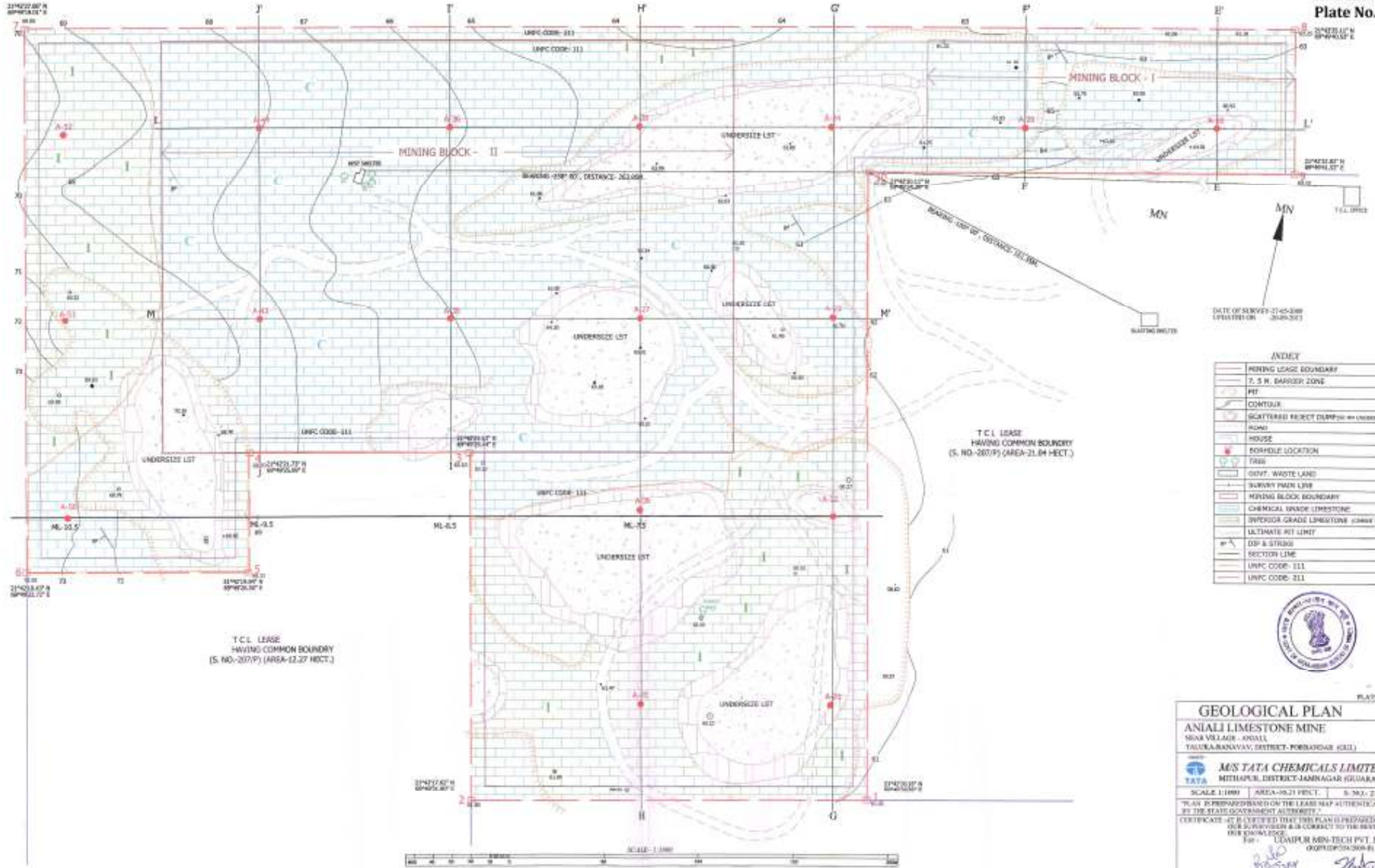
THIS PLAN IS PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY THE STATE GOVERNMENT AUTHORITY.

CERTIFICATE IS DECLARED THAT THIS PLAN IS PREPARED UNDER THE SUPERVISION & IN CONFORMITY TO THE RULES OF THE SURVEY OF INDIA.

For: **VEDAPUR MIN-TECH PVT. LTD.**
(INCORPORATED IN INDIA)

PLACED-PREPARER: **H. L. MODI** SURVEYOR
DATE: 06/01/08

PREPARED BY: **SHALENDRA SINGH RISHI** SURVEYOR



INDEX

[Red dashed line]	MINING LEASE BOUNDARY
[Red solid line]	7.5 M. BARRIER ZONE
[Red dotted line]	PII
[Brown line]	CONTOUR
[Blue line]	SCATTERED ROCK DUMPS (w/ UNDER-SIZE LOT)
[Black line]	ROAD
[Red square]	HOUSE
[Red circle]	BORHOLE LOCATION
[Green tree symbol]	TREE
[Red hatched area]	GRV. WASTE LAND
[Black line]	SURVEY MAIN LINE
[Red dashed line]	MINING BLOCK BOUNDARY
[Blue line]	CHEMICAL GRADE LIMESTONE
[Brown line]	SUPERIOR GRADE LIMESTONE (CHINA GRADE)
[Black line]	ULTIMATE PIT LIMIT
[Red line]	DIP & STRIKE
[Black line]	SECTION LINE
[Red line]	UNPC CODE- 111
[Red line]	UNPC CODE- 111



PLATE NO. 4A

GEOLOGICAL PLAN
ANALI LIMESTONE MINE
 NEAR VILLAGE - ANALI,
 TALUKA-BANAVAN, DISTRICT-PORBANDAR (GIL)

TATA **MIS TATA CHEMICALS LIMITED**
 MIDHAPUR, DISTRICT-JAMNAGAR (GUJARAT)

SCALE 1:1000 | AREA-1021 HECT. | S. NO.- 21 / P

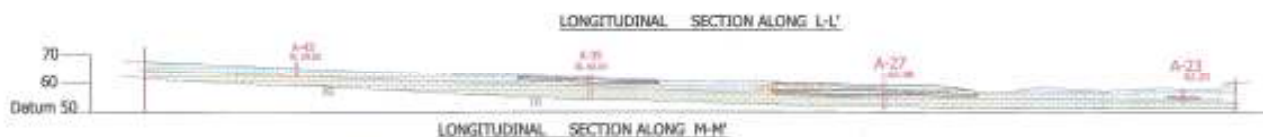
PLAN IS PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY THE STATE GOVERNMENT AUTHORITY.

CERTIFICATE-AT-B (VERIFIED THAT THIS PLAN IS PREPARED UNDER OUR SUPERVISION & IS CORRECT TO THE BEST OF OUR KNOWLEDGE)

FOR - **UNIPUR MIN-TECH PVT. LTD.**
 (0091007043004-01)

[Signatures]
B. L. MEED **SHALENDRA SINGH RISHI**
 DIST. OFFICER DIST. OFFICER

PLATE NUMBER: 4A
 DATE: 04/03/2024



LEGEND

	MINING LEASE BOUNDARY
	7.5 M BARRIER ZONE
	BORE HOLE LOCATION
	SCATTERED REJECT DUMP (as per Annexure XI)
	CHEMICAL GRADE LINE STONE
	MARGINAL GRADE LINE STONE
	PROCESS GRADE LINE STONE (CEMENT GRADE)
	IGNEOUS ROCK
	ULTIMATE PIT LIMIT
	UPPC CODE-111
	UPPC CODE-113



PLATE NO. 4B

GEOLOGICAL SECTIONS
ANALI LIMESTONE MINE
 NEAR VILLAGE - ANALI,
 TALUKA-BANAVAY, DISTRICT-PORBANDAR (GUJ.)

M/S TATA CHEMICALS LIMITED
 MITHAPUR, DISTRICT-JAMNAGAR (GUJARAT)

SCALE: 1:1000 | AREA-18.21 HECT | S. NO.-301/P

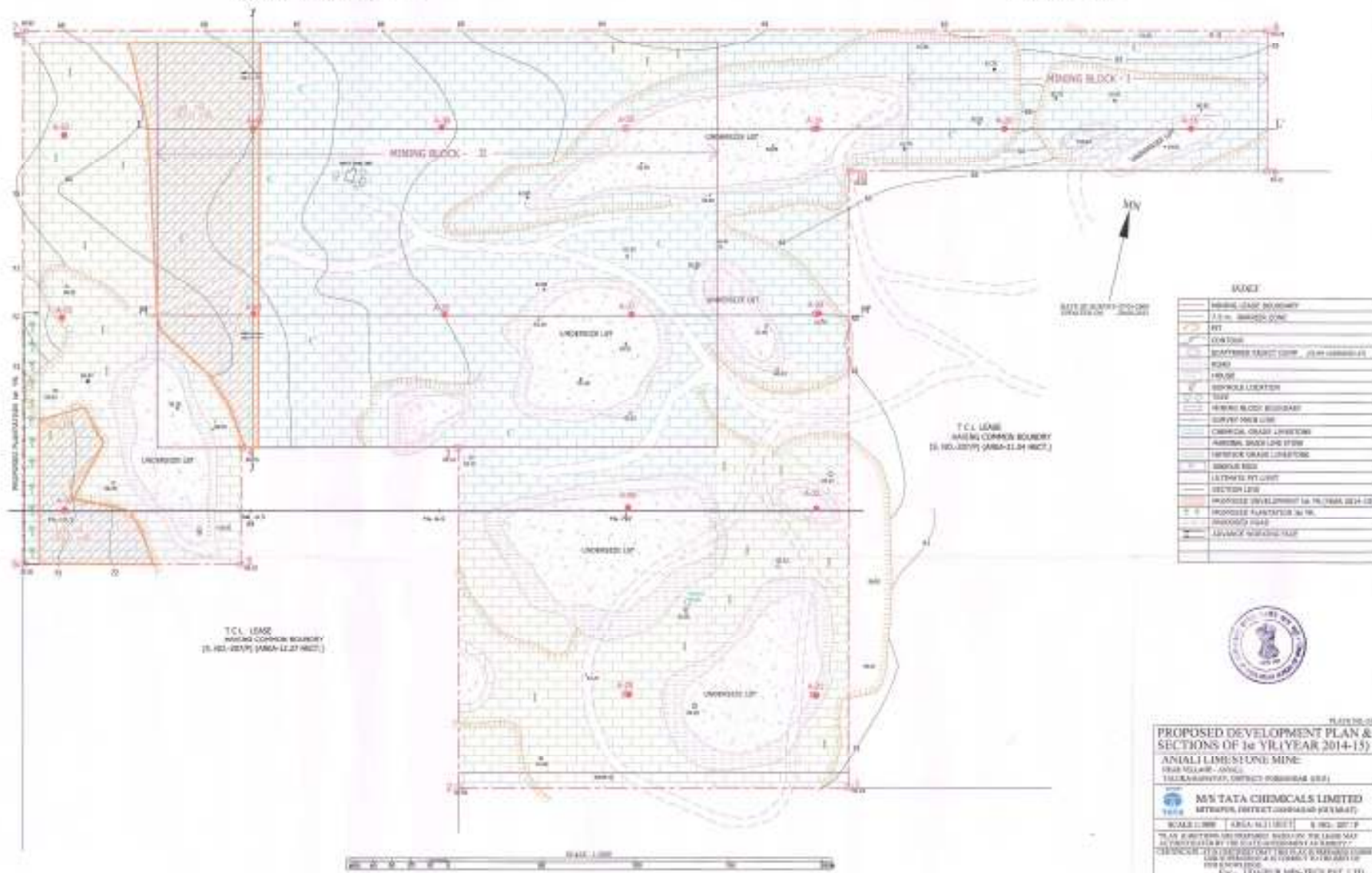
PLAN AND PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY THE STATE GOVERNMENT AUTHORITY.

CERTIFICATE - IT IS CERTIFIED THAT THIS PLAN IS PREPARED UNDER THE SUPERVISION & IN ACCORDANCE TO THE BEST OF OUR KNOWLEDGE.

For - UDARPUR MIN-TECH PVT. LTD.
 (REGD. OFFICE: 2008/01)

DATE: 05.01.2018

(Signatures)
 R. L. MODI
 SHALENDRA SINGH BRYT



T.C.L. LEASE
HAVING COMMON BOUNDARY
(S. NO. 105/9) (AREA-12.27 HECT.)

T.C.L. LEASE
HAVING COMMON BOUNDARY
(S. NO. 105/9) (AREA-12.24 HECT.)

INDEX	
(Symbol)	MINING LEASE BOUNDARY
(Symbol)	T.C.L. MINE BOUNDARY
(Symbol)	ROAD
(Symbol)	DRAINAGE CANAL
(Symbol)	UNDERSTORY LOT
(Symbol)	MINING BLOCK BOUNDARY
(Symbol)	SURVEY MARK LINE
(Symbol)	MINING BLOCK BOUNDARY
(Symbol)	CENTRAL GRASS LINE
(Symbol)	MINERAL GRASS LINE WITH
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE
(Symbol)	MINERAL GRASS LINE

PLATE NO. 02
PROPOSED DEVELOPMENT PLAN & SECTIONS OF 36 YR (YEAR 2014-15)
ANDALI LEASE-STONE MINE:
VILLAGE-REDDUR, TALUK-NANJANGLU, DISTRICT-RODHAMALUR.

M/S TATA CHEMICALS LIMITED
MURKOTTA, DISTRICT-GADGADUR (KARNATAKA)

SCALE: 1:1000 (AREA: 12.27 HECT.)

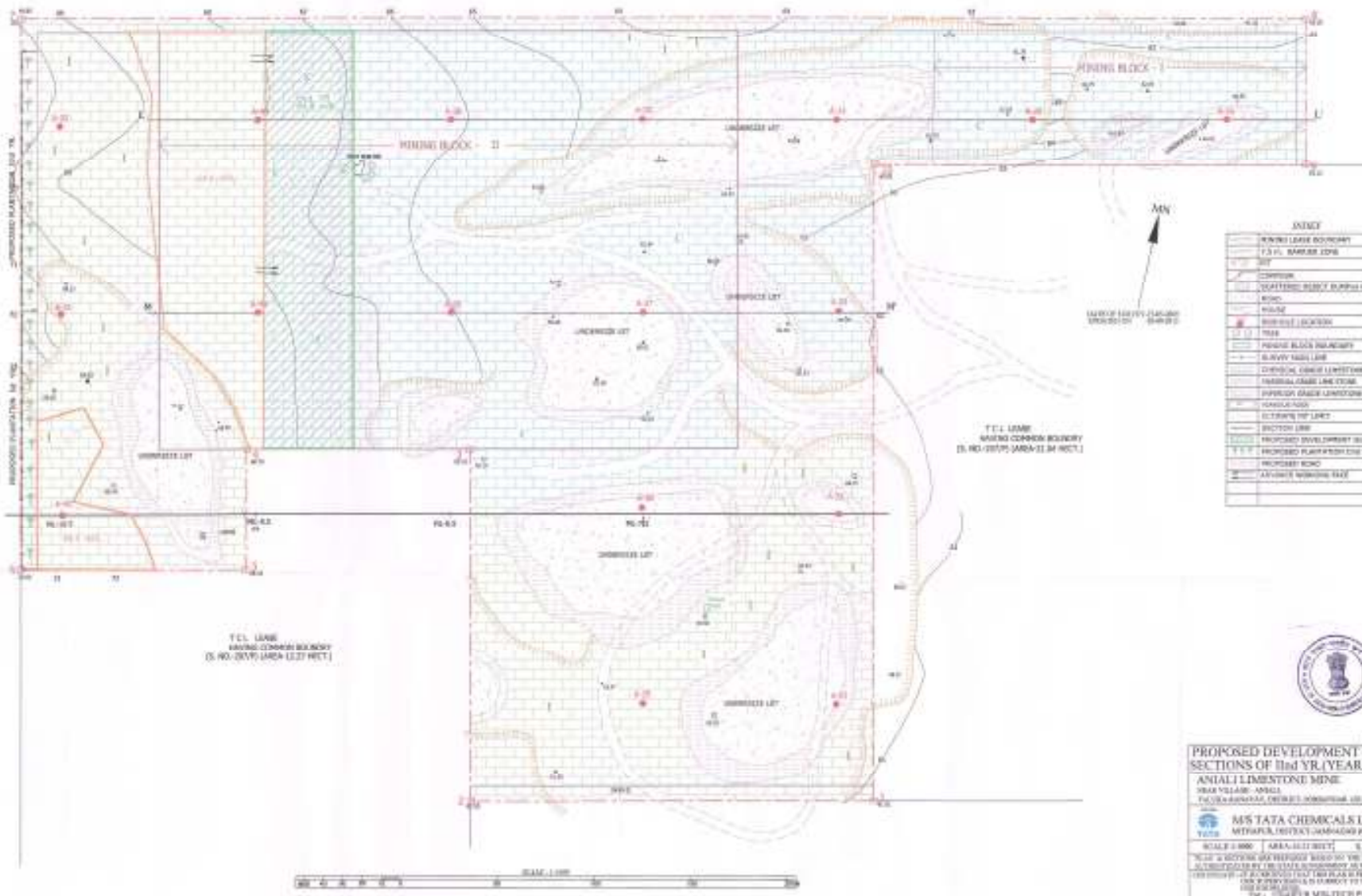
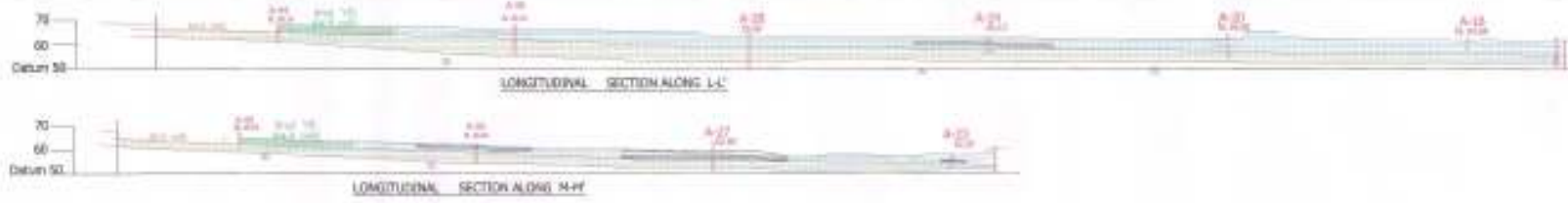
FOR ANY FURTHER INFORMATION REGARDING THE LEASE MAP OR THIS PLAN BY THE STATE GEOLOGICAL SURVEY OF INDIA, THE TECHNICAL ASSISTANT (MINE) SHOULD CONTACT THE OFFICE OF THE TECHNICAL ASSISTANT (MINE) AT THE STATE GEOLOGICAL SURVEY OF INDIA, BANGALORE.

DATE: 15.09.2014

PAPER NO. 105/9

PREPARED BY S. S. SHANMUGAN	CHECKED BY S. S. SHANMUGAN	APPROVED BY S. S. SHANMUGAN
--------------------------------	-------------------------------	--------------------------------





INDEX

MINING LEASE BOUNDARY
T.C.L. BARRIER ZONE
WELL
COMMON
UNLATERAL BOUNDARY BOUNDARY IN UNDERMINE LOT
WELL
WELL SITE LOCATION
TRAIL
MINING BLOCK BOUNDARY
SLURRY TAIL LINE
COMMON UNDERMINE BOUNDARY
TERRACE LEVEL LINE (T.C.L.)
UNDERMINE BOUNDARY
HANDMADE
ELECTRICITY WIRE LINE
SECTION LINE
PROPOSED DEVELOPMENT SHEET NO.
PROPOSED PLAN SHEET NO.
PROPOSED BOUNDARY
EXISTING WORKING SHAFT

T.C.L. LINE
HAVING COMMON BOUNDARY
(S. NO. 28(V) AREA (27 HECT.)

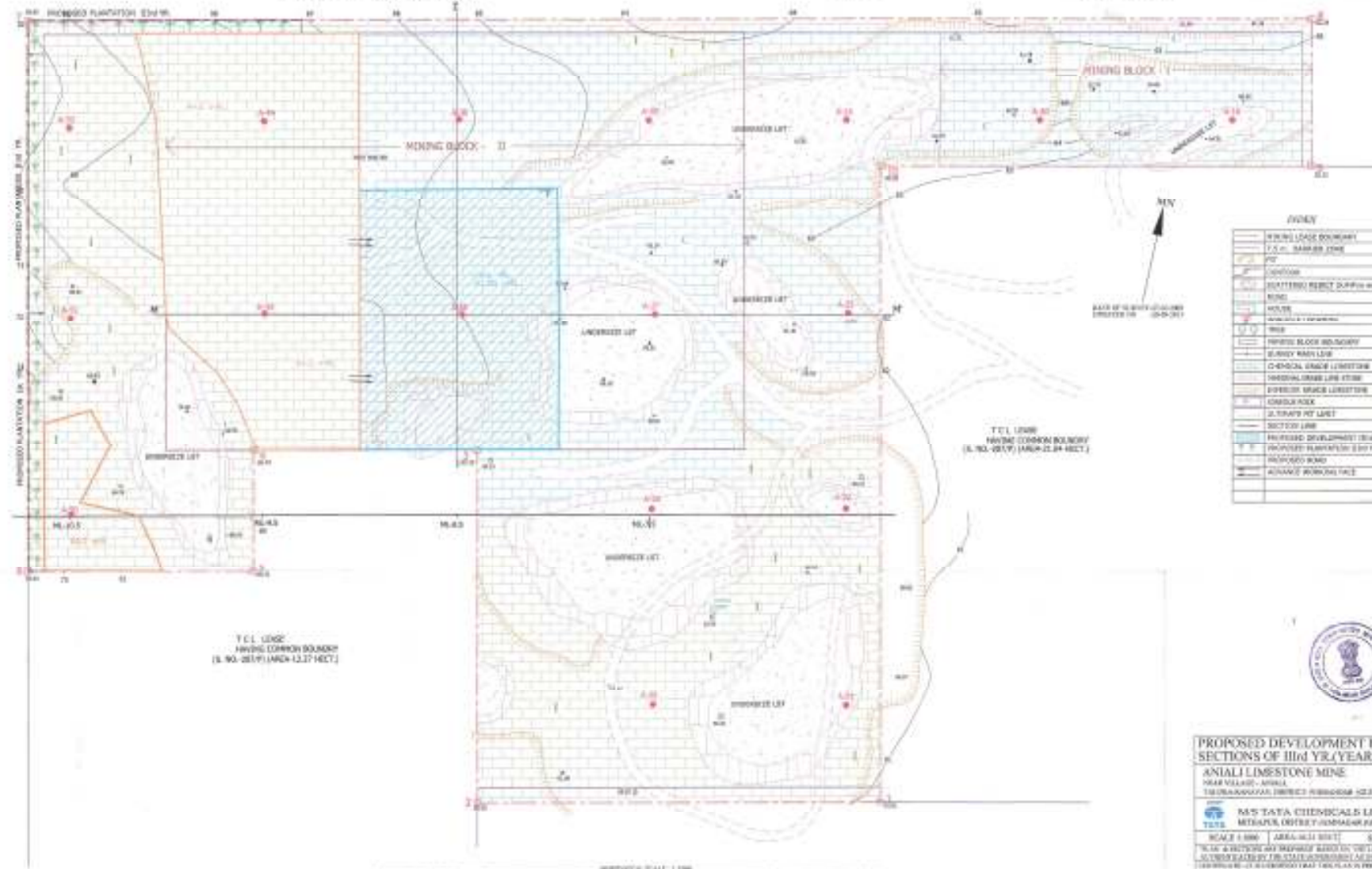
T.C.L. LINE
HAVING COMMON BOUNDARY
(S. NO. 28(V) AREA (24 HECT.)



BLR/2015/19
**PROPOSED DEVELOPMENT PLAN &
 SECTIONS OF 1st YR. (YEAR 2015-16)**
ANGALI LIMESTONE MINE
 NEAR VILLAGE - ANGALI
 TALUK - ANANTNAGUR, DISTRICT - ANANTNAGUR (KARNATAKA)

M/S TATA CHEMICALS LIMITED
 MYSURU, DISTRICT - CHAMARAJANUR
 SCALE: 1:5000 AREA: 227.00 HECT. S. NO. 28(V) P
 MADE & REVISED ACCORDING TO THE LEAD SHEET
 AUTHORIZED BY THE STATE GEOLOGICAL SURVEY
 (FOR DETAILS OF THE PROPOSED PLAN SHEET NO. 1 AND PLAN SHEET NO. 2 REFER TO THE
 MAIN DEVELOPMENT PLAN SHEET NO. 1 AND PLAN SHEET NO. 2 OF THE
 DEVELOPMENT PLAN)

(Signatures)
 S. L. MEER
 CHAMARAJANUR



KEY

[Symbol]	MINING LEASE BOUNDARY
[Symbol]	1/5 th M. SQUARE LINE
[Symbol]	GRID
[Symbol]	ROAD
[Symbol]	EXISTING/PROPOSED SURFACE WATER CHANNELS
[Symbol]	STONE
[Symbol]	WATER
[Symbol]	WATER TABLE
[Symbol]	WELL
[Symbol]	MINING BLOCK BOUNDARY
[Symbol]	MINING PLOT LINE
[Symbol]	CHEMICAL GRADE LINES/STONE
[Symbol]	TRADITIONAL GRADE LINE/STONE
[Symbol]	EXPLORE GRADE LINES/STONE
[Symbol]	CONTOUR LINE
[Symbol]	SECTION LINE
[Symbol]	PROPOSED DEVELOPMENT (S.W.)
[Symbol]	PROPOSED DEVELOPMENT (S.E. & N.E.)
[Symbol]	PROPOSED ROAD
[Symbol]	ADVANCED WORKING FACE

T.C.L. LEASE
HAVING COMMON BOUNDARY
(S. NO. 281/9) (AREA-12.17 HECT.)

T.C.L. LEASE
HAVING COMMON BOUNDARY
(S. NO. 281/9) (AREA-2.24 HECT.)

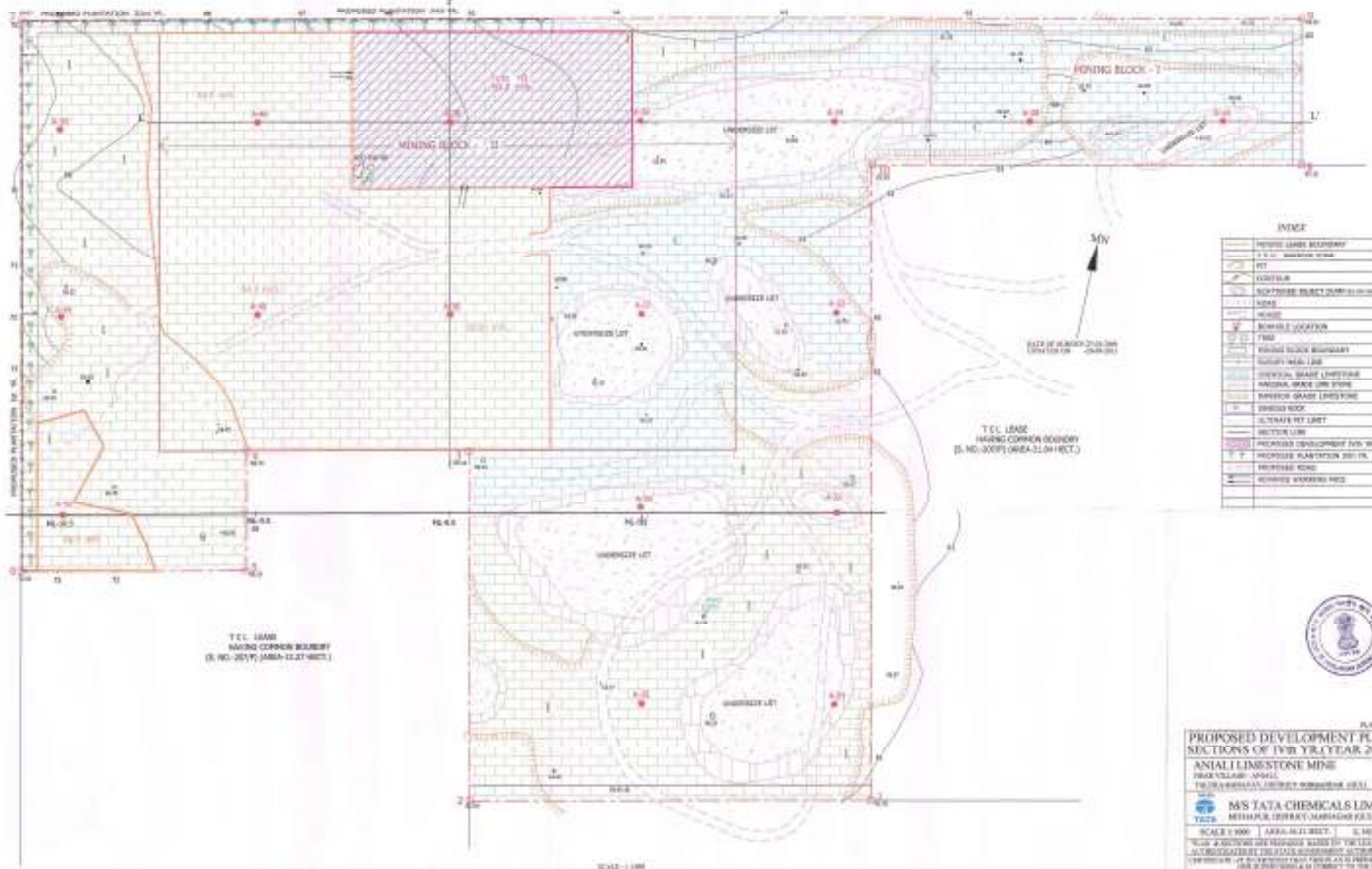


PLATE NO. 5 C
PROPOSED DEVELOPMENT PLAN & SECTIONS OF IIIrd YR./YEAR 2016-17)
ANALI LIMESTONE MINE
NEAR VILLAGE - ANALI, THURAIYANGUDI (DISTRICT - KANNUR) (S. NO. 281/9)

M/S TATA CHEMICALS LIMITED
MIDAPUR, DISTRICT - KANNUR (KARNATAKA)

SCALE 1:500 | AREA-12.17 HECT. | S. NO. 281/9
THIS DEVELOPMENT PLAN IS BASED ON THE DEVELOPMENT PLAN APPROVED BY THE STATE GOVERNMENT AT BANGALORE.
THIS DEVELOPMENT PLAN IS IN ACCORDANCE WITH THE MINING ACT, 1952 AND THE MINING REGULATIONS, 1955.
DATE OF PREPARATION: 15/05/2016
BY: **CHAMPUS MULTITECH PVT. LTD.** (S. NO. 281/9)

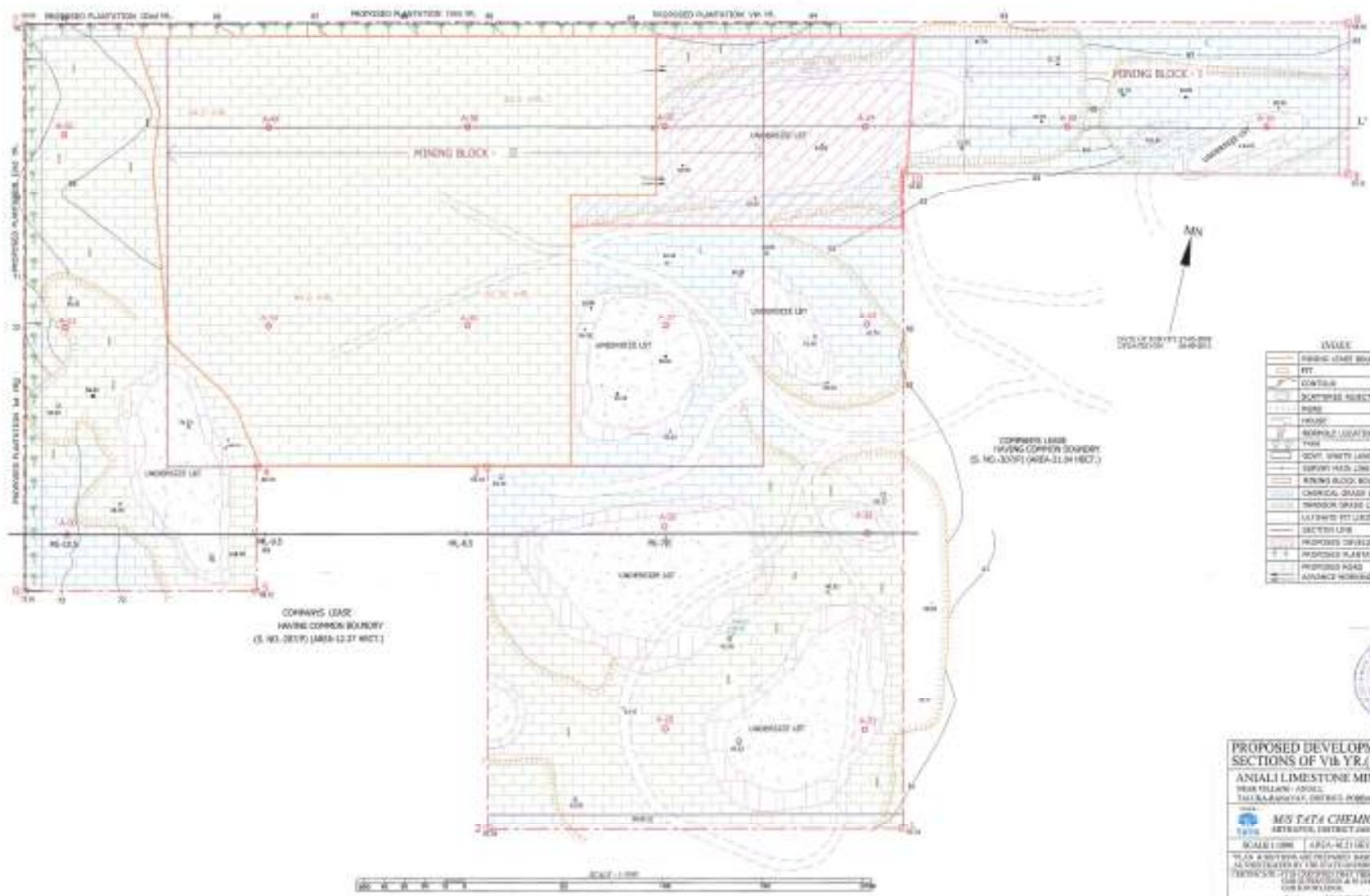
APPROVED BY: **CHAMPUS MULTITECH PVT. LTD.**
DATE: 15/05/2016



INDEX

[Symbol]	PROPOSED GRADE BOUNDARY
[Symbol]	EXISTING GRADE BOUNDARY
[Symbol]	ROAD
[Symbol]	RAILWAY
[Symbol]	WATER
[Symbol]	MINING BLOCK BOUNDARY
[Symbol]	PROPOSED ROAD
[Symbol]	PROPOSED RAILWAY
[Symbol]	PROPOSED CANAL
[Symbol]	PROPOSED DAM
[Symbol]	PROPOSED BRIDGE
[Symbol]	PROPOSED TOWER
[Symbol]	PROPOSED LIGHTNING ROD
[Symbol]	PROPOSED SIGNPOST
[Symbol]	PROPOSED FENCE
[Symbol]	PROPOSED BOUNDARY
[Symbol]	PROPOSED PLANTATION
[Symbol]	PROPOSED ROAD
[Symbol]	PROPOSED RAILWAY
[Symbol]	PROPOSED CANAL
[Symbol]	PROPOSED DAM
[Symbol]	PROPOSED BRIDGE
[Symbol]	PROPOSED TOWER
[Symbol]	PROPOSED LIGHTNING ROD
[Symbol]	PROPOSED SIGNPOST
[Symbol]	PROPOSED FENCE

PLATE NO. 5 D
PROPOSED DEVELOPMENT PLAN & SECTIONS OF IVYR (YEAR 2017-18)
ANJALI Limestone Mine
 (Area: 12.27 Hect.)
 THE INTERNATIONAL PROJECT MANAGEMENT GROUP
 M/S TATA CHEMICALS LIMITED
 METAL POLYMER LABORATORY
 SCALE 1:500 | AREA: 12.27 HECT. | S. NO. 2017/P
 THIS PLAN AND SECTION ARE PREPARED BASED ON THE DATA OF SURVEY AND FIELD VISITATION. THE DATA IS SUBJECT TO THE CHECK OF THE ENGINEER.
 For: CHARTERED ENGINEERS LTD.
 S. S. SURESH
 S. S. SURESH
 S. S. SURESH



INDEX

—	MINING BLOCK BOUNDARY
—	PT.
—	CONTOUR
—	BOUNDARY SUBJECT TO DISPUTE
—	ROAD
—	RAIL
—	WATER
—	BOUNDARY
—	GOVT. RIGHTS LAND
—	SURVEY MARK LINE
—	MINING BLOCK BOUNDARY
—	CHEMICAL GRADE LIMESTONE
—	TRASH GRADE LIMESTONE
—	LATERITE PIT LIMIT
—	SECTION LINE
—	PROPOSED DEVELOPMENT VI. YR.
—	PROPOSED PLANTER VI. YR.
—	PROPOSED ROAD
—	ADVANCE WORKING ROAD



PLATE NO. 5 E
PROPOSED DEVELOPMENT PLAN & SECTIONS OF VI. YR. (YEAR 2018-19)
ANALI LIMESTONE MINE
 NEAR VILKAVI - JODHPUR, TALUK SA-ANANDAPUR, DISTRICT PONDICHERRY - 605 001

M/S TATA CHEMICALS LIMITED
 (ATREPTUR, DISTRICT ANANDAPUR (TAMIL NADU))

SCALE: 1:1000 (AREA-12.27 HECT.) PLATE NO. 5 E

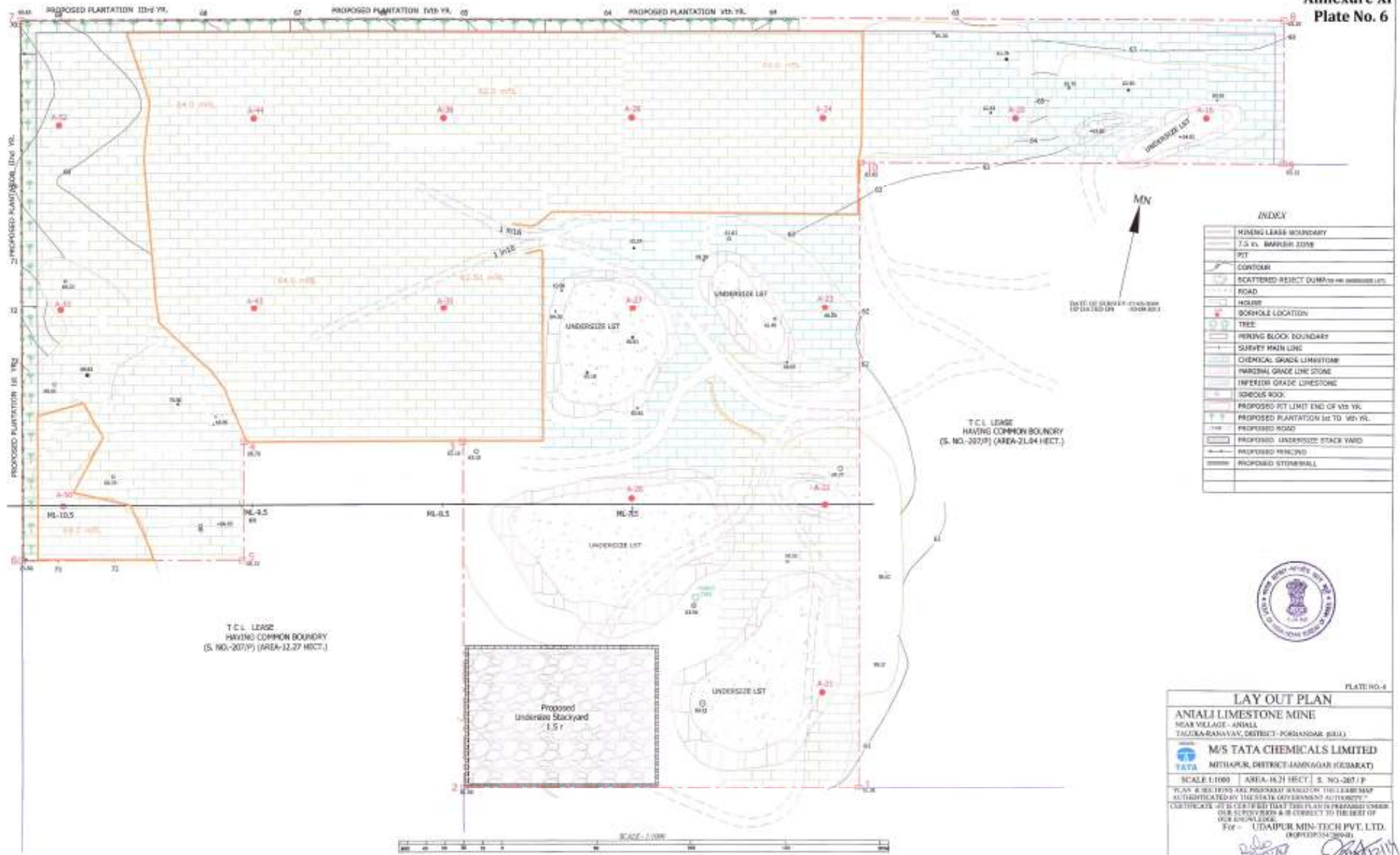
PLAN & SECTION ARE PREPARED BASED ON THE LEASE MAP AS DISTRIBUTED BY THE GOVT. DEPARTMENT OF MINES.

THIS PLAN & SECTION ARE DRAWN ONLY FOR THE PURPOSES OF THE LEASE MAP & IN ACCORDANCE WITH THE RULES OF THE GOVT. DEPARTMENT OF MINES.

To: **LEASING AND MINING OFFICE**
 (ATREPTUR)

S. J. SUD
 (SUD)

REMARKS: (SUD)



INDEX

[Symbol]	MINING LEASE BOUNDARY
[Symbol]	T.S. V.L. BARRIER ZONE
[Symbol]	PIT
[Symbol]	CONTOUR
[Symbol]	SCATTERED RESIST DUMPIES AND UNDERSIZE LST
[Symbol]	ROAD
[Symbol]	HOUSE
[Symbol]	BORHOLE LOCATION
[Symbol]	TREE
[Symbol]	PERING BLOCK BOUNDARY
[Symbol]	SURVEY MAIN LINE
[Symbol]	CHEMICAL GRADE LIMESTONE
[Symbol]	MARGINAL GRADE LIMESTONE
[Symbol]	INFERIOR GRADE LIMESTONE
[Symbol]	SCHEDULED ROAD
[Symbol]	PROPOSED PIT LIMIT END OF VII-VI YR.
[Symbol]	PROPOSED PLANTATION III TO VII-VI YR.
[Symbol]	PROPOSED ROAD
[Symbol]	PROPOSED UNDERSIZE STACK YARD
[Symbol]	PROPOSED PONDING
[Symbol]	PROPOSED STONEWALL



PLATE NO. 6

LAY OUT PLAN

ANJALI LIMESTONE MINE
NEAR VILLAGE - ANJALI
TAJURKARNAVAYAL, DISTRICT - PONDICHERRY, INDIA

M/S TATA CHEMICALS LIMITED
MITHAPUR, DISTRICT JAMNAGAR, GUJARAT

SCALE 1:1000 (AREA-103) HECT. S. NO-207/P

PLAN IS PREPARED AND PROPOSED ANALYSIS THE LESTER MAP AUTHORIZED BY THE STATE GOVERNMENT AUTHORITY.

CERTIFICATE IS CERTIFIED THAT THIS PLAN IS PREPARED UNDER OUR SUPERVISION & IS CORRECT TO THE BEST OF OUR KNOWLEDGE.

For - **UDAPUR MIN-TECH PVT. LTD.**
(REGD OFFICE: 2004)

PLACE: CHAMPAUR
DATE: 25/05/2018

H. S. MOD
S. S. SINGH
S. S. SINGH

Annexure XI Plate No. 7



DATE OF SURVEY-27-05-2008
UPDATE ON -20-09-2013

INDEX

	MINING LEASE BOUNDARY
	PIT BOUNDARY
	POND
	CONTOUR
	SCATTERED REJECT DUMP (UNDER SIZE)
	ROAD
	HOUSE / TEMPLE
	BORHOLE LOCATION
	TREE
	GOVT. WASTE LAND
	SURVEY MAIN LINE
	OTHER LEASE AREA
	FOREST AREA
	60 M. ZONE
	500 M. ZONE
	PROPOSED PLANTATION lit TO Vth YR.
	PROPOSED FENCING
	AIR MONITORING STN.
	NOISE MONITORING STN.
	WATER MONITORING STN.



PLATE NO-7

ENVIRONMENT PLAN

ANALI LIMESTONE MINE
NEAR VILLAGE - ANALI,
TALUKA-RANAVAV, DISTRICT-PORBANDAR (GUJ.)

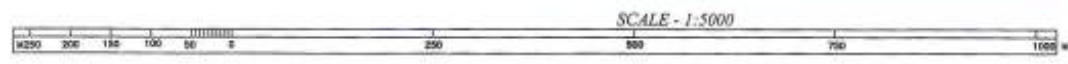
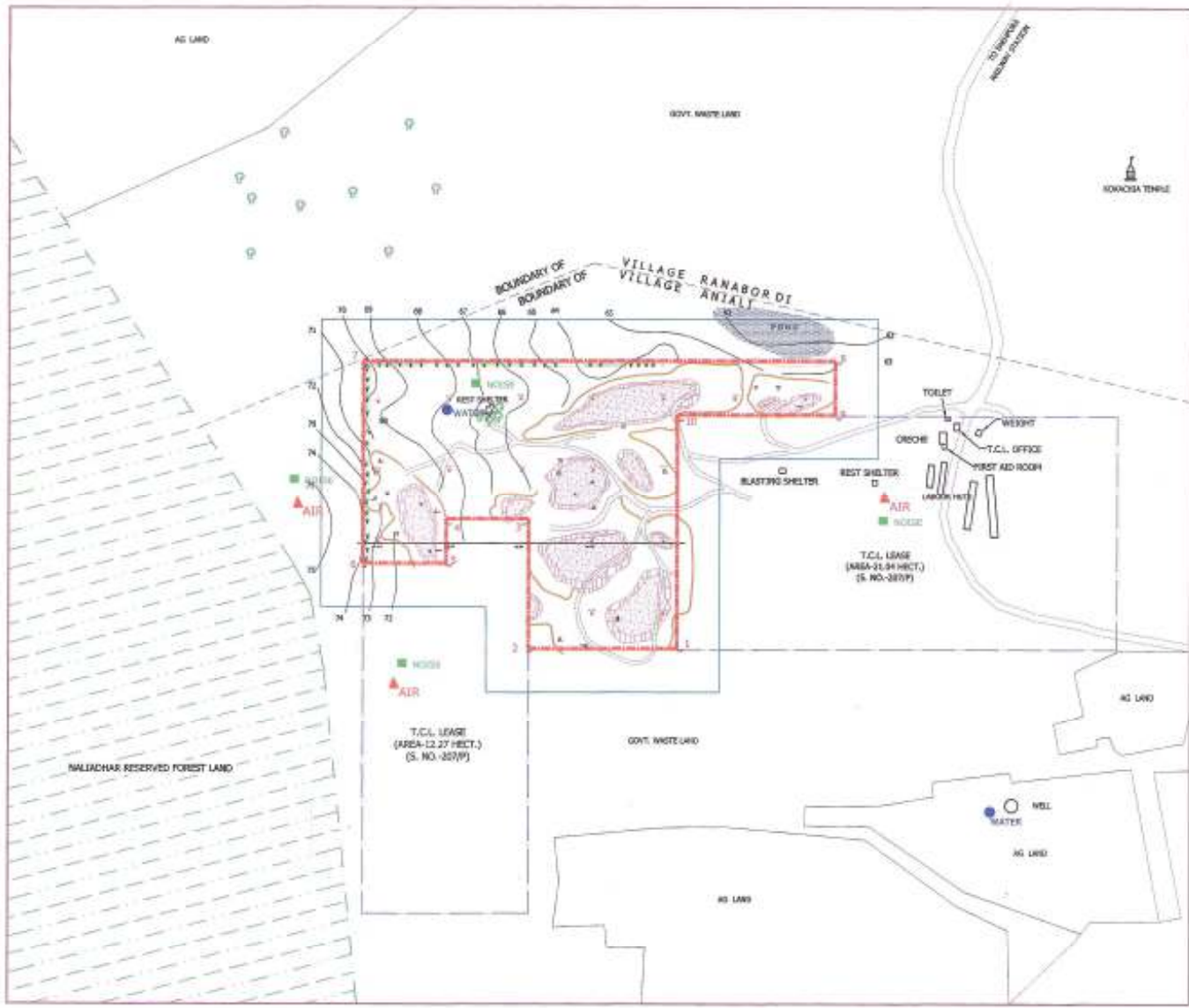
M/S TATA CHEMICALS LIMITED
MITHAPUR, DISTRICT-JAMNAGAR (GUJARAT)

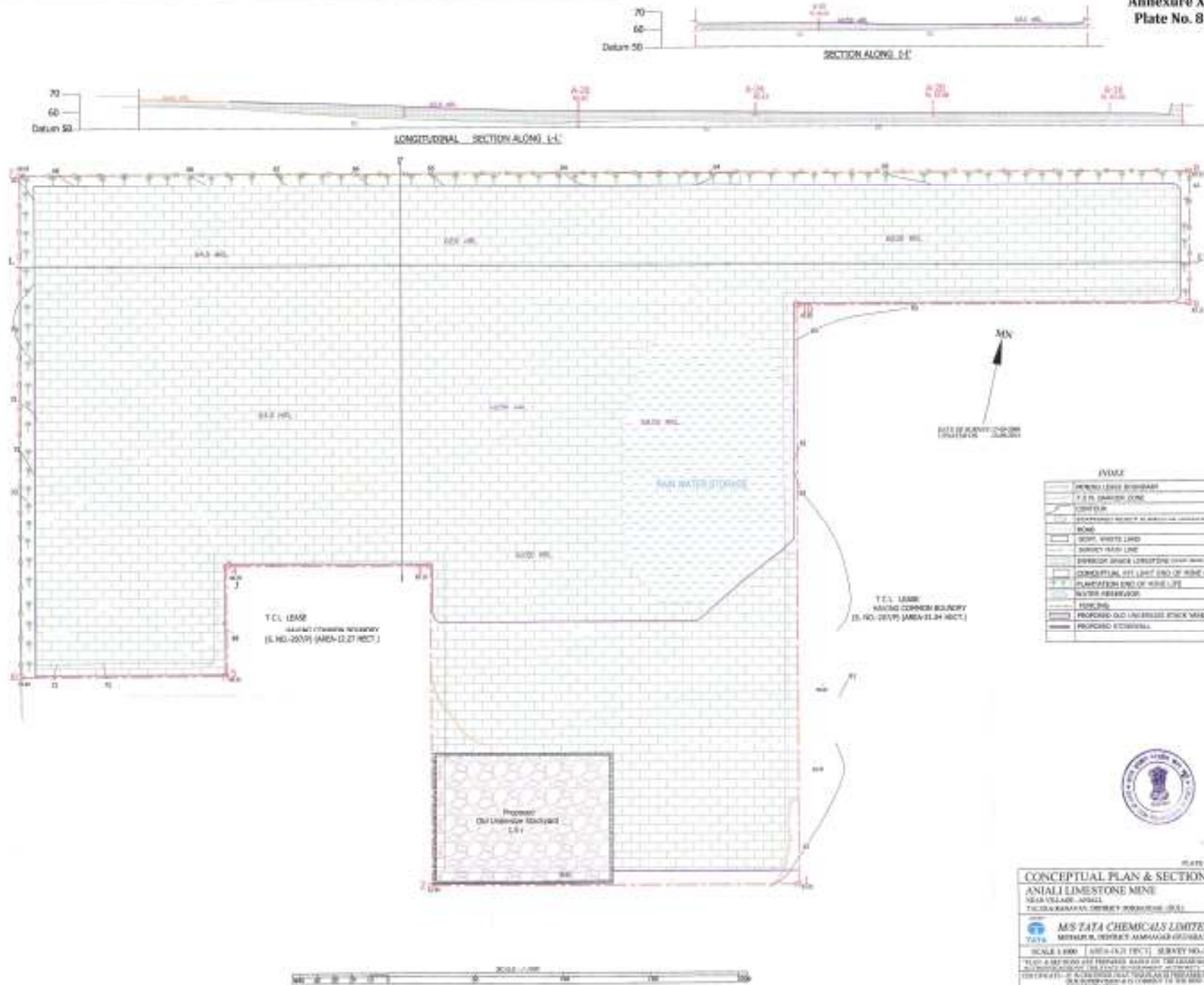
SCALE 1:5000 AREA-16.21 HECT S. NO.-207 / P

"PLAN IS PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY THE STATE GOVERNMENT AUTHORITY."

CERTIFICATE - IT IS CERTIFIED THAT THIS PLAN IS PREPARED UNDER OUR SUPERVISION & IS CORRECT TO THE BEST OF OUR KNOWLEDGE.
For - **UDAIPUR MIN-TECH PVT. LTD.**
(ROPUDP/344009-02)

B. L. MOD SHAILINDRA SINGH BIST
DATE -20.02.2014 KEY P282020 KEY P282020





SYMBOL

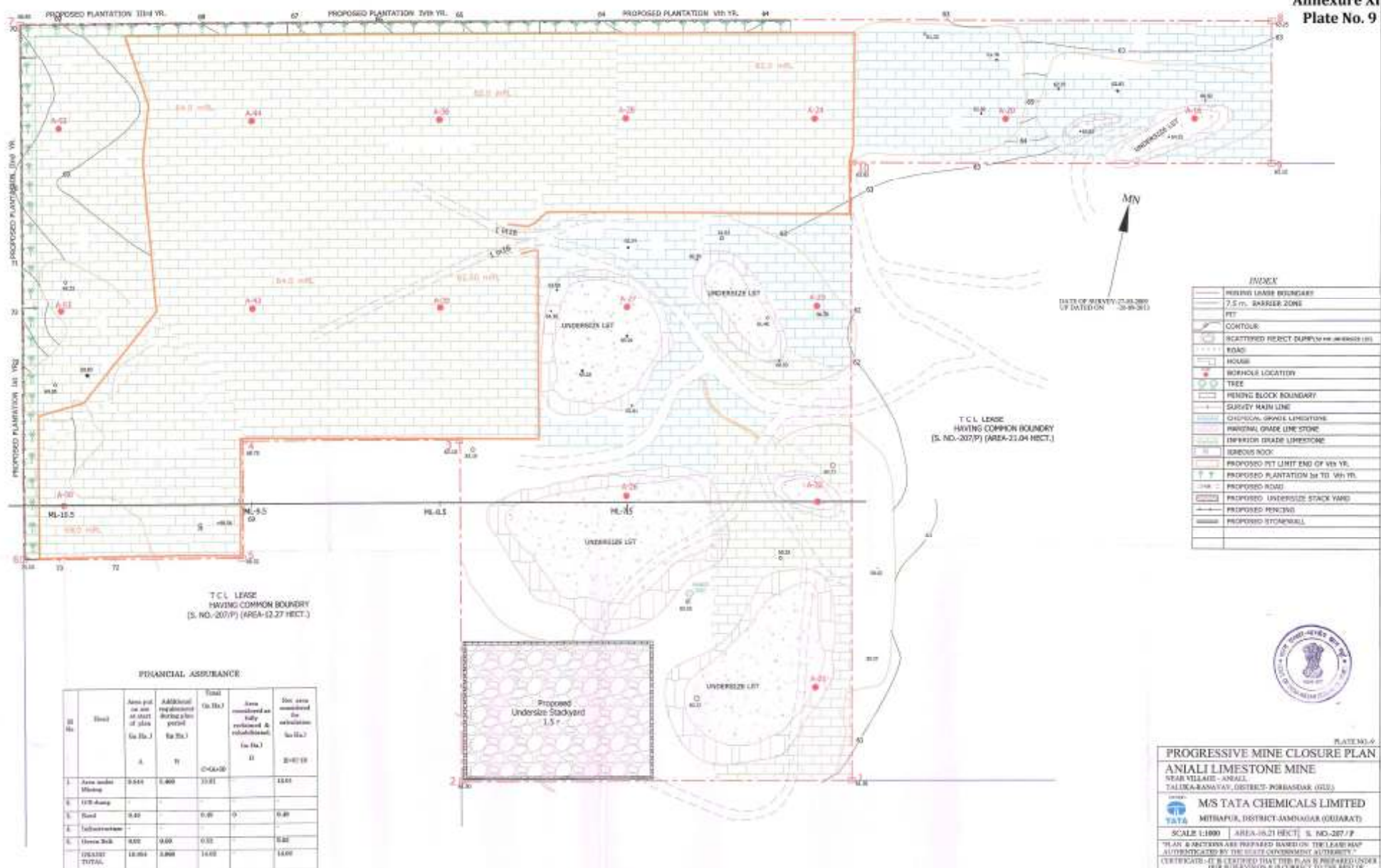
---	PERMITTED LIME BOUNDARY
---	T.C.L. GRASSY GULLY
---	CONTOUR
---	EXISTING BOUNDARY AS APPLICABLE TO ADJACENT LANDS
---	ROAD
---	SEPT. WHITE LINE
---	SURVEY MARK LINE
---	DIAGONAL BRICK LINEDSTONE STOCK YARD
---	CONCEPTUAL SET BACK END OF MINE LIFE
---	PLANTATION END OF MINE LIFE
---	WATER RESERVOIR
---	EXISTING
---	PROPOSED OLD LIME STOCK YARD
---	PROPOSED STOCKYARD

PLATE NO. 8

CONCEPTUAL PLAN & SECTIONS
ANALI LIMESTONE MINE
 NEAR VILLAGE - ANALI
 TAMIL NADU STATE MINES CORPORATION (S.M.C.)

MS TATA CHEMICALS LIMITED
 MITTAL B. DISTRICT AMBAGAR (S.M.C.)

SCALE 1:1000 [AREA: 12.27 HECT.] SURVEY NO. 2079
 THIS PLAN HAS BEEN PREPARED BASED ON THE LATEST SURVEY DATA AND THE PLANTATION ACTIVITY.
 THE PLANTATION IS A CONCEPTUAL PLAN AND IS SUBJECT TO THE APPROVAL OF THE GOVERNMENT.
 For: **LEASER MULTITECH PVT. LTD.**
 Sd/- **S. S. SIVARAJ**
 S. S. SIVARAJ
 S. S. SIVARAJ
 S. S. SIVARAJ



T.C.L LEASE
HAVING COMMON BOUNDARY
(S. NO.-207/P) (AREA-12.27 HECT.)

T.C.L LEASE
HAVING COMMON BOUNDARY
(S. NO.-207/P) (AREA-21.04 HECT.)

FINANCIAL ASSISTANCE

Sl. No.	Item	Area paid for out of plan (sq. ft.)	Additional expenditure (sq. ft.)	Total (sq. ft.)	Area considered as fully reclaimed & rehabilitated (sq. ft.)	Net area considered for rehabilitation (sq. ft.)
	A.	B.	C= (A+B)	D	E= (C-D)	
1.	Area under Mine	9,441	0,000	9,441	0	9,441
2.	100' Along Road	0,00	0,00	0,00	0,00	0,00
3.	Understore	0,00	0,00	0,00	0,00	0,00
4.	Understore	10,000	0,000	10,000	0,000	10,000
TOTAL		19,441	0,000	19,441	0,000	19,441

INDEX

(Symbol)	MINE'S LEASE BOUNDARY
(Symbol)	7.5 m. BARRIER ZONE
(Symbol)	PIT
(Symbol)	CONTOUR
(Symbol)	SCATTERED REJECT DUMPS (As per S. No. 207/P)
(Symbol)	ROAD
(Symbol)	HOUSE
(Symbol)	BORHOLE LOCATION
(Symbol)	TREE
(Symbol)	PENDING BLOCK BOUNDARY
(Symbol)	SURVEY MAIN LINE
(Symbol)	CHRONIC GRAVEL LIMESTONE
(Symbol)	PERIPHERAL GRADE LIMESTONE
(Symbol)	INTERNAL GRADE LIMESTONE
(Symbol)	SPERDS ROCK
(Symbol)	PROPOSED PIT LIMIT END OF 3RD YR.
(Symbol)	PROPOSED PLANTATION 3rd TO 5th YR.
(Symbol)	PROPOSED ROAD
(Symbol)	PROPOSED UNDERSTORE STACK YARD
(Symbol)	PROPOSED FENCING
(Symbol)	PROPOSED STONEWALL



PLATE No. 6
PROGRESSIVE MINE CLOSURE PLAN
ANALI LIMESTONE MINE
NEAR VILLAGE - ANALI,
TALUKA-BANASRAY, DISTRICT-POREBHAR (M.P.)

BY
M/S TATA CHEMICALS LIMITED
MITHAPUR, DISTRICT-JAMDGAR (GUJARAT)

SCALE 1:1000 | AREA-19.21 HECT. | S. NO.-207/P

"PLAN & DETAILS ARE PREPARED BASED ON THE LEASING AUTHORITY'S CERTIFICATE. IT IS CERTIFIED THAT THIS PLAN IS PREPARED UNDER THE SUPERVISION & IN CONTACT TO THE ACT OF OUR EXISTING" For -
L. S. SINGH MIN-TECH PVT. LTD. (REGISTERED)

DATE: 14-07-2024
BY: B. L. MOOD
FOR: BHALENDRA SINGH IEST

APPROVED

Vide Letter No. 682 (23) (MST-437/
2008) MCCM (N) UDP Dated 21.10.2008



UDAIPUR MIN-TECH. PVT. LTD.

MINING & GEOLOGICAL ENGINEERS

Annexure XI - 10

SCHEME OF MINING

PROGRESSIVE MINE CLOSURE PLAN अनुमोदित APPROVED OF

ANIALI LIMESTONE MINE

NEAR VILLAGE - ANIALI,

TALUKA - RANAVAV, DIST - PORBANDAR (GUJARAT)

(LEASE AREA - 16.21 HECT - NON FOREST)

UNDER RULE 12 & 23(B) OF MCDR 1988

अनुमोदित
Approved

*

*

(FINAL)

*

*

LESSEE

अनुमोदित

क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

M/s TATA CHEMICALS LIMITED

P.O. - Mithapur : 361345,

Taluka - Okhamandal, Dist- Jamnagar, Gujarat)

उदमपुर
UDAIPUR

*

*

*

*

PREPARED BY

S. S. BIST

MINING GEOLOGIST & RQP

M/S UDAIPUR MIN - TECH PVT. LTD.

"APEKSHA COMPLEX"

206 - IInd FLOOR, SECTOR NO.- 11,
HIRAN MAGRI, UDAIPUR - 313002 (RAJ.)

PH. 2489672 (OFF.) 2641832-0833 (RES.)

E mail - ssbist@udrmintech.com



TABLE OF CONTENTS

CONTENTS	PAGE NO.
1.0 INTRODUCTION AND REVIEW OF SCHEME OF MINING	5
2.0 PROPOSAL UNDER SCHEME OF MINING FOR NEXT ONE YEAR	13
3.0 EXPLORATION & RESERVES	15
4.0 MINING	19
5.0 HANDLING OF WASTE / SUB GRADE MATERIAL	30
6.0 USE OF MINERAL	32
7.0 CRUSHING AND BLENDING	35
8.0 EMPLOYMENT POTENTIAL	36
9.0 ENVIRONMENTAL MANAGEMENT PLAN	37
10.0 CONCEPTUAL MINING PLAN	41
11.0 PROGRESSIVE MINE CLOSURE PLAN	44
12.0 ANY OTHER RELEVANT INFORMATION	53

Details of Bore holes samples & pits samples analysis, lithologyAnnexure - I

Details of estimation of ReservesAnnexure -II.

Grade wise Geological Reserves.....Annexure - III

Mineable reserves of chemical gradeAnnexure - IV

Copy of Financial AssuranceAnnexure - V



LIST OF PLATES

PLATE NO.	TITLE
PLATE - 1	अवजोदित LOCATION MAP
PLATE - 2	KEY PLAN
PLATE - 3	SURFACE PLAN
PLATE - 4 - A	GEOLOGICAL PLAN
PLATE - 4 - B	GEOLOGICAL SECTIONS
PLATE - 5A & B	YEARWISE MINE PRODUCTION & DEVELOPMENT PLAN & SECTIONS
PLATE - 6	LAY OUT PLAN
PLATE - 7	ENVIRONMENT PLAN
PLATE - 8	CONCEPTUAL PLAN & SECTIONS
PLATE - 9	PROGRESSIVE MINE CLOSURE PLAN



अनुमोदित
APPROVED
DECLARATION

IT IS CERTIFIED THAT, THE ABOVE REPORT HAS BEEN PREPARED ON OUR CONSENT & APPROVAL, THAT WE WILL ABIDE BY ALL COMMITMENT MADE THEREUNDER. IN CASE OF DEFAULT, THE APPROVAL OF MINING PLAN / SCHEME OF MINING WITH PROGRESSIVE MINE CLOSURE PLAN WOULD BE WITHDRAWN.

PLACE - ADITYANA

FOR TATA CHEMICALS LTD.

DATE - 30 JUN. 08

(M K Nayak)

AGENT & MANAGER- Mining Operations

TATA CHEMICALS LIMITED

Ranavav Quarry, At / P.O. RANAVAV - 360 550. Dt. Porbandar (GUJARAT).


Tel : (02801) 236381, Fax : (02801) 236320.

Registered Office : Bombay House, 24, Homi Modi Street, Mumbai 400 001.

CERTIFICATE

THIS IS TO CERTIFY THAT THE PROVISIONS OF MINERAL CONSERVATION & DEVELOPMENT RULES 1988 HAVE BEEN OBSERVED IN THE MINING SCHEME WITH PROGRESSIVE MINE CLOSURE PLAN OF ANALI MINING LEASE AREA 16.21 HECTARES IN THE DIST. PORBANDER, GUJARAT OF M/S TATA CHEMICALS LIMITED MITHAPUR, AND WHEREVER SPECIFIC PERMISSIONS ARE REQUIRED, THE LESSEE WILL APPROACH THE CONCERNED AUTHORITIES OF INDIAN BUREAU OF MINES FOR GRANTING THE PERMISSION.

DATE :- 10TH OCT. 2008
PLACE :- UDAIPUR



S. S. BIST
MINING GEOLOGIST & RQP
RQP/UDP/128/95 A

CERTIFICATE

THIS IS TO CERTIFY THAT THE PROVISION OF MINES ACT, RULES & REGULATION MADE THEREUNDER HAVE BEEN OBSERVED IN THE MINING SCHEME WITH PROGRESSIVE MINE CLOSURE PLAN AND WHEREVER SPECIFIC PERMISSION ARE REQUIRED, THE LESSEE WILL APPROACH THE DIRECTOR GENERAL OF MINES SAFETY.

THE INFORMATIONS / PARTICULARS MENTIONED IN THE REPORT ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND IN CASE OF DEFAULT, THE APPROVAL OF MINING SCHEME GRANTED WOULD BE WITHDRAWN.

DATE :- 10TH OCT. 2008
PLACE :- UDAIPUR


S. S. BIST
MINING GEOLOGIST & RQP
RQP/UDP/128/95 A

अनुमोदित
Approved



UDAIPUR IN-TECH. PVT. LTD.
MINING & CHEMICALS ENGINEERING

APPROVED
Vide Letter No. 682 (23) (MS) - 437/
2008 - MCCM (N) UDP Dated 21-10-2008

अनुमोदित
Regional Controller of Mines

भारतीय खान ब्यूरो
Indian Bureau of Mines

UDAIPUR

INTRODUCTION AND REVIEW OF MINING PLAN

1.1.1 INTRODUCTION : Mining Plan under reference has been prepared for Aniali mining lease admeasuring 16.21 hect. It is a captive mine of M/s Tata Chemicals Limited. M/s Tata Chemicals Ltd. is public limited company registered under Company law. They put their first soda ash plant at Mithapur in 1939 with 50 tpd capacity & have gradually expanded their capacity & widened their product line over the years to become one of the most important national center for integrated production of basic chemicals in the country.

Tata Chemicals Ltd. have in due course expanded the capacity of their chemical plant to 8,75,000 t.p.a. have also established a cement plant at Mithapur with an annual rated capacity of 4,40,000 t.p.a. with a view to utilizing the fines (-50 mm) left behind after screening the ROM to obtain sized material for Soda Ash Plant along with other sub grade limestone obtained as overburden or interburden during mining of chemical grade limestone. TCL now propose to expand the capacity of the Soda Ash Plant to 10,00,000 t.p.a and of the Cement Plant to 8,80,000 t.p.a. in future.

1.1.2 The mine is located about 4.5 km. North of Aniali Village and connected with kuccha road. Aniali Village is 10 Km. interior from Varvala Village connected with a tar road. Varvala is situated on the NH No. 8B (Porbander-Rajkot-Ahemdabad) in between Kutiyana and Porbander segment.

The lease area can be approached from Porbander or Ranavav by N.H. -8B and further on Single tar road at a total distance of 20.0 Kms from Ranavav and 38.0 Kms from Porbander (Location plate No.1). The area is marked on Topo Sheet maps showing lease area with Village, Road,

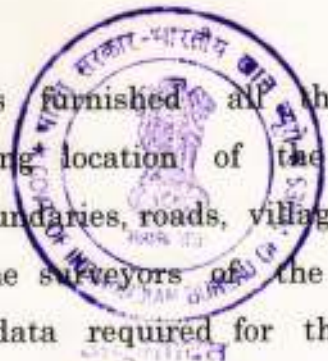
Type of Land & Other lease area of same lessee within 5 Km. radius (Plates 3).

In order to update scheme of mine development and environment management plan for the mine, TGE approached to S. S. Bist (Mining Geologist & RQP) C/o M/s Udaipur In-Tech Pvt. Ltd., Udaipur for the review of the mining plan and preparation of scheme of mine development and EMP for the next five years with following scope of works.

- (i) Study of all available geological and exploration reports including field visit to the area.
- (ii) Processing of all available exploratory data to calculate the reserves and the grade.
- (iii) Preparation of requisite number of slice plans at suitable interval.
- (iv) Preparation of Geological plan and sections covering the above aspects.
- (v) Preparation of production and development plans - Preparation of year wise development and production plans for the first five years and conceptual plan for the remaining period till the end of the lease period.
- (vi) Annual rate of production needed with ROM quality and quantity.
- (vii) Estimation of the requirement of additional mining machinery / equipment.
- (viii) Manner of waste, top-soil and sub grade dumping including site selected for the same.
- (ix) Re-assess the mine drainage and dewatering system.
- (x) Processing of base line data on environment.
- (xi) Preparation of Environment Management Plan (EMP) covering the environment protection measures.

1.1.3 APPROACH AND METHODOLOGY : The entire assignment was divided into three different parts i.e. (i) Survey & Geological works (ii) Mining scheme (iii) EMP.

The geological data processing, Scheme of mine development and the Environment Management plan in this report have been prepared based on the earlier approved Mining Plan.



M/s Tata Chemicals furnished all the bore hole data and surface plan on scale 1 : 1000 showing location of the contours at an interval of 1 to 2 mt., boreholes, lease boundaries, roads, village boundaries etc. The survey plan was updated by the surveyors of the M/s Udaipur Min - Tech (P) Ltd. All the base line data required for the preparation of the Mining Scheme was also furnished By M/s Udaipur Min - Tech (P) Ltd.

1.2 PARTICULARS OF APPROVAL OF MINING SCHEME

The mining scheme with progressive mine closure plan was approved by Indian Bureau of Mines, Udaipur vide letter no. 682(23)MS-228/2003 MCCM(N) UDP Dated 29/01/2004 for period of 2003-04 to 2007-08.

1.3 DATE OF COMMENCEMENT OF MINING OPERATIONS

The mining lease for limestone in respect of Aniali mine was granted over a total area of 16.21 hect. & the lease was executed on 29.10.1964 for a period of 20 years. This was expired on 29.10.1984. First renewal was executed on 21/08/1987 with effect from 29/10/1984 for period of 20 years(i.e. upto 29.10.2004) and TCL again applied for second renewal(20 years) before one year of expire of lease period and which is pending with State Govt.

The area has been explored with the help of core drilling over the entire lease area. 17 number of bore holes were drilled on grid pattern having 100 meters interval to study the depth behavior of the limestone deposit properly.

Total 92.50 mtrs. were drilled. Depth-wise limestone core samples were collected. Core were split into equal halves and samples were powdered. After coning and quartering, half of the powder of all samples were sent to company central laboratory at Mithapur for complete analysis. Total 118 core samples were collected from 17 numbers of Bore -holes core and

analyzed. Details of Bore – holes samples, analysis, litho logy, etc. are enclosed as Annexure - I.



1.4 COMPLIANCE OF MINING PLAN

1.4(a) Deficiency, if any, that existed in approved mining scheme : NIL.

1.4(b) The review of Scheme of Mining chapter wise details are as follow :

Due to not received environment clearance from MoEF, New Delhi (it is under process) company could not implemented the five year mining proposal as per Approved mining scheme.

As mining has not started, hence reclamation at this stage is not necessary. As there is no land degradation during last five years rehabilitation was also not necessary.

CHAPTERWISE DETAILS ARE AS FOLLOWS :

I) EXPLORATION : In the approved mining scheme no exploration was proposed because detail exploration was already carried out in the area and also no any exploration is proposed in next five years scheme.

II) MINING : Proposed mining has been selected in Mining Block -I & II for next five year. The proposed manual mining will be started from eastern part of the lease area in mining block - I towards western direction in order to develop systematic mining benches towards mining block no. II consideration less than 05% as the mining losses, the mine is being designed and planned to handle about 12600 Mt. (average) tones of material so as to produce about 12000 Mt. tones of usable limestone for making Soda Ash by the Year 2003-04. Whatever cement grade limestone will be generated during mining of chemical grade limestone, will be

used for cement manufacturing with suitable blending with undersized and fines of chemical grade limestone.

The ROM stone is proposed to be crushed at the central crusher at Adityana and the screened lumps in the size range of -100 mm + 50mm will be dispatched to the Soda Ash plant at Mithapur. The crusher undersize material and inferior grade limestone occurring within the chemical grade stone in the area will be similarly transported to the cement plant at Mithapur.

But since 1994 mining activity was closed due to enforcement of Contract Labor Abolition Act by Central Govt. So Company could not implemented mining proposal as per approved mining plan/scheme and after that from 2004 due to not getting environment clearance from MoEF, New Delhi. It is under process and hope within a year environment clearance will be received from MoEF, New Delhi. Now company has decided to submit scheme of mining by open cast and produced lumps will be either directly send to crusher at Adytiana or sizing manually at plot near mine site and sized limestone will be dispatched to Soda Ash Plant at Mithapur.

Proposed production as per approved mining plan and actual production achieved during the last five years as is given below :

YEAR	PROPOSED PRODUCTIONS		PRODUCTIONS ACHIEVED	
	CHEMICAL GRADE	INFERIOR GARDE	CHEMICAL GRADE	INFERIOR GRADE
2003-04	12603.91	9017.85	Nil	Nil
2004-05	12735.25	10336.25	Nil	Nil
2005-06	12670.24	8829.98	Nil	Nil
2006-07	12644.28	10332.96	Nil	Nil
2007-08	12689.60	6979.28	Nil	Nil
TOTAL	50653.68	45496.32	Nil	Nil

III) MINE DRAINAGE : Draining of water may not much problem in this area as the rainfall is very scanty. Further it is observed that due to porous and stratified nature of Milliolic limestone deposit the rain

water gets percolated quickly by ground seepage. The rain water dries up quickly whenever there is substantial rainfall.

During the past years no significant accumulation of water has been observed in the small working pits of earlier quarrying operation in this area. However during heavy rain, the accumulated water being pumped out to nearby water course which is passing through the eastern side of the lease without any treatment as there is no effect on water due to mining operation and so far there has been no complaints about the quality of the water. The dewatering operations are being carried out by local villagers to supply winter crop as and when required.

IV) DISPOSAL OF WASTE & SOIL : There was no overburden and no any generation of rejects at mine site, because all material direct send to Crusher site at Aditiyana for sizing. At crusher site, the chemical grade limestone in the size range of +50 to -100 mm for accept soda ash plant. The under sized material (-50 mm), which is generated at crusher site not at mine site is also high grade used in cement making in TCL's cement plant at Mithapur. This was stacked temporarily near the crusher site, away from the area of mining and transported at regular interval to the cement plant. So, no provision for dumping of overburden, waste material of sub grade minerals was given in the approved mining scheme.

The company was not done any research and development activities for utilization of Undersize(-50 mm) chemical grade limestone for production of Soda Ash so far.

There is practically no soil covering in this area. So provision for separate stacking of top soil was not made. However, the soil if found in pot holes or along the solution channels will be utilized for plantations.

V) AFFORESTATION : As per approved Mining Scheme phase-wise plantation schedule from 2003-04 onwards is given as below :

YEAR	PROPOSED INTENSITY OF PLANATATION	No. OF SAPLING PLANTED (Per hectare)	Survival rate(%)	Expenditure(Rs.)
2003-04	150	Nil	Nil	Nil
2004-05	180	Nil	Nil	Nil
2005-06	180	Nil	Nil	Nil
2006-07	180	Nil	Nil	Nil
2007-08	180	Nil	Nil	Nil

Besides that about 480 m long stone wall made along mined out area & 600 trees along lease boundary was proposed for safety purpose. Total budget for expenditure was Rs. 36000/- .

The above proposal was not implemented as per the approved mining plan /scheme because no mining operation since 1994 due to some legal problem.

VI) MINERAL BENEFICIATION : Except dry crushing the chemical grade limestone is being utilized without any further beneficiation. It is directly useable in lump form for the Soda ash manufacturing process. The desired grade required by the cement plant is being obtained by blending the limestone from different pits locations.

VII) SURFACE TRANSPORT : Blasted ROM limestone loaded into tippers by labors manually, for being unloaded in crusher Hopper /limestone stacking area. After crushing, the sized limestone for Soda Ash Plant is transported to the Plant site at Mithapur or the railway siding at Ranavav by trucks through transport agencies on contract. The railway carry part of the production from Ranvav siding to Mithapur.

VIII) LAND RECLAMATION & REHABILITATION : No proposal was given in approved mining scheme for land reclamation because in the



absence of filling material, the reclamation of the mined out area by way of back-filling is not a feasible proposition.

1.4(C) REVIEW OF THE COMPLIANCE POSITION OF CONDITION & STIPULATION IMPOSED IF ANY, WHILE APPROVING THE MINING PLAN :

अनुमोदित
APPROVED

No condition or stipulation were imposed while approving the mining scheme.

1.4(D) REVIEW OF COMPLIANCE OF VIOLATION POINTED OUT INSPECTIONS MADE UNDER MCDR - 1988 DURING LAST FIVE YEARS. THE POSITION EMERGING OUT OF YEARLY REVIEW OF MINING SCHEME / PLAN WHILE CHECKING UP IMPLEMENTATION OF THE MINING SCHEME/PLAN IN THE FIELD SHALL ALSO BE TAKEN NOTE OF AT THIS STAGE. :

No any inspections and violations were pointed out during last five years by any IBM authorities.

=====*****=====



2.0 PROPOSAL UNDER SCHEME OF MINING FOR FIVE YEAR :

2.1 Name and Address of the lessee :

अनुमोदित
APPROVED

Registered Office :

Tata Chemicals Limited.
Bombay House,
24, Homi Mody Street, Fort, Mumbai-1
Phone - 91-22-2049131, 2042947.

Works :

P.O. - Mithapur : 361345, Taluka - Okhamandal, Dist- Jamnagar, Gujarat.
Phone - 91-2892-22207, 22225. Fax - 223227.

Mines office :

Ranavav Quarries, P.O. Ranavav, Taluka - Ranavav, Dist - Porbander
(Gujarat). Phone - 91-2801 -236381. Fax. - 236320.
E mail:- mknayak@tatachemicals.com

The lessee M/s Tata Chemicals Ltd. is Public Limited Company and the affairs of the company are controlled by a Board of directors and The Directors are:

1. Sh. Ratan N. Tata, Bombay House, 24 Homi Mody Street, Fort, Mumbai-1.
2. Sh. R. Gopalkrishnan,same as above.....
3. Sh. Keshub Mahindra, Gateway building, Appolo Bunder, Mumbai-39.
4. Sh. D. M. Ghia, Kasturi Bldg. 3rd Floor, Jamshetji Tata Rd. Mumbai-20.
5. Sh. Nusli N. Wadia, Naville House, J.N. Heredia Mard, Mumbai-38.
6. Sh. R. C. Khanna, Allahabad Building, Mumbai-01.
7. Sh. A. N. Lalbhai, Arvind Mills, Naroda Road, A'bad - 6.
8. Dr. D.V. Kapur, 405, Aradhana Apprt., Sector-XIII, R.K.Puram, New Dehli-66.
9. Sh. N.A. Soonawala, Mumbai-01.
10. Sh. U. Mahesh Rao (Nominee of ICICI)
11. Sh. Homi R Khsrokhan (Managing Director)
12. Sh S. Srinivasan (Nominee of IDBI)
13. Sh. N.C. Sharma (Nominee of LIC)
14. Dr. T. Mukherjee (Additional Director)

Mr. Ratan N. Tata is Chairman of Company and Managing Director is nominated as Owner of the mines and Mr. M.K. NAYAK, Tata Chemicals Ltd. operates as Agent of Mines



2.2 NAME AND ADDRESS OF RQP: **अनुमोदित APPROVED**

SHAILENDRA SINGH BIST, Mining Geologist & RQP(IBM)
C/o UDAIPUR MIN-TECH. PVT. LTD.
206, APEKSHA COMPLEX, OPP. INDIAN OIL DEPOTT,
HIRAN MAGRI, SECTOR No. -11, UDAIPUR -313002 (RAJ.)
PHONE - 91-294-2489672 (Off.) 2641832(Res.)
E mail - sbist@udrmintech.com
RQP/UDP/128/95 A valid up to 7th Dec. 2011.

2.3 MINERAL TO BE MINED :

The Limestone is being mined out for the manufacture of Soda Ash & Cement in own plant located at Mithapur.

2.4 LEASE PARTICULARS :

The mining lease for limestone in respect of Aniali covering Survey No.207(area -16.21 hect) of Aniali village of Ranavav taluka was executed on dated 29/10/1964 for year 20 year. First renewal was executed on 21 / 8 / 1987 with effect from 29 / 10 / 84 for the period of 20 years i.e. upto 29/10/2004. Lessee has applied for 2nd renewal before one year of expiry lease period and it is still pending with State Govt..

2.5 DATE OF EXPIRY OF THE PERIOD OF MINING SCHEME :

The mining scheme was approved by Indian Bureau of Mines, Udaipur vide letter no. 682(23)MS-228/2003 MCCM(N) UDP Dated 29/01/2004 for period of 2003-04 to 2007-08 without any specific conditions. Date of expiry of Mining scheme period was Mar. 2008.

.....*****.....



3.0 EXPLORATION AND RESERVES

3.1 EXPLORATION

The area has been explored with the help of core drilling over the entire lease area. 17 number of bore holes were drilled on grid pattern having 100 meters interval to study the depth behavior of the limestone deposit properly.

Total 92.50 mtrs. were drilled. Depth-wise limestone core samples were collected. Core were split into equal halves and samples were powdered. After coning and quartering, half of the powder of all samples were sent to company central laboratory at Mithapur for complete analysis. Total 118 core samples were collected from 17 numbers of Bore -holes core and analyzed. Details of Bore - holes samples, analysis, lithology, etc. are enclosed as Annexure - I.

3.2 EXPLORATION TO BE CARRIED OUT

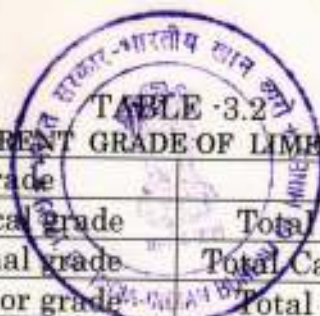
From the nature & extent of the deposit, the quantum and intensity of exploration already carried out in the area is considered adequate since the reserves & the quality have been proved with adequate degree of reliability. No additional exploration, therefore, is considered necessary in the area.

3.3 RESERVES

As per approved mining plan, Geological reserves of different grade limestone in entire leasehold area has been estimated as under: (Details of estimation of Reserves have been given in ANNEUXRE -II).

TABLE :- 3.1

Category of Limestone	UNFC Code	GEOLOGICAL LIMESTONE RESERVES(inTones)		
		Chemical	Marginal	Cement
Proved Reserves (111)		4,78,400	6,800	12,23,400


 TABLE -3.2
 SPECIFICATION OF DIFFERENT GRADE OF LIMESTONE PRESCRIBED BY TCL

Sr No	Grade	Characteristics
1.	Chemical grade	Total Carbonate \geq 92% & SiO ₂ <4%
2.	Marginal grade	Total Carbonate \geq 92% & SiO ₂ <4 to 5%
3.	Inferior grade	Total Carbonate <92% or SiO ₂ >5%

Two mining blocks namely Block I & Block II have been selected for next five years mining.

In order to get an uniform and substantial bench height, weighted average has been considered to get bench wise average quality by including small marginal and cement grade limestone patches which will be blended during excavation and will give average chemical grade limestone.

BLOCKWISE GEOLOGICAL RESERVES HAVE BEEN TABULATED BELOW:

BLOCK No.	LIMESTONE RESERVES		
	CHEMICAL GRADE	MARGINAL GRADE	CEMENT GRADE
BLOCK-I	1,13,400	1,100	45,900
BLOCK-II	3,22,200	4,000	5,31,000
TOTAL	4,35,600	5,100	5,76,900

(Refer Annexure No. III)

1. Mineable reserves of Chemical grade in Block -I & II = 4,43,900 Tones.
(Refer Annexure - IV)

Under size is generated from the Chemical grade limestone after its crushing. Its implies that the source of undersize limestone is the same which fed in to the crusher. Hence there is no change in Chemical properties.

3.4 DEPLETION OF RESERVES

3.4.1 Preliminary consideration : NO production of Chemical grade limestone raised during the period 1996-97 to 2007-2008.

3.4.2 Reserves available for future mining : Reserves available for future mining after depleting the mined out reserves are given in below :



Mineable reserves as per approved Mining plan	Reserves mined out during period 1996-97 2002-03	Reserves available for mining (1 - 2)
1	2	3
04,43,900 tones	NIL	04,43,900 tones

Reserves of chemical grade limestone is being fed to the crusher to get the requisite size (+50 to -100 mm) for Soda ash manufacturing. The undersize material (-50 mm) is generated from the chemical grade limestone only during size reduction and using for cement manufacturing with suitable blending with inferior grade. Separate cement grade limestone is not available within the chemical grade reserves. Hence for separate calculation of cement grade reserves is not done. Utilization under size limestone in cement industry is carried out with a view to conserve the mineral and to make its use after proper blending.

3.5 ADDITIONAL RESERVES ESTABLISHED (With basis and parameters considered) DURING THE PERIOD OF THE MINING SCHEME :

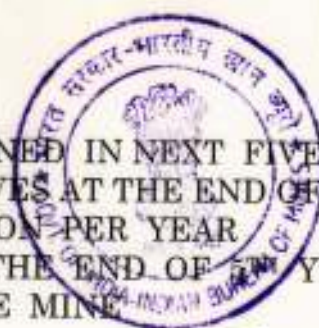
No additional reserves was established in the mine during the period of the last five years for which the mine plan was approved.

3.6 A MINEABLE RESERVES & ANTICIPATED LIFE OF THE MINE :

Mineable reserves have been calculated by tacking into account the reserves in proved categories of chemical grade only. Future rate of production will be maintained at 88000 tones per annum.

1. TOTAL GEOLOGICAL RESERVES	05,03,700 tones
2. LEFT ALONG LEASE BOUNDARY	36,400 tones
3. 5% MINING LOSES	23,400 tones
4. NET MINEABLE RESERVES	04,43,900 tones

5.	MINERAL TO BE MINED IN NEXT FIVE YEARS	4,40,000 tones
6.	REMAINING RESERVES AT THE END OF 5 TH YEAR	3,900 tones
7.	RATE OF PRODUCTION PER YEAR	88,000 tones
8.	LIFE OF MINE AT THE END OF YEAR	0.04 years
9.	TOTAL LIFE OF THE MINE	05 years.



NOTE :- 1) During estimation of reserves and life of mine only Chemical grade limestone & marginal grade(localize band) have been considered. Because company will be mining only for Chemical grade limestone. Whatever cement grade limestone will be generated during mining of chemical grade limestone, will be used for cement manufacturing with suitable blending with undersized and fines of chemical grade limestone Therefore cement grade limestone will be not considered for estimation of reserves and life of mine.

2) Main Adityana A1,F & D mine is going to exhausted within a year therefore requirement of limestone(0.88 lac/annum) for Soda Ash plant will be fulfill form this mine.

-----*****-----



4.1 METHOD OF MINING

4.1.1 Taking into consideration shape and nature of deposit and the targeted production the mine is being worked by manual opencast method of mining. Attempts have been made to design & exploit the deposit with minimum damage to environment & optimal utilization of limestone for Soda Ash & Cement manufacture. Chemical grade limestone occurring as compact layer, will be worked in two bench. Individual bench height not exceeding 3.0 mtr. The drilling is done with the help of 65 mm dia. down the hole drills (Drifter) or 100 mm wagon drill. The blasting is done mainly with ANFO as the column charge and Slurry emulsion explosive as the booster charge. Blasted limestone (ROM) will be loaded into tippers for being unloaded at crusher hopper for crushing & screening. Alternately it is proposed to get the ROM shifted at nearby sizing plot (outside the mining lease area) where sizing will be carried out manually. After sizing, the sized limestone (+50 to -100 mm for Soda Ash Plant) is transported to the Plant site at Mithapur by trucks through transport agencies. The under sized and inferior grade limestone will also be loaded in to trucks & transported to the cement plant at Mithapur or to any of the nearby Cement Plant.

4.2 DEVELOPMENT PLAN

As mentioned earlier that there is neither any top soil nor any overlying waste rocks strata as O/B to be removed as development work. However old stack of under sized (38760 Cum.) in Mining Block -I & II which will be remove in advance before start of mining and will be dispatch directly to Cement Plant at Mithapur. As such very nominal development work for proposed road making work will be required to start production from this mine. The present mining has been selected in Mining Block -I & II for next five year. The proposed mining will be started from one end(western

part- consider chemical grade limestone) of the lease area in mining block - II towards eastern direction in order to develop systematic mining benches towards mining block no. I. The existing road will be extended upto top bench. Therefore, the development and production plan have been described in 4.3.



The side of excavation shall be adequately benches shaped and secured as to prevent danger from fall of sides as per regulation 106 of the Metalliferous Mines Regulations 1961, Mines Act. 1952, Mines Rules 1955 & M.C.D.R. 1988.

4.3 DEVELOPMENT AND PRODUCTION PLAN FOR NEXT FIVE YEAR

4.3.1 Keeping in view the production capacity of the Soda Ash plant, future expansion plans & the availability of different grades of limestone from this mine, the production targets (in tones) as per approved mining scheme, from mine area for the period 2003-04 to 2007-08 has been given in Chapter -I (Review of Mining Scheme).

4.3.2 However, due to recession in the Soda Ash & Cement Industry and other legal problem the above targeted production could not be achieved. Now taking into consideration the balance reserves of limestone in lease area, the Soda Ash plant capacity & the future expansion program the limestone production targets (in tones) for the next five years from this lease as given below :

					(in lac tones)
YEAR	2008-09	09-10	10-11	11-12	12-13
Chemical grade	92714.83	92835.96	90767.72	83622.82	81228.27
Inferior grade	Nil	Nil	1957.00	8928.86	11598.62



4.3.3 Therefore, taking into consideration less than 05% as the mining losses, the mine is being designed and planned to handle about 0.92 lakh (average) tones of material so as to produce about 0.88 lakh tones of usable limestone for making Soda Ash & Cement by the Year 2008-09.

The present capacity of Soda Ash plant is 8.75 lakh /tones/year. For generating of one Soda ash, about 2.0 tones Chemical grade limestone is required. The Company has others leases of Chemical grade limestone for supplying materials to plant as well. Hence a planning of production 0.92 lakh tones of Chemical grade limestone /year has been suggested

First Year : (YEAR 2008-09)

During the year the actual limestone production from this mine is 0.92 lakh tones. During the year entire production of limestone from this mine will be from the bench 64.50 mRL towards section line J-J'(lengthwise) & M-M' (widthwise) in Mining Block No. II.

During the first year of operation no inferior grade will be generated. The likely position of the benches with height(3.0 m max.), roads & Plantation etc. in this mine area at the end of first year are shown in the plate no. 5.

At the end of first year total 1.088 hect of area is likely to be degraded. Bench - wise calculations as given below :

BENCH RL	CROSS SECTIONAL AREA(IN Sqm.)	AVERAGE THICKNESS (IN Mtr.)	VOLUME (IN Cum.)	TONNAGE	REMARKS
(A) CHEMICAL GRADE/INFERIOR GRADE LIMESTONE					Tonnage factor -2.06
64.50	11844.00	3.80	45007.20	92714.83	
Sub Total			45007.20	92714.83	
(B) INFERIOR GRADE LIMESTONE					
Sub Total			Nil	Nil	
AVAILABE CHEMICAL GRADE LIMETSONE			45007.20	92714.83	


Second Year : (YEAR 2009-10)

During the year the actual limestone production from this mine is 0.92 lakh tones. During the year entire production of limestone from this mine will be from the bench 64.50 mRL towards section line I-I' & J-J' (lengthwise) & L-L' & M-M' (widthwise) Block No. II and some part of Block No.-I.

During the second year of operation no inferior grade will be generated. The likely position of the benches, roads & Plantation etc. in this mine area at the end of second year are shown in the plate no. 5.

At the end of second year total 2.577 hect of area is likely to be degraded. Bench - wise calculations as given below :

BENCH RL	CROSS SECTIONAL AREA(IN Sqm.)	AVERAGE THICKNESS (IN Mtr.)	VOLUME (IN Cum.)	TONNAGE	REMARKS
(A) CHEMICAL GRADE/INFERIOR GRADE LIMESTONE					Tonnage factor -2.06
64.50	15540.00	2.90	45066.00	92835.96	
Sub Total			45066.00	92835.96	
(B) INFERIOR GRADE LIMESTONE					
Sub Total			Nil	Nil	
AVAILABE CHEMICAL GRADE LIMETSONE			45066.00	92835.96	

Third Year : (YEAR 2010-11)

Taking into consideration the fact that all the limestone is exposed on the surface & there are well developed faces the targeted production of limestone can be achieved without any difficulty.

During the year the actual limestone production from this mine is 0.92 lakh tones. During the year entire production of limestone from this mine will be from the bench 60.50 mRL towards section line I-I'



(lengthwise) & L-L' & M-M' (widthwise) in Mining Block No. II and some part of Block No.-I.

During the third year of operation 1867 tones of inferior grade will be generated. The likely position of the benches, roads & Plantation etc. in this mine area at the end of second year are shown in the plate no. 5.

At the end of third year total 4.166 hect of area is likely to be degraded. Bench - wise calculations as given below :

BENCH RL	CROSS SECTIONAL AREA(IN Sqm.)	AVERAGE THICKNESS (IN Mtr.)	VOLUME (IN Cum.)	TONNAGE	REMARKS
(A) CHEMICAL GRADE/INFERIOR GRADE LIMESTONE					Tonnage factor -2.06
60.50	15540.00	2.90	45066.00	92835.96	
Sub Total			45066.00	92835.96	
(B) INFERIOR GRADE LIMESTONE					
60.50	950.00	1.00	950.00	1957.00	
Sub Total			950.00	1957.00	
AVAILABE CHEMICAL GRADE LIMETSONE			44062.00	90767.72	

Fourth Year : (YEAR 2011-12)

Taking into consideration the fact that all the limestone is exposed on the surface & there are well developed faces the targeted production of limestone can be achieved without any difficulty.

During the year the actual limestone production from this mine is 0.92 lakh tones. During the year entire production of limestone from this mine will be from the bench 59.50 mRL towards section line I-I' (lengthwise) & L-L' & M-M' (widthwise) in Mining Block No. I & II.

During the fourth year of operation 8928 tones of inferior grade will be generated. The likely position of the benches, roads & Plantation etc. in this mine area at the end of second year are shown in the plate no. 5.



At the end of fourth year total 5.825 hect. of area is likely to be degraded. Bench wise calculations as given below :

BENCH RL	CROSS SECTIONAL AREA(IN Sqm.)	AVERAGE THICKNESS (IN Mtr.)	VOLUME (IN Cum.)	TONNAGE	REMARKS
(A) CHEMICAL GRADE/INFERIOR GRADE LIMESTONE					Tonnage factor -2.06
59.50	18720.00	2.40	44928.00	92551.68	
Sub Total			44928.00	92551.68	
(B) INFERIOR GRADE LIMESTONE					
59.50	7224.00	0.60	4334.40	8928.86	
Sub Total			4334.40	8928.86	
AVAILABE CHEMICAL GRADE LIMETSONE			40593.60	83622.82	

Fifth Year : (YEAR 2012-13)

Taking into consideration the fact that all the limestone is exposed on the surface & there are well developed faces the targeted production of limestone can be achieved without any difficulty.

During the year the actual limestone production from this mine is 0.92 lakh tones. During the year entire production of limestone from this mine will be from the bench 60.00 mRL towards section line L-L' (lengthwise) & E-E, F-F' & G-G' (widthwise) in Mining Block No. I & II.

During the fifth year of operation 11598 tones of inferior grade will be generated. The likely position of the benches, roads & Plantation etc. in this mine area at the end of second year are shown in the plate no. 5.

At the end of fourth year total 7.942 hect. of area is likely to be degraded. Bench wise calculations as given below :



BENCH RL	CROSS SECTIONAL AREA(IN Sqm.)	AVERAGE THICKNESS (IN Mtr.)	VOLUME (IN Cum.)	TONNAGE	REMARKS
(A) CHEMICAL GRADE/INFERIOR GRADE LIMESTONE					Tonnage factor -2.06
60.00	19592.00	2.30	45061.60	92826.90	
Sub Total			45061.60	92826.90	
(B) INFERIOR GRADE LIMESTONE					
59.50	7224.00	0.60	5630.40	11598.62	
Sub Total			5630.40	11598.62	
AVAILABE CHEMICAL GRADE LIMESTONE			39431.20	81228.27	

4.4 EXTENT OF MECHANISATION

Mining operation is carried out by open cast mining method. Atlas Halco & bvb-125 Drifter(ONE EACH) with Atlas XAH-210 (450 cfm) compressor will be used for drilling of blast holes of 65 /100 mm dia. respectively according to the bench height.

The blasted limestone (ROM) will be either transport by hire trucks to fed to the company's crusher plant located at Adityana Quarry where crushing of the limestone will be done in recover around 55% of sized (+50 to - 100mm) stone lumps of chemical grade limestone and rest 45% undersize (- 50 mm) or transported to plot out side the mine, where sizing of limestone will be done manually and recover around 70 to 85% of sized(+50 to - 100 mm) lumps of chemical grade limestone and rest 15-30% undersize (-50 mm). The sized stone to be used for Soda Ash production at company's Soda Ash plant located at Mithapur and undersized & inferior grade will be utilized for cement production at company's cement plant at Mithapur.

No pumping provisions are made as the rain water accumulation in the pit bottom during rainy season gets quickly dried up due to seepage through stratified and porous limestone strata.

4.5 DRILLING & BLASTING



4.5.1 Burden, Spacing, Depth & Sub-Grade Drilling

The mining method chosen involves the conventional drilling and blasting followed by loading. The company will done drilling by drifter machin. Considering the nature of the limestone deposit, the blast hole parameters proposed are as follows :

BROAD BLASTING PARAMETERS :

		Drifter/Wagon drill
Bench height	=	3.0 / 4.0 m
Depth of hole	=	3.3 / 4.4 m (10% sub-grade drilling)
Dia. of hole	=	65/ 83 mm
Burden	=	1.7 / 3.0 m
Spacing	=	2.0 / 4.0 m
Inclination of hole	=	5° to 10° from vertical
Volume of rock broken per hole	=	11.22 / 52.8 Cum.
Bulk density	=	2.06
Explosive efficiency	=	4.0 T/Kg. (For Chemical Grade Limestone)
Explosive per hole	=	5.78 / 26.4 Kg.

4.5.2 Explosive charge and loading Parameters

The explosive charge and loading parameters are proposed as under :

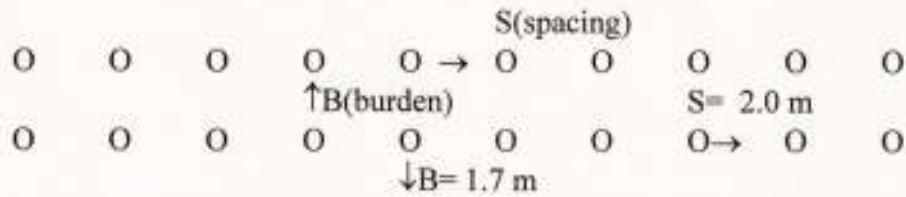
Diameter of cartridge	=	50 /83 mm.
Length of explosive column in the hole	=	2.3 m
Stemming	=	2 & 1.0 m
Type of initiation	=	Direct initiation
Point of Initiation	=	Bottom initiation

For the base charge, any cap-sensitive explosive and for column charge, any non cap-sensitive explosive would be used. The ratio of base charge to column charge would be 25:75.



4.5.3 Blasting Pattern

The pattern of initiation for blasting affects the fragmentation, vibrations, noise and muck piling after the blast. Of the various firing patterns used in blasting, the multi row square grid 'V' pattern of blasting with double row is proposed to be adopted in this mine.



Free face

Fig. 4.5 : Blasting Pattern

EXPLOSIVE : Different type of explosive, for use in opencast mines, are available in the country. The most popular are ANFO, LOX, Slurry and AN based explosives. All these explosive have certain advantages and disadvantages. However it has been found that in medium hard rocks like limestone, shale etc. ANFO along with some other high explosive as the booster / base charge is most suitable. It is therefore proposed to use ANFO as the primary column charge and some cap sensitive high explosive like Aquadyne / Super dyne etc. as the booster / base charge for blasting. However, during the rainy season or in water holes it is proposed to use slurry or emulsion explosives. It has been estimated that consumption of ANFO & other high explosives shall be in the ratio of 75 : 25. In order to calculate the explosive consumption per day, powder factor of 4.0 tones / kg. for limestone. Therefore, the yearly requirement of explosive as given below:

YEARLY EXPLOSIVE REQUIREMENT (PROJECTED)

YEAR	ROM		NO. OF HOLES Drifter/Wagon	EXPLOSIVE PER YEAR		DETONATOR PER YEAR
	TONES	VOL.		ANFO(KG)	SG(KG)	
1 st to 5 th	92631	44966	4007 / 851	17373	5791	4007 / 851

NOTE :- FRACTION ARE ROUNDED OFF.



EXPLOSIVE MAGAZINE : Transportation of explosive will be done by an "explosive van" (TATA-407-mini van). The company already has one explosive magazine near Ranavav Railway station, 1.5 kms away from this mine. The total capacity of storing 2000 kg. of category 2 explosive, 44000 Nos detonators, 30000 meters of detonating fuse and 20000 mtrs. Safety fuse. As this storage capacity is considered adequate to meet the requirement of all company mines therefore, no additional explosive magazine is proposed for this mine. The location of main magazine is shown on the Location plan (plate no.1) .

4.6 PROCAUTIONS TO BE OBSERVED DURING DRILLING & BLASTING :

To carry out the mining operations with precautionary measures, So that no adverse effect is caused to the working labors, the following steps will be taken -

- a) Four bags filled with sand, having about 50 Kg. of sand in each bag, shall be placed on top of the hole to be blasted. This will have a "muffled blasting" effect. The negative effects caused by any blasting could be mainly due to vibration, noise and fly rocks. The steps which are taken to minimize the effect of these hazards are out lined below :

I) Vibration Control

Vibration control is achieved by the following :-

- i) Blast holes are always initiated by either using short delay detonators or by using TLD & DTH with shock tube for true bottom initiation, rather than adopting instaneous detonating. Shock Tube technology with TLD & DTH effectively reduces ground vibration, Air blast, fly rocks & noise problems while giving very good fragmentation & desired muck piling.
- ii) Number of holes per delay and per blast is kept to minimum to guide the throw in the desired direction while keeping vibration and noise to minimum.
- iii) Multiple blasting and "V" pattern of firing is adopted to minimum forward throw and have a good rock pile.
- iv) Mostly holes are fired towards the free face.



- v) Use of ANFO, which has low velocity of detonation, also reduce the vibration problem.

II Noise Control

Noise control is achieved by the following:

- i) Shooting of large numbers of well designed blast holes hastily planned daily.
- ii) Detonating fuse if not used for trunk lines.
- iii) Blasts are planned to eliminate or minimize secondary blasting.
- iv) No plaster shooting is taken up as this is the main reason of noise pollution.

III Fly rock hazard control

- i) Stemming length is not kept less than the burden.
- ii) It is ensured that the burden is not excessive.
- iii) Inter row delay is selected in a manner so that each row pushes its burden in a forward rather than in an upward direction.

=====*****=====

5.0 HANDLING OF WASTE SUB-GRADE MATERIAL

As has been stated earlier, there is no O/B and there will also not be any generation of rejects as a result of the mining operations (no sizing at mine site).



5.1 SOIL HANDLING

As stated earlier the area which is mineralized is generally devoid of any soil. However, if any soil is encountered, it will be removed separately and will be utilized for tree plantation program.

5.2 SUB - GRADE MATERIAL HANDLING

The inferior grade limestone to be extracted separately from the interbands has an average total carbonate content of about 72% in the lease area & can not be directly accepted even for cement making. But with proper blending with very high grade crusher fines, this inferior grade limestone will be used in the cement factory of TCL at Mithapur.

The sub grade (inferior) mineral is mined in such a fashion that it is fed directly to cement plant by suitable blending either from this pit. In next year about 22484 tones sub grade (inferior) mineral will be mine-out.

The undersize material generated on crushing / sizing manually is estimated to be about 15% or 45% of the ROM production. With the rated production of chemical grade limestone from this mine at 92631 tones / annum in next five year, the annual generation of fines only is estimated at around 13894 / 41684 tones / year, i.e around 1389 or 4168 tones per month. The removal of these fines to the cement plant will be regular feature simultaneous with their generation.



5.3 WASTE MATERIAL HANDLING

No waste material will be generated during next five year mining, So question of waste material handling is not arise. However old stack of under sized (38760 Cum.) in Mining Block -I & II which will be remove in advance before start of mining and will be dispatch directly to Cement Plant at Mithapur.

-----*****-----



6.0 USE OF MINERAL

M/S TCL is manufacturing Soda Ash and Cement in its works at Mithapur in Jamnagar District. The entire limestone production from the mine is proposed for the manufacture of Soda Ash and Cement.

6.1 GRADE SPECIFICATION

The management specified the Soda Ash and Cement grade limestone requirement as under :

- CaCO₃ + MgCO₃ ≥ 92%
- SiO₂ < 4%
- Size + 50 mm to -100 mm

Limestone with the same total carbonate but with 4% or more of SiO₂ but not exceeding 5% is considered to be marginal quality but still acceptable for the manufacture of Soda Ash.

The broad chemical specification for cement grade limestone based on accepted norms evolved by the National Council for Cement and Building Materials and followed throughout the Indian Cement Industry are presented in Table 6.1.

TABLE - 6.1

BORAD SPECIFICATION FOR CEMENT GRADE RUN OF MINE LIMESTONE

Oxide Components	Acceptable range for Manufacture of Ordinary Portland Cement (%)	Limiting Values, taking into consideration other types of cement, scope of beneficiation and blending (%)
CaO	44-52	40

MgO	Max. 3.3	Max. 5
SiO ₂		
Al ₂ O ₃		
Fe ₂ O ₃		
Mn ₂ O ₃		< 3.0
R ₂ O(Na ₂ O + K ₂ O)		< 1.0
Total S as SO ₃	< 0.6	< 0.8
P ₂ O ₅	< 0.6	< 1.0
Cl	< 0.05	< 0.1



*To satisfy the LSF and the Silica and Alumina Moduli of the raw-mix

अनुमोदित
APPROVED
 0.5

* Lime Saturation Factor(LSF)	$\frac{\text{CaO} - 0.7\text{SO}_3}{2.8 \text{SiO}_2 + 1.18\text{Al}_2\text{O}_3 + 0.65\text{Fe}_2\text{O}_3}$	<u>Range in Raw Mix</u> 0.9 - 0.95
*Silica Modulus (SM)	$\frac{\text{SiO}_2}{\text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3}$	1.8 - 2.8
Alumina Modulus(AM)	$\frac{\text{Al}_2\text{O}_3}{\text{Fe}_2\text{O}_3}$	1.8 - 2.8

6.2 AVERAGE QUALITY OF LIMESTONE

Based on the result of geological investigation, the average quality of the chemical grade limestone and the inferior grade limestone within the lease area as given below:

	<u>Chemical Grade</u>	<u>Inferior Grade</u>
a) Total Carbonates (CaCO ₃ + MgCO ₃)	94.40%	72%
b) SiO ₂	2.70%	--

6.3 GRADE CONTROL

In the proposed method of working of the mine, the desired



grade of limestone required by Soda Ash plant is planned to be obtained by opening the entire width of Chemical grade limestone. As far as possible the limestone will be dispatched to the crusher in such a manner that no stacking of inferior grade limestone is done. Regular sampling of blast holes will be carried out to maintain the quality of limestone being dispatched to the crusher everyday.

अनुमोदित
APPROVED

6.4 CHANGES PROPOSED IN SPECIFICATION OF MINERAL BEING USED INCLUDING ANTICIPATED CHANGES AND NEW INDUSTRIES USING THE MINERALS.

There are no changes in proposed specification of the mineral being used. No new industries are likely to consume limestone produced from the mine. No change in the specification of limestone is anticipated from the consuming industries in near future.

6.5 SUB GRADE UTILISATION

The Inferior grade material and the fines from the crusher/sizing yard, which are basically of chemical grade composition, will be consumed by TCL's cement plant or to be supplied to the near by cement plants for cement manufacturing.

-----*****-----



7.0 CRUSHING AND BLENDING

7.1 CRUSHING / SIZING :

The ROM limestone will be sized either by crushing and screening or by manual sizing in a yard out side the Mining Dept. to produce +50 to -100 mm sized chemical grade limestone which is a prime requirement of Soda -Ash plant. No other beneficiation is applicable for limestone as it is to be directly consumed in same form and composition.

The under size (-50 mm) chemical grade limestone will be used for manufacturing of cement at Company's Cement plant at Mitahpur or be sold off to other Cement companies..

7.2 BLENDING AND QUALITY CONTROL :

As already stated, the chemical grade composition of the limestone mined from the area will be such that it will be directly useable in sized form for the Soda Ash manufacturing process. Therefore, the limestone produced will not be required any blending or beneficiation in a any plant.

The sub grade limestone recovered from after sizing of chemical grade limestone(under sized) will also be directly dispatched to the cement plant & necessary blending with inferior grade will be done at the cement plant. In next year inferior grade will be generated.

For quality control regular sampling of the blasted limestone and the cutting from the blast holes will be carried out.

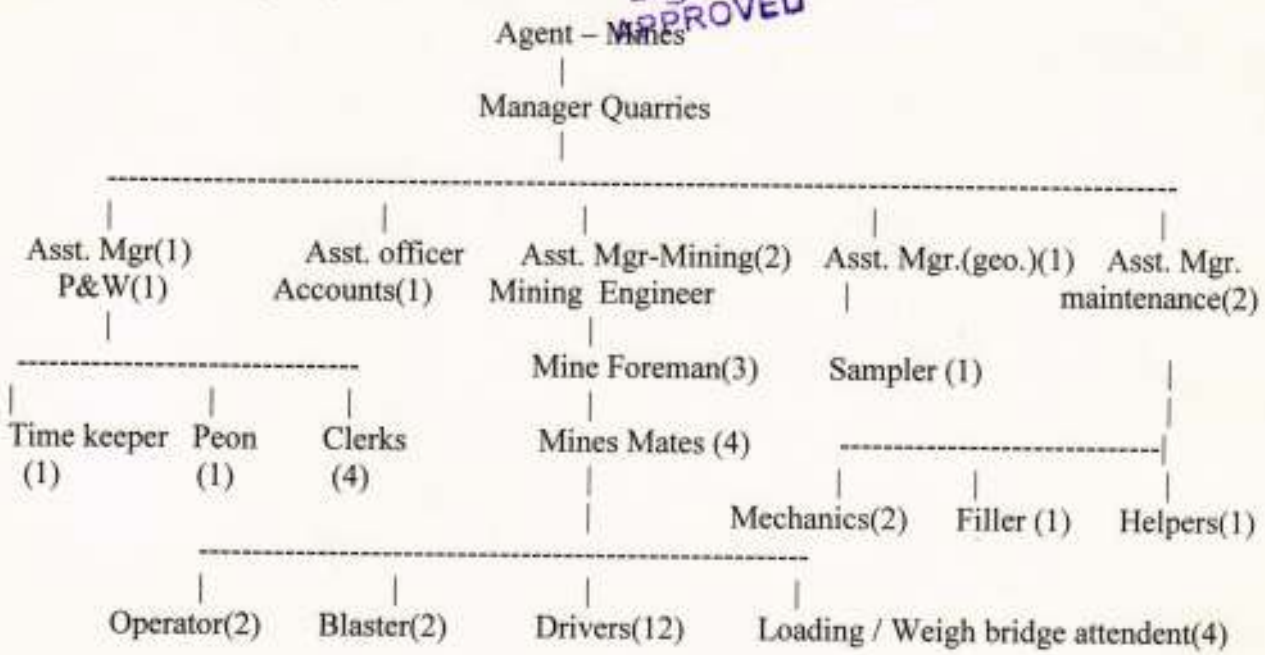
.....*****.....



8.0 EMPLOYMENT POTENTIAL

8.1 MANAGEMENT & SUPERVISORY PERSONAL :

Following suitably staffed by technical and allied men power already employed by company for mines. Details thereof given below :



Mining operation shall not be commenced conducted unless a qualified and other supervisory staff are appointed as required under the Regulation 34 (1)(a) of the MMR 1961.

8.2 LABOUR – SKILLED, SEMI – SKILLED & UN SKILLED PROPOSED TO BE EMPLOYED .

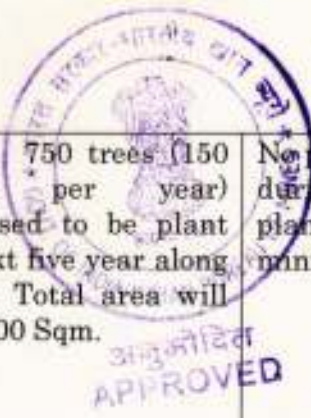
About 10 local labors will be employed in mining area for plantation, wire fencing, road spraying & watering of plants. Out of the total manpower to be engaged in the mine, one man will be depute as Chokidar.

=====*****=====

9.0 ENVIRONMENTAL MANAGEMENT PLAN

S.No.	ITEM	PROPOSAL AS PER APPROVED MINING PLAN, DATE OF APPROVED 29/1/2004	POSITION OF THE END OF 5 TH YEAR OF MINING PLAN PERIOD	PROPOSAL FOR NEXT FIVE YEAR PLAN PERIOD
1.	2.	3.	APPROVED	5.
1.	Top soil storage, preservation & utilization	There is no top soil in the lease area, however if some top soil is encountered in pot holes, solution channels during mining, then it will be recovered carefully and use for plantation purpose. And it will be analyzed.	No mining activities was done during approved mining plan period.	There is no top soil in the lease area, however if some top soil is encountered in pot holes, solution channels during mining, then it will be recovered carefully and use for plantation purpose.
2.	Land reclamation & Rehabilitation	No Provision was made for reclamation because no material left for backfilling, However proposed to utilize the present pit as a reservoir for water accumulation which will help in recharge of ground water after mineral exhausted.	No mining activities was during last five year plan.	Reclamation will be not possible due to non availability of waste or reject materials, so at the end of mining activities deepest part of pit will be use for rain water storage and other mined out part left for local benefits like groundwater recharge & grazing land.
3.	Waste dump management	No waste material will be required to removed in the course of mining.		No waste material will be required to removed in the course of mining.

4.	Afforestation Programme	Total 750 trees (150 trees per year) proposed to be plant in next five year along lease. Total area will be 5000 Sqm.	No plantation was done during last five year plan due to closed mining activities.	Total 750 trees (150 trees per year) proposed to be plant in next five year along lease boundary as shown in layout plan (refer plate no.08. Total area will be 5000 Sqm. Year wise table given in para-10
5.	Quality of Mine water	There is no surface water accumulation within the area of mining. Excavation of limestone in mining block will never touch to ground water table (55.0 mRL).	No mining activities was done during last five year.	In next five year no surface water will be accumulated, however during heavy rain accumulated water will be pumped out and discharge water will not carry any toxic or poisonous matter dissolved in the water. So no treatment of water is required in the mine. No ground water will be anticipated as ground water table in much below than proposed level.
6.	Fly rock problem & Precautions	There was no mentioned of fly rock problem and precautions for then in the approved mining plan.		In future, it is proposed to carry out the mining operation with precautionary measures so that no adverse



				effect is caused to the habitants.
7.	Quality of Air	The entire lease area is very calm and free from air sampling was done as per CCOM's circular 3/92 in five year.	Minning activities was closed since 1994 and no monitoring was done for Air.	In next five year Air monitoring will be done as per CCOM's circular 3/92 and submitted yearly to IBM office.
8.	Noise level	Noise level due to operation of loaders, drills, dumpers will not cause any problem to the inhabitants of this area because there is no human settlement in close proximity to the lease area. The nearest town (Ranavav) is far away to be affected by noise pollution. As few farmers are living around lease area there will be negligible impact of noise in and around 500mtrs. of this area.	No mining activities was done during last five year plan so no any impact was asses and no monitoring was done.	In next five year Noise level will be monitor as per CCOM's circular 3/91 and report will be submit to IBM office.
9.	Ground vibration	Electric blasting with delay detonators will be used carefully designed blasts to minimize ground vibration and noise due to blasting.	No mining activities was done during planed period.	Regular noise level and ground vibration monitoring will be carried out as per the CCOM's circular as when required because mining will be done by manual mining method .
10.	YEAR-WISE PLANTATIONS	<p>YEAR</p> <p>FIRST (2008-09)</p> <p>SECOND(2009-10)</p> <p>THIRD(2010-11)</p> <p>FOURTH(2011-12)</p> <p>FIFTH(2012-13)</p>	<p>AREA OF (IN Sqm.)</p> <p>PLANTATION</p> <p>1000</p> <p>1000</p> <p>1000</p> <p>1000</p> <p>1000</p>	<p>NUMBERS OF</p> <p>TREES.</p> <p>150</p> <p>150</p> <p>150</p> <p>150</p> <p>150</p>



It is proposed that company will be plant and maintained about 150 trees over 1000 Sqm. area of various species viz : Cocoanut, Mango, Sagwan & Neem etc. every year along northern lease boundary of lease area. One workman will be deputed for maintenance of the plantation throughout the year. Survival rate of the plantation will be 80%. Therefore next year 20% extra plants will be plant.

=====*****=====

10.0 CONCEPTUAL MINING PLAN

10.1 BACK GROUND INFORMATION :

10.1.1 The entire production from the mine will be used for captive consumption for the manufacture of Soda Ash plants at Mithapur. No Part of the production is proposed to be sold within the country or exported. The whole mineable reserves will be mined out within scheme period. Therefore life of mine will be only five year.

The present capacity of the Soda Ash plant is 8,75,000 t.p.a. for which the annual requirement of sized chemical grade limestone is of the order of 17,50,000 tones. The plant capacity is likely to be expanded to a million tones per annum requiring chemical grade limestone to the extent of about two million tones / annum in future. Only a part of the requirement of limestone for the Soda Ash plant is proposed to be supplied from this mine. The Company's Cement Plant with annual capacity of 4,40,000 tones at present is also likely to expand to a capacity of 8,80,000 tones/annum in future also. Besides the fines from the crusher & the interbands of inferior material obtained in the process of mining the chemical grade limestone, the cement plant meets its requirement of limestone of cement grade from other source as well.

10.1.2 Taking into consideration the topographical features, configuration of the deposit & the desired production level, the deposit is being worked by opencast method of mining with the help of drilling & blasting in coming year.

10.1.3 As per approved mining scheme mining was proposed with manual opencast method and same method will be adopt for next scheme period.



अनुमोदित
APPROVED

10.1.4 The balance mineable reserves of limestone in lease area are about 4,43,900 tones. Which is sufficient to sustain the proposed production level in next five year.

10.2 MINERAL EXPLORATION :

Further exploration has been not required because lease area is fully explored by bore hole drilling.

10.3 ULTIMATE PIT LIMIT :

The mineable reserves of limestone covers the entire lease-hold area. The mining will be carried out by manual open-cast method. Therefore, to ensure maximum recovery of reserves, the pit limit will be advanced upto the maximum permissible extent. Leaving statutory barrier of 7.5 mtrs. from lease boundary. Mainly one bench will be developed for limestone. The bench slope has been proposed to be kept at 90° from horizontal, while the ultimate pit slope has been kept 45° from horizontal. The limestone benches will be taken down upto the bottom contact of granophyre's to extract complete limestone from this deposit. The ultimate pit limit will be 590 m in length, 246 m in width and 3.50 m (59.5 mRL) in depth. At the end of mine life around 13.01 hect. area will be degraded. The conceptual plan and section plate no. 8 can be referred for highest and lowest pit bottom RL.

10.4 DISPOSAL OF WASTE :

It has been already stated that, this area is free from any overburden or waste material. Further, the undersize fines which will be generated during the crushing and screening will be dispatched to Mithapur day to day from the crusher site located at Adityana.



After the Chemical grade limestone is totally exhausted, the mining of cement grade limestone will be taken up and the material will be dispatched directly to cement plant at Mithapur. So, no provision for dumping of overburden, waste material or sub grade mineral has been kept in this proposal.

There is practically no soil covering in this area. So provision for separate stacking of top soil also has not been made. However, the soil if found in pot holes or along the solution channels will be utilized to fill the plantation pits and old stack of under sized which will be remove in advance and direct dispatch to cement plant at Mithapur

10.5 POST MINING LAND USE PATTERN :

At no point of time reclamation of the workout area by backfilling will not be possible as there is no O/B. Therefore the deepest part of pit at the end of mining will be use for rain water storage for the benefit of recharge of ground water.

The abandon pit will be fenced & plantation will be done all around the ultimate pit boundary and rest of mined out area use for grazing by local people. This plantation shall be completed at the end of mining activity. The cumulative land use pattern at the abandoned of mine as given below :

PARTICLUARS	AT THE END OF MINE LIFE (in Hect.)
A) Mining Activity	
i) Plantation	
a) Along lease boundary & Barren	0.86
b) For Grazing land	8.17
ii) Rain water storage	1.45
iii) old mined out area covered by fine stack	3.51
B) Remaining virgin Govt. waste land	2.22
TOTAL	16.21

.....*****.....



11.0 PROGRESSIVE MINE CLOSURE PLAN

1.0 INTRODUCTION

(A) NAME & ADDRESS OF LESSEE :

Registered Office :

Tata Chemicals Limited.
Bombay House,
24, Homi Mody Street, Fort, Mumbai-1
Phone - 91-22-2049131, 2042947.

Works :

P.O. - Mithapur : 361345, Taluka - Okhamandal, Dist- Jamnagar, Gujarat.
Phone-91-2892-222207, 222225. Fax :- 223227.

Mines office :

Ranavav Quarries, P.O. Ranavav, Taluka - Ranavav, Dist - Porbandar (Guj).
Phone - 91-2801 -36381. fax.:- 236320, E mail:- mknayak@tatachemicals.com

(B) LOCATION OF THE LEASE AREA :

District and State : Porbandar & Gujarat.
Taluka : Ranavav
Village : Aniali

(Refer Location Plan, Plate no.1)

(C) EXTENT OF THE LEASE AREA

Lease area - 16.21 Hect. (Non -Forest)

(D) LAND USE PATTERN :

SURVEY NO.	TYPE OF LAND	AREA (IN HECT.)
207	GOVT. WASTE LAND	16.21

Land use pattern present (May 2008) and end of scheme period as given below :

PARTICULARS	PRESENT POSITION OF THE AREA IN HECT.	POSITION AT THE END OF SCHEME PERIOD
A) Mining Activity		
i) Pits	9.54	13.01
ii) Road/Building	0.49	0.46
iii) Plantation & reclaimed	0.02	0.52
B) Remaining virgin Govt. waste land	6.156	2.22
TOTAL	16.21	26.10

(E) METHOD OF MINING :

Given in chapter 4.0 of present mining scheme. (Repetition is avoided here.)

(F) MINERAL PROCESSING

It is mentioned in chapter 6.0 of present mining scheme. Further discussion is avoided here.

1.1 REASONS FOR CLOSURE :

The reasons for mine closure are mainly mineral exhausted, natural calamity & economic crisis. The progressive mine closure plan has been prepared in compliance of Rule 23(B) MCDR 1988.

1.2 STATUTORY OBLIGATIONS :

The lessee is bound to submit the Progressive closure plan well in time either with Mining plan or Scheme of Mining. Lessee is bound to follow the terms and conditions as stipulated in the lease deed. In addition to it the rules pertaining to the Protection of Environment i.e Environment Act, Environment Rules and other associated rules with protection of environment has to be followed. During the course of mining the rules stipulated in Mines Act, Mines rules and Metalliferous Mines Regulation 1961, has to be followed. All other rules pertaining to the mining existing at that time has to be followed during the course of mining.



1.3 CLOSURE PLAN PREPARATIONS

NAME, ADDRESS AND REGISTRATION NUMBER OF THE RECOGNISED PERSONS WHO PREPARED THE PROGRESSIVE CLOSURE PLAN

SHAILENDRA SINGH BIST
RQP/UDP/128/95 A, valid up to 7-12-2011.

अनुमोदित
APPROVED

ADDRESS : M/S UDAIPUR MIN-TECH PVT. LTD.
"APEKSHA COMPLEX" 206, IInd FLOOR, OPP. INDIAN OIL DEPOT,
SECTOR NO. 11, HIRAN MAGRI, UDAIPUR -313002
PHONE - 2489672, e mail:- ssbist@udrmintech.com

Lessee will be himself implement the closure plan, no outside agency will be involve.

2.0 MINE DESCRIPTION

2.1 GEOLOGY :

I) TOPOGRAPHY & DRAINAGE PATTERN :-

The lease area falls within the latitude 21° 42' 06" to 21° 42' 24" & longitude 69° 49' 04" to 69° 49' 25". Lease area is a limestone outcropping ridge with moderate height. The lease area under reference is a waste land of Aniali village revenue area which is rocky covered and part of the area is covered with soil. There is no prominent water course available within and near lease area but during rainy season rain water flows SE to NW direction and meets nearby small nallas.

II) GENERAL GEOLOGY AND LOCAL GEOLOGY :-

The rock formation belonging to Late Pleistocene to Early Holocene age and designated as Miliolite Formation occupies the Saurashtra coastal plain extending from northwest of Porbandar to near Gopnath Point in Bhavnagar district. This formation overlaps the Pliocene and Miocene rocks and occurs directly over the Deccan Trap Formation of Upper Cretaceous to Paleocene age towards the north and east. The regional stratigraphic sequence is given in Table 2.1



TABLE 2.1
REGIONAL STRATIGRAPHIC SEQUENCE

AGE	FORMATION	ROCK TYPE
Recent(Holocene)	Alluvium, Recent Limestone	Alluvial Soil, Black-brown soil, coastal limestone
Early Holocene to Late Pleistocene	Miliolite Formation	Arenaceous limestone and calcareous sandstone
Pliocene	Dwarka Beds	Gypsiferous clay and sandy foraminifer limestone
Miocene	Gaj Beds	Clay and calcareous clay
.....	Unconformity.....
Paleocene to Upper Cretaceous	Deccan Trap	Basalt and its derivatives including the intermediate and acidic rock types like, dacites, granophyre's etc.

Following geological sequence will be observed in lease area at the ultimate depth of mining :

TABLE 2.2
LOCAL STRATIGRAPHIC SEQUENCE

AGE	FORMATION	ROCK TYPE
Pliocene	Dwarka Beds	Gypsiferous clay and sandy foraminifer limestone(inferior grade)
Miocene	Gaj Beds(Impersistent)	Clay & Calcareous clay.
Pliocene to Upper Cretaceous	Deccan Trap	Granophyre's

2.2 RESERVES : Reserves available for future mining given in chapter 3.0 of present mining scheme. (Repetition is avoided here.)

2.3 MINING METHOD : Mining is proposed in chapter 4.0 of this mining scheme. Hence repetition of the same is avoided here.

2.4 MINERAL BENEFICIATION : The chemical /inferior grade composition of the limestone mined from the area will be such that it will be directly useable in lump form for the Soda Ash / Cement manufacturing process. Therefore,



the limestone produced will not be required any blending or beneficiation in a any plant.

3.0 REVIEW OF IMPLEMENTATION OF MINING SCHEME INCLUDING PROGRESSIVE CLOSURE PLAN UPTO THE FINAL CLOSURE PLAN.

Review of Scheme of Mining with progressive mine closure plan has been discussed and given in details in Para 1.4 in Chapter 1.0 of this mining scheme. Hence repetition of the same is avoided here.

4.0 CLOSURE PLAN

4.1 MINED – OUT LAND : At the end of mining scheme period about 13.01 hect. area have been mined out.

At the time of closer the deepest part of mined out area will be use for rain water storage and rest of part for grazing by local people. Plantation will be done along lease boundary, consultation with forest deptt./local authority. Wire fencing will be done all along the lease boundary. At the end of scheme period 0.52 hect. area will be convert in to green belt. Details of works as proposed for closure during scheme period as given below :

ACTIVITY	First	Second	Third	Fourth	Fifth
1. PLANTATION(No. of plants)	150	180	180	180	180
2. WIRE FENCING (IN Mtrs.)	155	135	135	135	135

4.2 WATER QUALITY MANAGEMENT : The proposed mining activity for next five year is likely to remain above the existing water table 55.0 mRL, which is 5 mtrs. below the proposed mining in next five year. It is expected that mining will not effect the water table in the area.

The discharge mine water will not carry any toxic or poisonous matter dissolved in the water. So no treatment of water is required in the mine.



4.3 AIR QUALITY MANAGEMENT: For air pollution management at the final closure of mine, periphery of mined out land and top benches will be cover with good vegetation and make area fully green to controlled air pollution.

4.4 WASTE MANAGEMENT: There is practically no solid waste & overburden in its present mining areas. As no generation of Waste / OB in the area so question of disposal and configuration of waste dump is not arise.

4.5 TOP SOIL MANAGEMENT : The mining area lies on hilly land having rocky exposure and has no soil cover, therefore storage of soil is not required. So far no soil patches was encountered during mining.

4.6 TAILING DAM MANAGEMENT : There is no proposal of beneficiation for processing of mineral as is used directly in crude form, so no effluents will generated. Therefore no tailing dam is required.

4.7 INFRASTRUCTURE : In view of large distance between the mine & the plant, site services will be provided at the Mine or at a centralized place for the group of mine as these are all small & scattered units. So this mine will be completely controlled from central mines office at Adityana as common facilities to a group of mines. Only infrastructure required is office, store, shelter for workers are proposed. For drinking water brought from the tube well from near village & this water is potable. All most workers reach to work from the near by villages & go back after works.

4.8 DISPOSAL OF MINING MACHINERY : all mining machinery will be shift to another lease of same owner's.

4.9 SAFETY & SECURITY : Safety measures implemented to prevent access to surface opening, excavation will be taken as per Mine Act 1951, MMR 1961,

Mines Rules 1955 and MCDR 1988. Side of excavation shall be adequately benches & sloped as per Reg. 106 of MMR 61 to prevent fall of side.

Fencing will be made all around worked out pits as Safety & Security measures. Fencing will be done by iron wire with pillar and spacing between of pillars will be 3 m. and between wire will be 0.3 m. About 1.25 m height with 0.50 m width of Stone wall will be made. Length of wire fencing is mentioned in para no.7 in tabular form. A chokidars will be depute for security purpose

4.10 DISASTER MANAGEMENT AND RISK ASSESSMENT : The major mining Activities will not involve high risk accident like landslides, subsidence flood, fire, seismic Activities, tailing dam failure etc. No emergency plan is proposed for quick evacuation. During heavy rain mining activities is closed. The mining area is free from any activity as since long time no flood, landslides was reported in the region.

4.11 CARE & MAINTENANCE DURING TEMPORARY DISCONTINUANCE

No major care and maintenance will be required for mining activities during temporary discontinuance. All machinery either will be shifted to another mine of same lessee or shifted to workshop and garage for maintenance and working pits will be fenced properly and also depute chokidars for watch the area and look after for infrastructure and care for plantations.

5.0 ECONOMIC REPERCUSSION OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

5.1 Around 10 local persons as employed in the mine as chokidar and caretaker of plantations. They will be continued after closer of mine for look after the exiting plantations and allied job.



5.2 All the manpower and machinery will shift to another mine of same owner, hence the question of compensation does not arise at this stage. Compensation will be decided later in case of mine closure due to any natural calamity as per rules.

5.3 The chief satellite occupation is transportation of mineral. It will be also shift to another lease area of same owner.

5.4 Mining is not going to affect the nearby residents. Further no persons will be displaced from the lease area. The mined out area (in part) will be use for rain water storage after the completion of mine life. It will benefit the near by society.

5.5 The repercussion envisaged due to mine closure is that the employees make become unemployed. However their basic occupation will no be affected due to mining hence the question of repercussion not expected at this stage.

6.0 TIME SCHEDULING FOR ABANDONMENT

As projected in the conceptual plan the mineral is likely to be exhausted in next 5 years. In view of this the exact scheduling for closer in next scheme period as given in below table:

Time scheduling for mine closure during scheme period

Land : Stage Wise use reclamation Area(Ha.)					
S.No	Year	Disturbed	Afforested	Reclaimed/Rehabilitated	
				Grazing land	Rain water storage
1.	Present	10.034	0.02	--	--
3.	End of Mine Life	13.47	0.86	8.17	1.45

Proposed Land Use (till end of life) (in Ha.)

POST MINING LAND USE OF CORE ZONE WITH ENV. MANAGEMNET					
S.No.	Description	Area in Hect.	% of Total	Reclaimed/ Rehabilitated	
				Grazing land	Rain water storage
1.	Afforestation	0.86	5.31	--	--
2.	Undisturbed	2.22	13.69	--	--
3.	Under structure/Built-up	--	--	--	--
4.	Remaining mined out area covered by fine stack	3.51	21.65	--	--
5.	Reclaimed/ Rehabilitated	9.62	59.34	8.17	1.45
	Total	16.21	100	8.17	1.45

7.0 ABANDONMENT COST

The total abandonment cost for rehabilitation of mined out area before surrender the lease to state mining deptt. as per schedule given in below table:

ACTIVITY	First	Second	Third	Fourth	Fifth	RATE	AMOUNT (IN Rs.)
1. PLANTATION (No. of plants)	150	180	180	180	180	Rs. 40 per saplings	34800/-
2. POST PLANTATION CARE(No. of plants)	7500	16500	25,500	25,500	25,500	Rs. 50 per sapling	102,000/-
3. WIRE FENCING	155	135	135	135	135	Rs. 75 per mtrs.	52,125/-
TOTAL							188,925/-

8.0 FINANCIAL ASSURANCE

Details of area put in use as given below :

Sl No.	Head	Area put on use at start of plan (in Ha.)	Additional requirement during plan period (in Ha.)	Total (in Ha.)	Area considered as fully reclaimed & rehabilitated. (in Ha.)	Net area considered for calculation (in Ha.)
		A	B	C=(A+B)	D	E=(C-D)
1.	Area under Mining	9.544	3.466	13.01	-	13.01
2.	O/B-dump	-	-	-	-	-
3.	Road	0.49	-	0.49	0.03	0.46
4.	Infrastructure	-	-	-	-	-
5.	Green Belt	0.02	0.50	0.52	-	0.52
	GRAND TOTAL	10.054	3.966	14.02	-	13.99



Total area 13.99 hect. area will be remain for mine closure at the end of mining scheme period, therefore submit financial assurance of Rs. 3.50 Lac in form of Bank Guarantee as per rule 23(F) (2) of Mineral Conservation and Development (amendment) Rules, 2003 is attached as Annexure No V. If any change for financial assurance, IBM will be informed in advance.

APPROVED

अनुमोदित
Approved

9.0 CERTIFICATE

Enclosed with end of report.

12.0 ANY OTHER RELEVANT INFORMATION

NIL.

Date :- 10th OCT. 2008

क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

उदयपुर
UDAIPUR

S. S. BIST
Mining Geologist & RQP(IBM)
RQP/UDP/128/95 A

-----*****-----



अनुमोदित
APPROVED

CERTIFICATE

THE PROGRESSIVE MINE CLOSURE PLAN COMPLIES ALL STATUTORY RULES, REGULATIONS, ORDERS MADE BY THE CENTRAL OR STATE GOVERNMENT, STATUTORY ORGANIZATION, COURT ECT. HAVE BEEN TAKEN INTO CONSIDERATION AND WHEREVER ANY SPECIFIC PERMISSION IS REQUIRED WILL APPROACH THE CONCERNED AUTHORITIES.

PLACE - ADITYANA

FOR TATA CHEMICALS LTD.

DATE - 30 JUN. 2008

(M K Nayak)

AGENT & MANAGER- Mining Operations

TATA CHEMICALS LIMITED

Ranavav Quarry, At / P.O. RANAVAV - 360 550. Dt. Porbandar (GUJARAT).

Tel : (02801) 236381, Fax : (02801) 236320.

Registered Office : Bombay House, 24, Homi Modi Street, Mumbai 400 001.



अनुमोदित
APPROVED

DECLARATION

IT IS CERTIFIED THAT, THE ABOVE REPORT HAS BEEN PREPARED ON OUR CONSENT & APPROVAL, THAT WE WILL ABIDE BY ALL COMMITMENT MADE THEREUNDER. IN CASE OF DEFAULT, THE APPROVAL OF MINING PLAN / SCHEME OF MINING WITH PROGRESSIVE MINE CLOSURE PLAN WOULD BE WITHDRAWN.

PLACE - ADITYANA

FOR TATA CHEMICALS LTD.

DATE - 30 JUN. 08

(M K Nayak)
AGENT & MANAGER- Mining Operations

TATA CHEMICALS LIMITED

Ranavav Quarry, At / P.O. RANAVAV - 360 550, Dt. Porbandar (GUJARAT).

Tel : (02801) 236381, Fax : (02801) 236320.

Registered Office : Bombay House, 24, Homi Modi Street, Mumbai 400 001.



MINING ENGINEERS

CERTIFIED TRUE COPY OF THE RESOLUTION PASSED BY THE DIRECTORS OF TATA CHEMICALS LIMITED AT THEIR MEETING ON 30 OCTOBER 2000 AT BOMBAY HOUSE APPROVAL.

अनुमोदित
APPROVED

APPOINTMENT OF A DEEMED OWNER/OCCUPIER UNDER THE LIMESTONE AND DOLOMITE MINES LABOUR WELFARE FUND RULES, 1973

"RESOLVED that in supersession of the Resolution passed on 10 August 2000, Mr. Prasad R. Menon, Managing Director, be and is hereby nominated as the 'Deemed Owner/Occupier' of the Company's mining quarries in the vicinity of Junagadh and Jamnagar Districts, in place of Mr. R. Copalakeshnan, Vice-Chairman, and he shall have the powers and ultimate control over all affairs of the mining quarries and empowered to comply with the various provisions of the Mining Act and Rules framed therein and that the Company shall be responsible for all acts and deeds done by him in discharge of his duties as the 'Deemed Owner' of the Mines under the Limestone and Dolomite Mines Labour Welfare Fund Rules, 1973

RESOLVED FURTHER that a copy of this Resolution be sent to the Director of Mines Safety, Udaipur, for his information and record."

CERTIFIED TO BE A TRUE COPY
For Tata Chemicals Limited

S.U.K. MENON
Chief Financial Officer &
Company Secretary

Attested -
[Handwritten signature]
11/11/2000
S. U. K. Menon
11/11/2000



अनुमोदित
APPROVE



Prasad Menon
31201
APPROVED

3 January, 2001

TO WHOMSOEVER IT MAY CONCERN

I hereby give my consent to act as the Deemed 'Owner/Occupier' of the Company's Mining Quarries, under the Section 76 of Mines Act 1952 and Metalliferous Mines Regulations-1961, in terms of the Resolution passed by the Directors at the Board Meeting held on 30th October, 2000.

Prasad Menon
(Prasad Menon)

Prasad Menon
TRUE COPY
Prasad Menon
31/1/2001

TATA CHEMICALS LIMITED

ANNEXURE - I

LIMESTONE MINING LEASE S.NO -207/PART - ANALI(16.21 HECTS)
LITHOLOGICAL OF BORE HOLES DRILLED

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 16 SRL-64.65 BRL-53.41	A-16/1	0.00-0.63	96.83	94.90	---	2.12	0.62	98.48	C	White fine to medium grained soft Limestone (good quality)
	A-16/2	0.63-0.98	82.43	90.31	3.03	2.62	1.20	97.16	C	Pink, fine grained Limestone
	A-16/3	0.98-1.37	82.43	94.90	0.84	1.86	0.70	98.48	C	White, soft, medium grained Limestone
	A-16/4	1.37-2.45	78.37	94.10	0.67	2.52	1.09	98.38	C	White, fine grained soft Limestone
	A-16/5	2.45-2.85	78.37	92.30	1.34	2.38	1.08	97.11	C	White, fine grained soft Limestone
	A-16/6	2.85-4.65	77.46	93.90	0.84	3.13	1.31	99.18	C	White, soft, medium grained Limestone
	A-16/7	4.65-4.72	77.77	79.91	1.68	14.69	2.67	98.96	CEM	Reddish, fine to medium grained siliceous Limestone
	A-16/8	4.72-5.48 5.48-6.25	0.00 49.35	---	---	---	---	---	CAV CEM	--- Cavity --- Reddish, hard, compact fine grained siliceous Limestone.

B. H. NO. A-16 Closed AT 6.25 Mts

Note:

C - CHEMICAL GRADE LIMESTONE
CaCO₃ + MgCO₃ % - 92 % & above
SiO₂ % - 4 % & below

CEM - CEMENT GRADE LIMESTONE
CaCO₃ + MgCO₃ % - Less than 92 %
SiO₂ % - Above 5 %

Info.

M - MARGINAL GRADE LIMESTONE
CaCO₃ + MgCO₃ % - 92 % & above
SiO₂ % - Strictly between 4 - 5 %

CL - CLAY

CAV - CAVITY

APPROVED





APPROVED



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 20 SRL-65.80 BRL-58.78	A-20/1	0.00-0.68	92.64	94.30	0.67	2.01	0.88	98.69	C	Dull white, soft, medium grained Limestone.
	A-20/2	0.68-0.86	84.05	95.90	0.34	2.97	0.79	99.60	C	Dull white, soft, medium grained Limestone.
	A-20/3	0.86-1.37	84.05	95.90	0.34	2.47	0.92	99.63	C	Dull white, soft, fine to medium grained Limestone.
	A-20/4	1.37-1.72	98.48	95.10	0.67	2.18	0.86	99.61	C	-- Do --
	A-20/5	1.72-2.64	98.48	95.10	0.67	2.93	0.95	99.65	C	Buff, soft, fine grained Limestone.
	A-20/6	2.64-3.35	98.48	92.30	0.34	2.78	1.03	99.58	C	-- Do --
	A-20/7	3.35-3.73	98.48	94.90	0.50	5.44	1.60	99.68	CEM	Dull white, hard, compact Limestone with irregularly filled with ferrous and ferrogenous matter.
	A-20/8	3.73-4.12	0.00	---	---	---	---	---	CAV	-- Cavity --
	A-20/9	4.12-4.65	66.03	94.90	0.50	3.27	1.00	99.67	C	Buff, fine grained, hard Limestone.
	A-20/10	4.65-5.50	89.41	95.10	0.34	2.86	1.39	99.69	C	-- Do --
	A-20/11	5.50-5.65	0.00	---	---	---	---	---	CAV	-- Cavity --
	5.65-6.15	96.00	92.90	0.84	4.32	1.39	99.45	M	Buff, fine grained, hard Limestone.	
	6.15-6.32	0.00	---	---	---	---	---	CAV	-- Cavity --	
	6.32-7.02	61.42	88.71	1.01	6.46	3.29	99.47	CEM	Brown, hard, compact siliceous Limestone with irregular cavities coated with ferrogenous matter.	

B. H. NO. A-20 Closed AT 7.02 Mts

THE DIRECTOR, GEOLOGICAL SURVEY OF INDIA
 CENTRAL OFFICE, DELHI

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-21 SRL-62.42 BRL-57.19	A-21/1	0.00-1.37	93.84	95.10	0.34	3.23	1.00	99.67	C	White, soft, fine to medium grained Limestone
	A-21/2	1.37-2.28	76.92	93.90	0.50	3.68	1.02	99.10	C	-- Do --
		2.28-2.66	0.00	---	---	---	---	---	C	-- Cavity --
	A-21/3	2.66-3.15	APPROVED	91.94	0.17	6.32	1.26	99.65	CEM	Dull white soft medium to coarse grained Limestone.
	A-21/4	3.15-4.00	84.61	90.50	0.67	7.25	1.13	99.55	CEM	Buff, hard fine grained Limestone with cavities.
	A-21/5	4.00-4.72	71.42	76.92	0.84	17.29	4.66	99.71	CEM	Dull, brown, hard, compact fine, heavy siliceous Limestone.
	4.72-5.23	0.00	---	---	---	---	---	CAV	-- Cavity --	
B. H.NO. A-21 Closed AT 5.23 Mts										
A - 22 SRL-62.56 BRL-56.61	A-22/1	0.00-0.63	87.30	94.10	1.51	2.47	0.25	98.33	C	White, soft, fine to medium grained Limestone
	A-22/2	0.63-1.37	91.89	93.90	1.35	2.90	0.82	98.97	C	-- Do --
	A-22/3	1.37-2.13	89.47	92.30	1.01	4.80	1.12	99.13	M	Dull white fine grained compact Limestone.
		2.13-2.60	0.00	---	---	---	---	---	CAV	-- Cavity --
	A-22/4	2.60-4.35	93.33	89.10	1.68	7.29	1.31	99.38	CEM	Brown, hard, compact, heavy siliceous to coarse grained Limestone.
	A-22/5	4.35-4.65	100.00	90.50	1.35	6.39	1.46	99.70	CEM	Buff, medium grained, hard Compact Limestone.
	A-22/6	4.65-4.80	0.00	---	---	---	---	---	CEM	Soft Limestone.
4.80-5.95		13.04	76.31	1.16	18.78	2.73	99.00	CEM	Conglomeratic Limestone. Brown, hard, compact, fine grained Limestone, igneous rock pieces found embedded in Calcareous matrix.	
B. H. NO. A-22 Closed AT 5.95 Mts										



APPROVED



Digitized by www.scribd.com
 www.indianrock.com
 www.indianrock.com

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 23 SRL-62.20 BRL-57.48	A-23/1	0.00-0.38	90.90	92.10	0.50	5.94	1.13	99.67	CEM	Dull white, medium to coarse grained, soft Limestone.
	A-23/2	0.38-0.55	90.99	81.31	0.50	14.09	2.08	97.98	CEM	Dull, white medium to coarse grained soft Limestone.
	A-23/3	0.55-1.15	83.33	---	0.84	11.86	1.87	98.48	CEM	Buff, fine grained, hard compact Limestone with igneous rock fragments.
	A-23/4	1.15-1.75	100.00	91.90	0.50	5.18	1.97	99.55	CEM	Buff, fine grained limestone with plenty of irregular cavities with ferrous ore matter.
	A-23/5	1.75-2.14	94.28	89.71	1.51	6.49	1.78	99.49	CEM	Buff, fine grained hard compact Limestone with small cavities filled with reddish ferrous ore matter.
	A-23/6	2.14-2.45	90.32	93.90	0.50	4.04	0.90	99.34	M	Buff, fine to medium grained compact Limestone.
	A-23/7	2.45-2.67	0.00	---	---	---	---	---	CAV	-- Cavity --
	A-23/7	2.67-3.00	93.02	94.50	1.01	2.81	1.07	99.59	C	Buff, fine to medium grained compact Limestone.
	A-23/8	3.00-3.25	92.59	86.10	0.84	8.31	1.80	99.05	CEM	Brown, fine to medium grained heavy Limestone.
	A-23/9	3.25-3.96	92.59	92.90	1.35	2.59	2.76	99.60	C	Brown, fine grained, hard compact Limestone with reddish ferrogenous matter in cavity.
A-23/10	3.96-4.72	94.60	91.10	0.67	4.39	3.31	99.47	CEM	Brown, fine grained, siliceous Limestone.	

B. H. NO. A-23 Closed AT 4.72 Mts.



APPROVED
अनुमोदित



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 24 SRL-66.12 BRL-59.87	A-24/1	0.00-0.63	92.06	96.20	0.34	2.08	0.78	99.50	C	White, fine to medium grained soft Limestone
	A-24/2	0.63-1.25	88.70	96.20	0.34	2.17	1.10	99.51	C	-- Do --
	A-24/3	1.25-1.93	98.58	96.10	0.50	2.39	0.74	99.73	C	-- Do --
	A-24/4	1.93-3.02	91.07	95.10	0.50	2.77	0.55	99.92	C	-- Do --
		3.02-3.05	-	-	-	-	-	-	CEM	Reddish hard compact siliceous Limestone.
		3.05-3.73	-	-	-	-	-	-	CL	Cavity filled with siliceous ferrogenous clayey matter.
	A-24/5	3.73-4.22	90.69	91.10	0.84	5.79	1.24	99.15	CEM	Dull white fine grained Limestone ferrogenous matter (clayey) also fractures.
	A-24/6	4.22-4.75	100.00	94.90	0.50	3.42	1.05	99.87	C	Buff fine grained compact Limestone.
	A-24/7	4.75-5.05	79.10	94.90	0.34	3.38	1.33	99.05	C	Buff fine grained compact Limestone.
	A-24/8	5.05-5.42	67.57	87.31	0.50	9.76	2.30	99.87	CEM	Reddish, ferrogenous siliceous soft Limestone with igneous rock fragments.
	5.42-5.87	0.00	-	-	-	-	-	CAV	-- Cavity --	
A-24/9	5.87-6.25	65.21	91.50	0.84	5.63	1.84	99.31	CEM	Brown, hard, compact fine grained heavy siliceous Limestone fractured surface coated with ferrogenous and siliceous matter.	

B/H NO. A-24 Closed AT 6.25 Mts

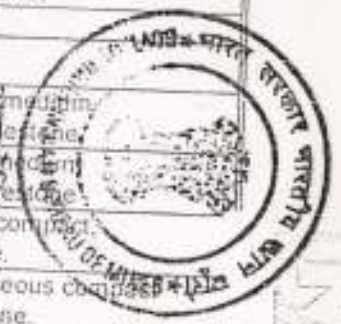
BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 25 SRL-61.28 BRL-55.18	A-25/1	0.00-0.43	88.37	95.50	0.34	2.89	1.16	99.89	C	Brown, fine to medium grained hard compact Limestone.
	A-25/2	0.43-0.65	90.90	93.70	0.84	4.29	1.12	99.95	M	-- Do -- siliceous.
	A-25/3	0.65-1.67	90.91	80.32	1.18	14.90	3.30	99.73	CEM	0.65-1.12 Reddish, hard heavy, compact, fine grained siliceous Limestone with irregular Cavities.
	A-25/4	1.67-4.20	62.50	91.90	0.34	6.42	2.10	99.96	CEM	Hard, compact, heavy Limestone.
	A-25/5	4.20-4.47	66.67	85.51	0.67	9.87	3.85	99.90	CEM	Reddish, hard, compact heavy Limestone.
	A-25/6	4.47-6.10	53.33	84.72	0.34	10.52	3.70	99.28	CEM	-- Do --
B/H NO. A-25 CLOSED AT 6.10 Mts.										
A - 26 SRL-64.07 BRL-57.82	A-26/1	0.00-1.30	90.16	95.90	0.50	2.57	0.99	99.96	C	White, soft medium grained Limestone.
	A-26/2	1.30-1.93	90.62	96.10	0.34	2.28	0.84	99.56	C	White, soft medium grained, fine grained Limestone.
	A-26/3	1.93-2.84	100.00	95.30	0.50	3.05	1.08	99.93	C	White to buff, compact fine Limestone.
	A-26/4	2.84-3.52	96.35	86.92	0.84	8.89	2.58	99.23	CEM	Brown, siliceous compact heavy Limestone.
	A-26/5	3.52-4.25	100.00	93.91	0.84	3.51	1.67	99.93	C	Brown, fine grained hard compact Limestone.
	A-26/6	4.25-4.79	13.16	86.72	0.84	9.27	2.37	99.20	CEM	Brown, hard compact heavy siliceous Limestone.
	A-26/7	4.79-6.25	95.96	89.52	0.50	7.23	2.35	99.20	CEM	Brown, fine grained compact heavy siliceous Limestone with irregular cavities coated with ferrogenous and siliceous matter.
B/H NO. A-26 CLOSED AT 6.25 Mts.										



APPROVED



APPROVED



GDAIPUR MIN-TECH. PVT. LTD.
MINING & GEOLOGICAL ENGINEERS

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	LITHOLOGY
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-27 SRL-63.98 BRL-56.23	A-27/1	0.00-0.63	87.30	99.93	0.34	2.67	0.93	99.84	C	White, fine grained soft Limestone.
	A-27/2	0.63-1.62	84.85	95.90	0.50	2.57	0.94	99.91	C	White fine grained compact, hard Limestone.
	A-27/3	1.62-2.38	63.64	96.10	0.50	2.09	0.78	99.31	C	White fine grained soft Limestone.
	A-27/4	2.38-2.87	98.00	91.31	0.67	6.09	1.83	99.90	CEM	Brown, medium to coarse grained, hard, compact Limestone.
	A-27/5	2.87-3.18	100.00	95.70	0.34	2.64	1.14	99.82	C	Brown, fine grained compact Limestone.
	A-27/6	3.18-3.61	76.75	95.30	0.34	2.54	1.30	99.88	C	Buff, fine grained, hard compact Limestone.
	A-27/7	3.61-3.91	66.65	94.30	0.84	3.15	1.52	99.61	C	Buff, fine to medium grained Limestone.
	A-27/8	3.91-4.37	92.68	91.90	1.35	3.26	2.85	99.36	C	Dark brown, fine grained compact Limestone with cavities coated with ferrogenous matter between 3.95 - 4.37 mts.
	A-27/9	4.37-4.92	91.48	90.10	1.35	4.90	3.43	99.98	CEM	Dark, brown, compact siliceous ferrogenous Limestone.
	A-27/10	4.92-5.30	87.90	87.91	1.35	6.49	3.74	99.49	CEM	Brown, fine grained hard, compact, siliceous, ferrogenous Limestone.
	A-27/11	5.30-6.40	94.28	90.86	0.84	4.76	3.21	99.67	CEM	Brown, fine grained, hard, compact Limestone.
	A-27/12	6.40-7.75	66.00	78.92	0.50	5.40	3.06	97.88	CEM	-do- with igneous rock pieces embedded in calcareous matr

B/H NO. A-27 CLOSED AT 7.75 Mts.

BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY	CHEMICAL ANALYSIS %					GRADE	DESCRIPTION
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 28 SRL-65.60 BRL-58.20	A-28/1	0.00-0.63	92.06	96.10	0.84	2.08	0.72	99.74	C	White, fine to medium grained limestone.
	A-28/2	0.63-1.32	100.00	95.30	0.57	2.02	0.82	99.81	C	-- Do -- compact, hard limestone.
	A-28/3	1.32-2.13	83.55	95.90	1.01	1.95	0.89	99.76	C	-- Do --
		2.13-2.82	0.00						CAV	-- Cavity --
	A-28/4	2.82-3.28	70.96	95.11	1.80	10.05	1.85	99.82	CEM	Dull white, siliceous Limestone
	A-28/5	3.28-3.80	87.95	95.70	0.15	2.55	1.18	99.93	C	Buff, fine grained hard, compact limestone.
	A-28/6	3.80-4.65	93.33	90.31	0.84	6.79	1.84	99.78	CEM	Dull white, compact, hard & siliceous Limestone.
	A-28/7	4.65-6.10	89.18	83.12	0.84	12.18	3.37	99.41	CEM	Chocolate colour, fine grained, hard, compact heavy limestone.
	6.10-6.40	50.00	80.72	1.01	14.14	3.52	99.39	CEM	-- Do --	
	6.40-7.40	0.00						CAV	-- Do --	
B/H NO. A-28 CLOSED AT 7.40 Mts.										
A-35 SRL-66.04 BRL-59.18	A-35/1	0.00-0.55	72.73	95.70	0.50	2.67	0.99	99.86	C	Dull white, fine to medium grained hard limestone.
	A-35/2	0.55-1.40	100.00	92.30	0.84	4.61	1.89	99.64	M	-- Do -- with cavities & fractures.
	A-35/3	1.40-1.60	83.33	94.30	0.84	3.91	1.42	99.75	C	-- Do --
	A-35/4	1.60-2.47	86.00	93.90	1.18	3.07	1.40	99.55	C	Buff, fine grained compact Limestone.
	A-35/5	2.47-2.67	85.00	88.71	0.67	7.25	3.24	99.87	CEM	Buff, fine grained, heavy siliceous Limestone.
	A-35/6	2.67-4.10	68.33	89.51	1.18	7.26	1.80	99.75	CEM	Brown, siliceous, compact heavy Limestone.
	A-35/7	4.10-4.82	45.08	85.91	0.67	9.62	2.93	99.13	CEM	Reddish, medium grained siliceous ferrogenous.
	A-35/8	4.82-6.58	34.55	84.91	1.01	9.97	3.86	99.75	CEM	-- Do --
	A-35/9	6.58-6.86	78.60	88.71	1.18	6.64	3.25	99.78	CEM	-- Do --
B/H NO. A -35 CLOSED AT 6.86 MTS.										

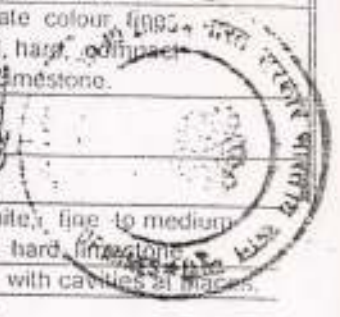


APPROVED



APPROVED

APPROVED





APPROVED



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A - 36 SRL-64.33 BRL-60.23	A-36/1	0.00-1.15	90.56	94.91	0.84	1.15	2.22	99.41	C	White, fine grained Limestone.
	A-36/2	1.15-1.67	96.15	94.52	0.84	2.32	2.50	99.68	C	-- Do --
		1.67-2.43	0.00	---	---	---	---	---	CAV	-- Cavity --
	A-36/3	2.43-3.05	45.16	91.91	0.54	5.68	1.00	99.09	CEM	Brown, fine grained, compact siliceous Limestone.
	A-36/4	3.05-3.68	80.00	95.30	0.34	2.92	1.24	99.80	C	Brown, hard, compact, fine to medium, grained Limestone.
	A-36/5	3.68-4.87	100.00	83.12	1.18	11.82	3.58	99.70	CEM	Reddish, hard, compact, siliceous, ferrogenous Limestone.
A-36/6	4.87-6.10	83.33	66.53	0.84	28.12	3.57	99.06	CEM	-- Do --	
B/H No. A-36 CLOSED AT 6.10 MTS.										
A-43 SRL-68.62 BRL-65.04	A-43/1	0.00-0.35	80.00	96.30	0.50	2.08	0.68	99.56	C	Buff, fine to medium grained Limestone.
	A-43/2	0.35-0.84	81.63	95.30	0.50	2.71	0.98	99.79	C	-- Do --
	A-43/3	0.84-1.30	71.74	95.30	0.50	2.20	1.24	99.24	C	-- Do --
	A-43/4	1.30-2.20	70.00	95.30	0.50	2.84	1.24	99.88	C	Brown, medium to coarse grained, hard, compact Limestone.
	A-43/5	2.20-3.58	70.00	94.30	0.50	2.90	1.64	99.34	C	-- Do --
B/H No. A-43 CLOSED AT 3.58 MTS.										
A-44 SRL-68.14 BRL-64.34	A-44/1	0.00-0.38	89.58	96.29	0.50	2.30	0.71	99.80	C	White, fine to medium, grained, Limestone.
	A-44/2	0.38-1.85	58.44	96.29	0.34	2.24	0.76	99.63	C	-- Do --
	A-44/3	1.85-2.05	75.00	91.90	1.85	3.76	1.27	98.78	C	-- Do --
	A-44/4	2.05-3.80	63.95	81.51	1.68	1.90	3.52	98.61	CEM	Brown to reddish, siliceous, ferrogenous hard, compact Limestone with cavities.
B/H NO. A-44 CLOSED AT 3.80 MTS										

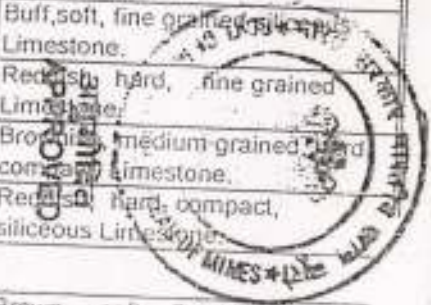
भारत सरकार
भू-विज्ञान सर्वेक्षण विभाग
लखनऊ



APPROVED
 श्री गणेश



BORE HOLE No.	SAMPLE No.	HORIZON (DEPTH) IN Mts.	RECOVERY %	CHEMICAL ANALYSIS %					GRADE	
				CaCO ₃	MgCO ₃	SiO ₂	R ₂ O ₃	TOTAL		
A-50 SRL-73.41 BRL-70.23	A-50/1	0.00-0.50	82.50	95.30	0.50	2.85	1.12	99.78	C	Buff, fine to medium grained Limestone.
	A-50/2	0.50-1.52	66.67	95.32	0.84	7.15	2.20	99.11	CEM	Brown to buff, hard, compact, siliceous ferrogenous Limestone.
	A-50/3	1.52-3.18	42.66	88.92	1.10	7.04	2.68	99.65	CEM	Chocolate to reddish colour very hard, compact, siliceous Limestone.
B/H NO. A-50 CLOSED AT 3.18 MTS.										
A-51 SRL-70.58 BRL-67.35	A-51/1	0.00-0.20	90.91	90.51	0.34	7.72	1.12	99.69	CEM	Buff, soft, fine grained Limestone.
	A-51/2	0.20-0.55	100.00	77.00	2.80	6.16	2.60	99.56	CEM	Reddish hard, fine grained Limestone.
	A-51/3	0.55-1.30	90.91	94.13	0.84	3.08	1.66	99.89	C	Brown, medium grained compact Limestone.
	A-51/4	1.30-3.23	29.19	90.72	0.50	6.29	2.40	99.91	CEM	Reddish hard, compact, siliceous Limestone.
B/H NO. A-51 CLOSED AT 3.23 HTS.										
A-52 SRL-69.98 BRL-67.15	A-52/1	0.00-0.30	68.75	81.91	0.67	4.40	2.94	99.92	CEM	Brown, soft, fine grained siliceous Limestone.
	A-52/2	0.30-0.73	100.00	87.91	0.67	8.60	2.67	99.85	CEM	Brown, hard, compact, siliceous Limestone.
	A-52/3	0.73-1.30	100.00	84.61	0.17	2.41	2.70	99.89	CEM	-- Do --
	A-52/4	1.30-1.98	89.70	89.41	0.00	8.29	2.28	99.93	CEM	Chocolate colour, hard, compact siliceous, Limestone.
	A-52/5	1.98-2.83	64.70	86.40	4.31	6.07	2.62	99.40	CEM	Brown, hard, compact siliceous, Limestone.
B/H NO. A-52 CLOSED AT 2.83 MTS.										



THE INSTITUTE OF ENGINEERS
 CIVIL ENGINEERS
 GEOLOGICAL ENGINEERS



TATA CHEMICALS LIMITED

ANNEXURE -II

LIMESTONE MINING LEASE -S.NO -207/PART - ANALI(16.21 HECTS)
STATEMENT SHOWING GEOLOGICAL RESERVE OF DIFFERENT CATEGORY LIMESTONE

SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE APPROVED (in mt)	IN SITU VOLUME (in m ³)	SPECIFIC GRAVITY	INSITU RESERVE OF LIMESTONE		
					CHEMICAL GRADE (in MT)	MARGINAL GRADE (in MT)	CEMENT GRADE (in MT)
EE'	258.75 (C)	93.00	24063.75	2.06	49,600	---	---
	123.75 (CEM)	93.00	11508.75	2.06	---	---	23,700
	9.00 (CAV)	15.00	135.00	2.06	---	---	(-) 300
FF'	312.00 (C)	100.00	31200.00	2.06	49,600	---	23,400
	8.80 (CEM)	22.00	193.60	2.06	64,300	---	---
	4.40 (CAV)	11.00	48.40	2.06	(-) 400	---	400
	112.50 (CEM)	100.00	11250.00	2.06	(-) 100	---	---
	16.00 (M)	32.00	512.00	2.06	---	---	23,200
						1,100	(-) 1,100
GG'	1510.65 (CEM)	70.00	1,05,745.50	2.06	63,800	1,100	22,500
	375.00 (CEM)	30.00	11250.00	2.06	---	---	2,17,800
	14.40 (C)	32.00	460.80	2.06	---	---	23,200
	31.80 (C)	60.00	1908.00	2.06	900	---	(-) 900
	194.00 (C)	70.00	13580.00	2.06	3,900	---	(-) 3,900
	67.50 (C)	30.00	2025.00	2.06	28,000	---	(-)28,000
	7.50 (CEM)	25.00	187.50	2.06	4,200	---	(-) 4,200
	12.95 (M)	37.00	479.15	2.06	(-)400	---	400
	11.2C (M)	28.00	313.60	2.06	---	1,000	(-) 1,000
	6.00(CAV)	10.00	60.00	2.06	---	600	(-) 600
	3.00(CAV)	10.00	30.00	2.06	---	---	(-) 100
						---	(-) 100
						36,600	1,600

अनुमोदित
APPROVED



अनुमोदित
APPROVED

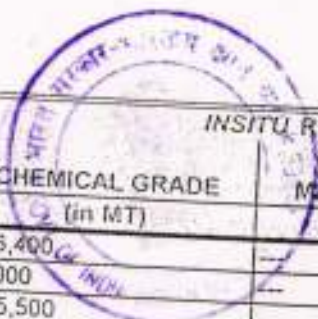


TATA CHEMICALS LIMITED
SHEKHUPURA, JALANDHAR

SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE (in mt)	INSITU VOLUME (in m ³)	SPECIFIC GRAVITY	INSITU RESERVE OF LIMESTONE		
					CHEMICAL GRADE (in MT)	MARGINAL GRADE (in MT)	CEMENT GRADE (in MT)
HH'	710.45 (C)	100.00	71045.00	2.06	1,46,400	---	---
	236.20 (C)	39.00	9211.00	2.06	19,000	---	---
	220.80 (CEM)	100.00	22080.00	2.06	(-)45,500	---	---
	36.00 (CEM)	39.00	1404.00	2.06	(-) 2,900	---	45,500
	937.30 (CEM)	39.00	36554.70	2.06	---	---	2,900
	1931.60 (CEM)	100.00	193160.00	2.06	---	---	75,300
	3.00 (M)	12.00	36.00	2.06	---	---	397,900
	13.20 (CAV)	22.00	290.40	2.06	---	100	(-) 100
II'	550.00 (C)	100.00	55000.00	2.06	1,17,000	100	(-) 600
	33.06 (M)	58.00	1917.48	2.06	1,13,300	---	5,20,900
	131.04 (CEM)	100.00	13104.00	2.06	(-)4,000	---	---
	8.67 (CAV)	26.00	225.42	2.06	(-)27,000	4,000	---
	839.16 (CEM)	100.00	83916.00	2.06	---	---	27,000
JJ'	597.64 (C)	100.00	59764.00	2.06	82,300	4,000	1,70,900
	423.70 (CEM)	100.00	42370.00	2.06	1,23,100	---	1,94,400
KK'	1027.18 (CEM)	72.00	73956.96	2.06	1,23,100	---	87,300
	225.06 (CEM)	45.00	10127.70	2.06	---	---	87,300
	12.60 (C)	42.00	529.20	2.06	---	---	1,52,400
	38.40 (C)	62.00	2380.80	2.06	1,100	---	20,900
					4,900	---	(-) 1,100
				6,000	---	(-) 4,900	
			Total →	4,78,400	6,800	12,23,400	

Note :

- C = Chemical grade limestone
- M = Marginal grade limestone
- CEM = Cement grade limestone
- CAV = Cavity



APPROVED

APPROVED



GOVERNMENT OF KARNATAKA
 DEPARTMENT OF GEOLOGY
 BANGALORE



APPROVED



ANNEXURE - III

TATA CHEMICALS LIMITED

LIMESTONE MINING LEASE - S.NO -207/PART - ANALI(16.21 HECTS)
STATEMENT SHOWING GEOLOGICAL RESERVES OF DIFFERENT CATEGORY(GRADE) LIME STONE IN MINING BLOCK I AND II

BLOCK	SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE (in mt)	INSITU VOLUME (in m ³)	SPECIFIC GRAVITY	RESERVES OF LIMESTONE			REMARKS
						CHEMICAL GRADE (C) (in MT)	MARGINAL GRADE (M) (in MT)	CEMENT GRADE (CEM) (in MT)	
I	EE'	258.75 (C)	93	24,063.75	2.06	49,600	---	---	Reserves figures have been rounded upto nearest hundred.
		123.75 (CEM)	93	11,508.75	2.06	---	---	23,700	
	FF'	9.00 (CAV)	15	135	2.06	---	---	23,700	-Cavity-
		312.00 (C)	100	31,200.00	2.06	---	---	(-) 300	
		8.80 (CEM)	22	193.6	2.06	(-) 400	---	---	
		4.40 (CAV)	11	48.4	2.06	(-) 100	---	400	
		112.50 (CEM)	100	11,250.00	2.06	---	---	---	
		16.00 (M)	32	512	2.06	---	---	23,200	
							1,100	(-) 1,100	Cavity in chemical grade.
					Total=	1,13,400 MT	1,100 MT	45,900 MT	
II	HH'	587.14 (C)	100	58,714.00	2.06	1,16,800	---	---	This thin band of cement grade limestone has been considered for blending with chemical grade limestone.
		180.42 (CEM)	100	18,042.00	2.06	---	---	37,200	
	1025.24 (CEM)	100	1,02,524	2.06	---	---	2,07,100		
II'		550.00 (C)	100	55,000.00	2.06	1,13,300	---	---	cement grade limestone at the bottom of chemical grade limestone.
		33.06 (M)	58	1917.48	2.06	(-) 4,000	4,000	---	
									Marginal grade limestone considered for blending.

SUBMITTED TO THE DIRECTOR GENERAL OF MINES, GOVT. OF INDIA

BLOCK	SECTION ALONG	CROSS SECTIONAL AREA (in m ²)	MEAN DISTANCE (in mt)	INSITU VOLUME (in m ³)	SPECIFIC GRAVITY	RESERVES OF LIMESTONE			REMARKS
						CHEMICAL GRADE (C) (in MT)	MARGINAL GRADE (M) (in MT)	CEMENT GRADE (CEM) (in MT)	
		131.04 (CEM)	100	13,104.00	2.06	(-)27,000	---	27,000	Cement grade limestone considered for blending.
		8.67 (CAV)	26	225.42	2.06	---	---	(-) 500	
		839.16 (CEM)	100	83,916.00	2.06	---	---	1,72,900	
	JJ'	597.64 (C)	100	59,764.00	2.06	1,23,100	---	---	Cement grade limestone at the bottom of chemical grade limestone.
		423.70 (CEM)	100	42,370.00	2.06	---	---	87,300	
					Total	3,22,200	4,000	5,31,000	
					Grand Total of block I & II.	4,35,600	5,100	5,76,900	

Special Note:

(i) 4000 MT Marginal grade and 64,100 MT cement grade limestone which occur with in the chemical grade limestone bands have been considered blendable as the average quality (taking weighted average) worked out to be chemical grade limestone.

(ii) Breakup of blendable chemical grade Limestone reserve is given below:

(a) Block-I	1,13,400 + 400 = 1,13,800 MT I
(b) Block-II	3,22,200 MT (C)
	4,000 MT (M)
	37,200 MT (CEM)
	26,500 MT (CEM)
Total->	3,89,900 MT 3,89,900 MT ...II
Gross Total -->	5,03,700 MT ...I+II

- (iii)
- | | |
|-----|---------------------------|
| C | =Chemical grade limestone |
| M | =Marginal grade limestone |
| CEM | = Cement grade limestone |
| CAV | = Cavity |



**अनुमोदित
APPROVED**

**अनुमोदित
APPROVED**



TATA CHEMICALS LIMITED

LIMESTONE MINING LEASE -S.NO -207/PART - ANIALI(16.21 HECTS)

STATEMENT SHOWING MINEABLE RESERVES OF CHEMICAL GRADE LIMESTONE IN MINING BLOCK I AND II

BLOCK	GEOLOGICAL (INSITU) RESERVES			TOTAL CHEMICAL GRADE LIMESTONE (BLENDED) RESERVES (in MT) A+B+C=(D)	RESERVES TO BE LEFT FOR BENCHING AND BARRIORS (in MT) (E)	DEDUCTION FOR GEOLOGICAL UNCERTAINTIES AND MINING LOSSES @ 5% (in MT) (F)	TOTAL DEDUCTION (in MT) B+F=(G)	NET MINEABLE RESERVES (in MT) D-G=(H)
	CHEMICAL GRADE LIMESTONE (in MT) (A)	MARGINAL GRADE LIMESTONE (TO BE BLENDED WITH CHEMICAL GRADE LIMESTONE) (in MT) (B)	CEMENT GRADE LIMESTONE (TO BE BLENDED WITH CHEMICAL GRADE LIMESTONE) (in MT) (C)					
BLOCK I	1,13,400	-	400	1,13,800	20,200	4,700	24,900	88,900
BLOCK II	3,22,200	4,000	63,700	3,89,900	16,200	18,700	34,900	3,55,000
			TOTAL	5,03,700	36,400	23,400	59,800	4,43,900



अनुमोदित
APPROVED



अनुमोदित
APPROVED



गुजरात गुजरात GUJARAT

H 686531

अनु. नं. २३९३ २२५५३ १००५
 भारतीय न्यायिक नाम ...
 र. नाम ...
 हस्त ...
 भारतीय न्यायिक सहीर ...
 वा. १५/११
 सा. नं. DM-STP : 594
 (क. गुना आजी लोक सुरण क्रांती)

२२५५३
 सुरण क्रांती

To,
 The Regional Controller of Mines
 Indian Bureau of Mines,
 Udaipur Region,
 Udaipur

Bank Guarantee towards Security

In consideration of the Regional controller of Mines, Indian Bureau of Mines, Government of India, Udaipur Region, hereby agreed to exempt M/S Tata Chemicals Limited (hereinafter referred to as the Company) from depositing **Rs. 3.50 Lacs** towards the security in lieu of the said Company having agreed to furnish a Bank Guarantee for the said sum of **Rs. 3.50 Lacs** as required under the terms and condition as prescribed under Rule 23 (F) (2) of MCD (amended) Rules, 2003.

0370010.11/000205



2 :-

અનુમોદિત
APPROVED

The Bank Guarantee as provided to cover up the expenses in the event of the company fails to implement various reclamation suggested in the Mining Scheme of Limestone - Mining Lease for **16.21 Hectares**, under the renewal grant, and the various activity suggested for the reclamation of the mined out land which confined to **13.99 Hects.** in the mining lease in **S. No. 207/P** of Village: **Aniall**, Taluka: **Ranavav**, District: **Porbandar** of Gujarat State.

Notwithstanding anything contained therein above our bank liability under this guarantee restricted to **Rs. 3.50 Lacs** and shall remain in force up to 5 years from 17-09-2008 to 16-09-2013. We shall be discharged from all liability under the guarantee hereafter.

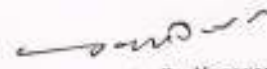
Notwithstanding anything contained herein

- A) Our Banks Liability under this guarantee shall not exceed **Rs. 3.50 Lacs**. (Rupees Three Lac fifty thousand only).
- B) This Bank Guarantee shall remain valid up to **16-09-2013**. (Sixteenth September two thousand thirteen).
- C) Bank is liable to pay guaranteed amount or any part thereof under this guarantee only and if you serve upon our bank written claim or demand on or before **16-09-2013**.

In witness whereof the Bank through the authorized officer has set its hand.

Date: 17/9/08
Place: Nitunapur


૨૦

Bank of Baroda

Dr. Manager
Sur (S), Di. Jamnagar

037096FIN000208



गुजरात गुजरात GUJARAT
 प्रतीद्वार नं. 6136
 प्रतीद्वार नं. नाम 21 3 मि. 8-27
 रवेपासी 21/11/21
 सरनामं
 तारीख 20-11-21 सज पोस्ट भाखार
 राधायाय
 ला. नं. 54
 प्रतीद्वारनी सही
 21/11/21

10AA 900203

I, M K Nayak, Agent of Aniali Limestone Mine of Tata Chemicals Ltd.
 (S. No. 207/P, Lease area 16.21 Hectares), situated in Village: Aniali, District:
 Porbandar, State: Gujarat, on behalf of Tata Chemicals Ltd., undertake as
 follows:


- A Progressive mine closure plan as required under Rule 23(B)(1) of
 MCDR, 1988 has been prepared by M/s. Udaipur Min Tech, Udaipur (Mr.
 S. S. Bist), RQP, for the above mine and submitted under Rule 23(B)(1) of
 MCDR (Amended) 2003, to Regional Controller of Mines for approval.



- 2) I, on behalf of Tata Chemicals Ltd., assure that the proposal contained in progressive mine closure plan approved by Regional Controller of Mines will be executed as such within prescribed time limit.
- 3) The amount of financial assurance as required under Rule 23 (f)(1) of MCDR (Amended) 2003 has been calculated based on the area put in use. The total lease area is 16.21 Hects. Out of which the area put in use is 13.99 Hects. Including the requirement of next five years proposals. Therefore total amount of financial assurance comes out to be Rs. 3.50 Lac.
- 4) I, on behalf of Tata Chemicals Ltd., give financial assurance of Rs 3.50 Lac in the form of Bank Guarantee of Citibank N.A., Bank Guarantee No. 0370 IGFIN 000208 dated 17-09-2008 in favour of the Regional Controller of Mines, Indian Bureau of Mines, Udaipur. If Tata Chemicals Ltd. fails to execute the proposal contained in the approved progressive / final mine closure plan then the above amount of Rs. 3.50 Lac should be forfeited and It will be realised by the Indian Bureau of Mines for execution of the proposals contained in the progressive / final mine closure plan as envisaged under the Rule.
- 5) The financial assurance in the form of original Bank Guarantee along with a set of photocopy is enclosed with this undertaking.

The above information are true and if any false statement / information is found then I, on behalf of Tata Chemicals Ltd., will be completely responsible for the same.

For and on behalf of TATA CHEMICALS LTD.

Signature : 
Name of Agent : M K Nayak
Full permanent address: Tata Chemicals Ltd.,
Ranavav-360 550,
Dist.: Porbandar,
Gujarat.

ANNEXURE XII To XV

OF

FINAL EIA REPORT

FOR

ANIALI 16.21 HA. LEASE

OF

M/S TATA CHEMICALS LTD

List of Annexure

ANNEXURE-XII	-	PUBLIC HEARING PROCEEDINGS
ANNEXURE-XIII	-	LATEST QCI ACCREDITATION STATUS OF MANTEC CONSULTANTS PVT. LTD.
ANNEXURE-XIV	-	ANALYSIS REPORTS FROM NABL ACCREDITED LABORATORY
ANNEXURE-XV	-	FROM I – NOTICE OF OPENING, CLOSING OR CHANGE ETC.

Annexure XII

PUBLIC HEARING PROCEEDINGS

As per the Ministry of Environment and Forests, Government of India, New Delhi, vide its Notification No. S.O. 1533, dated 14/09/2006 and its amendments S.O. 3067, dated 01/12/2009, Public Hearing was conducted for the following project covered under category 'A'. M/s. Tata Chemicals Limited has proposed for Limestone mining project with production capacity of 93,000 (0.093 million) metric tons per annum, Mine Lease Area: 16.21 Ha, at survey number 207/part, Village- Aniali, Taluka- Ranavav, District- Porbandar as mentioned in their request application.

A copy of the Draft Environmental Impact Assessment Report and Summary of Environment Impact Assessment Report were sent to the following authorities or offices to make available the draft EIA report for the inspection to the Public during normal office hours, till the Public Hearing is over:

1. The District Collector office, **Porbandar**
2. District Development Office, **Porbandar**
3. District Industries Centre, **Porbandar**
4. Taluka Development Office, **Ranavav, Ta. Ranavav, Dist. Porbandar**
5. The Chief Conservator of Forests, Ministry of Environment & Forest, Govt., Regional Office (West Zone), Kendriya Pariyavaran Bhavan, E-5, Arera Colony, Link Road 3, Ravisankar Colony, **Bhopal- 462 016**
6. Regional Office, Gujarat Pollution Control Board, Sandeep Complex, Opp. Madhvani College, Narsang Takri, **Porbandar- 360 577**

Other concerned persons having plausible stake in the environmental aspects were requested to send their response in writing to the concerned authorities. They were requested to send their comments to the regulatory authorities as under.

Central Government in Ministry of Environment and Forests, Govt. of India, CGO Complex, Lodi Road New Delhi- 110 003 as the matter falls under category A of schedule of the aforesaid notification.

The Public Hearing was scheduled on 11-12-2013 at 10:30 A.M., Place: Panchayat Ground, Near Panchayat Kacheri, Village- Aniali, Taluka- Ranavav, Dist- Porbandar.

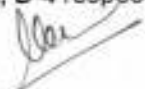
An advertisement in **English** was published in the "**Indian Express**" dated 07/11/2013 and in Gujarati in "**Divya Bhaskar**" dated 07/11/2013.

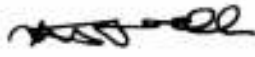
Shri M A Gandhi, Collector and District Magistrate, Porbandar, supervised and presided over the entire public hearing process

A statement showing participant present during the Public Hearing is enclosed as **Annexure A**.

A statement showing salient points highlighting issues raised by the participants and responded by the representative of the applicant during the Public Hearing in English and Gujarati languages are enclosed herewith as **Annexure B and B1**.

The copies of the responses received in writing from other persons having plausible stake in environmental aspects are enclosed herewith as **Annexure C-1, C-2, C-3, C-4** along with their replies as **Annexure D-1, D-2, D-3, D-4** respectively.


B L Maru
Regional Officer, GPCB,
Porbandar as Representative
of the Member Secretary, GPCB


M A Gandhi, I.A.S
Collector and
District Magistrate,
Porbandar

Date: 11/12/2013

Venue: Panchayat Ground, Near Panchayat Kacheri, Village- Aniali, Taluka- Ranavav, Dist- Porbandar

Enclosed: 1. Annexure A, B, B1, C-1, C-2, C-3, C-4 and D-1, D-2, D-3, D-4
2. Video CD of public Hearing 3. Data CD of Document

ANNEXURE-A

A Statement showing participants present during the PUBLIC HEARING




As per the Ministry of Environment and Forests, Government of India, New Delhi, vide its Notification No. S.O. 1533 dated 14/09/2006 and its amendments S.O. 3067, dated 01/12/2009, Public Hearing is conducted for the following project covered under category 'A'. **M/s. Tata Chemicals Limited** has proposed for 0.093 million (93,000) metric tons per annum Limestone mining project lease Area of 16.21 Hectare at survey number 207/part, at Village- Aniali, Taluka- Ranavav, District- Porbandar.

The List of Participants present during the public hearing




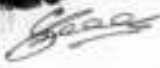
ભારત સરકારના વન અને પર્યાવરણ મંત્રાલય નવી દીલ્હીનાં જાહેરનામા ક્રમાંક એસ. ઓ. ૧૫૩૩(ઇ), તા. ૧૪/૯/૨૦૦૬ અને તેના પછી નાં સુધારા ક્રમાંક એસ.ઓ. ૩૦૬૭ (ઇ), તા ૧/૧૨/૨૦૦૯ નાં અનુસંધને કેટેગરી 'એ' માં આવરી લેવાયેલ મે. ટાટા કેમિકલ્સ લી. દ્વારા સૂચિત ૯૩,૦૦૦ (૦.૦૯૩ મિલિયન) મેટ્રીક ટન પ્રતિ વર્ષ, લાઇમ સ્ટોન માઇનીંગ પ્રોજેક્ટ લીઝ વિસ્તાર આવેલ ૧૬.૨૧ હેક્ટર, સર્વે ન. ૨૦૭/પૈકી, ગામ : અણીયારી, તાલુકો રાણાવાવ જિલ્લો: પોરબંદર માટે ની પરિયોજનાની પર્યાવરણ લોક સુનાવણી તાં ૧૧/૧૨/૨૦૧૩ નાં રોજ સવારે ૧૦:૩૦ કલાકે પંચાયત ગ્રાઉન્ડ, પંચાયત કચેરી પાસે, ગામ:- અણીયારી, તાલુકો રાણાવાવ, જિલ્લો: પોરબંદર ખાતે યોજવામાં આવેલ

લોક સુનાવણીમાં હાજર લોકોની યાદી:











S. No. અનુ. નં.	Name & Designation નામ અને હોદ્દો	Organization/ Village સંસ્થા/ગામ	Signature સહી
1	સિખાબાઈ હીરાબાઈ ફુલગ સરપંચ આણીયારી	આણીયારી	સિખાબાઈ હીરાબાઈ ફુલગ
2	સીમલબાઈ રાણાવાવ મીસ્ટર દલાલ રાંધન	રાણાવાવ	સીમલબાઈ રાણાવાવ
3	બી.પી.કે. જામવાળા C. P. B. જુલમ પટેલકર	પરિવેદક	M. K. J.
4	સરભાઈ ભાઈભાઈ ફુલ કચુ.મ. પુસ્તા.મા.સ.વ. ગામવાવ ગામવાવ	વહીવટીશર આણીયારી-વડવા	
5	Dr. Vivek N. Singh DAM, (E.W.) *	Mantec Consultants (P) Ltd. D-36, Sect. 06, Noida.	Vivek Singh
6	Anil Kumar Socio Economic Expert	Mantec Consultant D-36, Sect. 06 Noida.	Anil Kumar





S. No. અનુ. નં.	Name & Designation નામ અને ઊદ્યોગ	Organization/ Village સંસ્થા/ગામ	Signature સહી
7	Priyanka Singh	Mantic Consultants (Senior Environment Scientist)	Priyanka
8	P. Ravindranath	of: ITAPUR	P
9	મોહનભાઈ જી. મોરી મોરી સુભાષભાઈ જી.	મોરી સુભાષ	M
10	સરખેલ	મન સમુદાય	M
11	સેતુભાઈ જી. રાવેલ	મન સમુદાય	M
12	મીરાંત મહેલ મોરી	મોરી સુભાષ	M
13	સીદ્ધિપાત્ર રાણા દેવરાજભાઈ	મોરી સુભાષ	M
14	મુશીર સીમીર રાણામણ સીમીર મ. રાણામણ	મોરી સુભાષ	M
15	મોરી રાજા સીદ્ધેશ	મન સમુદાય	M
16	મોહનભાઈ	મોરી સુભાષ	M
17	મુશીર મ. સી	મોરી સુભાષ	M
18	દેવરાજભાઈ	મોરી સુભાષ	
19	સીદ્ધિપાત્ર મીરાંતભાઈ	મોરી સુભાષ	
20	સીદ્ધિપાત્ર મીરાંતભાઈ	મોરી સુભાષ	
21	શ્રી. શ્રી. શ્રી. શ્રી.	મોરી સુભાષ	M



S. No. અનુ. નં.	Name & Designation નામ અને હોદ્દો	Organization/ Village સંસ્થા/ગામ	Signature સહી
22	મગાનભાઈ ભટ્ટ	સુભાષ	મગાનભાઈ
23	અરુણ ભોજા	અભાયારી	અરુણ ભોજા
24	A. V. Hattiholi	Ramnarayan	A. V. Hattiholi
25	Jayantilal Nathubhai	Ramnarayan	Jayantilal
26	પરભાઈ રાવળ	અભાયારી	
27	દેવાઈ ભાઈ	અભાયારી	દેવાઈ ભાઈ
28	મણી ગોરીશંકર શિંડે	અભાયારી	Mani Gorishankar
29	દયારામ શિંડે	અભાયારી	દયારામ શિંડે
30	શાંભુ ભાઈ મોરી	ગોરી	શાંભુ ભાઈ મોરી
31	ગોવિંદ ભાઈ	અભાયારી	
32	ગોવિંદભાઈ સાયભાઈ	અભાયારી	
33	શાંભુ ભાઈ શાંભુ	અભાયારી	શાંભુ
34	શાંભુ ભાઈ		શાંભુ ભાઈ
35	મગાનભાઈ દેવભાઈ	અભાયારી	Maganbhai
36	શાંભુ ભાઈ	અભાયારી	

S. No. અનુ. નં.	Name & Designation નામ અને હોદ્દો	Organization/ Village સંસ્થા/ગામ	Signature સહી
37	મુફ્ત દલોરા	અલ્લીપાલ	મુફ્ત દલોરા
38	રામ ખાલા મોદી	અખાતારી	રામખાલા
39	ભાલુભાઈ પુનભાઈ	અખાતારી	
40	શિવજી વીરજી દાર્શિક	કુલખાતારી	શિવજી વીરજી દાર્શિક
41	બાગીબાઈ	અખાતારી	બાગીબાઈ
42	વિશ્વકાંત શીખડીયા	અખાતારી	વિશ્વકાંત શીખડીયા
43	વિશ્વકાંત ભગવાનભાઈ	અખાતારી	વિશ્વકાંત ભગવાનભાઈ
44	Bahar Singh	Ranav.	
45	શશીભાઈ ભગવાનભાઈ	અખાતારી	શશીભાઈ
46	Rathod D.V.	Aniyasi	Rathod D.V.
47	મોરન મોરિયા C.M. Morvi	દોલનગર Ranav.	મોરન
48	મોરન મોરિયા	દોલનગર	
49	કુલખાતારી ભાલુભાઈ પુનભાઈ ભાલુભાઈ પુનભાઈ મુખ્ય અધિકારી સંસ્થા	કુલખાતારી અખાતારી	
50	બાગીબાઈ બાગીબાઈ બાગીબાઈ	અખાતારી	બાગીબાઈ
51	મોરનભાઈ ભાલુભાઈ	અખાતારી	મોરનભાઈ ભાલુભાઈ

S. No. અનુ. નં.	Name & Designation નામ અને હોદ્દો	Organization/ Village સંસ્થા/ગામ	Signature સહી
52	મુરારી લાલ પાટીલ	મુરારી લાલ પાટીલ અણપારી	મુરારી લાલ પાટીલ
53	ઓડેશી રાજગી રામમલ	દુર્ગા	રેશ્મી R.O
54	નિમલ આગ	ગાંધીવાડી	કે.એ. આગ
55	ઉલલા જન પસા	અણપારી	ઉલલા જન પસા
56	Josiy Lakhuman	વાનિજુડી	રેશ્મી
57	લીમાલાઈ	અણપારી	
58	જનન્ય પાટીલ	અણપારી	જનન્ય પાટીલ
59	લાલજી હરજી	અણપારી	લાલજી હરજી
60	કારી જીવ મોઝલ	અણપારી	કારી જીવ
61	પાપજીવ મોઝલ	અણપારી	
62	દામણીવરવતી	"	દામણીવરવતી
63	વીરજી લાલજી. ડા.	પાટણ	વીરજી લાલજી
64	ચૌહાણી ચૌહાણી ગાંધીવાડી	ચૌહાણી	ચૌહાણી
65	Amid A	RANK VADVALA	Amid
66	અણપારી લાલજી	અણપારી	અણપારી લાલજી

S. No. અનુ. નં.	Name & Designation નામ અને હોદ્દો	Organization/ Village સંસ્થા/ગામ	Signature સહી
67	Nilesh C. Joshi	Pachar	
68	T.C. Zimzwadia	Mithapur	
69	બી.કે. વીરો	Ranavav	
70	દુર્ગમ અરજી ભાગીદાર	અભાઈપાલી	દુર્ગમ અરજી
71	Bharat P khuntia	Ranavav	
72	ગણેશ સી. સિદ્ધી	સુભાષીપાલી	
73	SAMEER BAPODRA	RANAVAV	
74	B. J. Joshi	Ranavav	
75	B. J. Rand	"	
76	મોં દેવ ગોવા	અડાપાલી	મોં દેવ ગોવા
77	ચરેશી વપન	અકાંચાલી	ચરેશી વપન
78	જી. સી. રાંધ	અકાંચાલી	જી. સી. રાંધ
79	લક્ષ્મણ સી. રાંધ	પરિવેર	
80	નાનુભાઈ સી. રાંધ	"	
81	વલ્લભ નાથાભાઈ	વલ્લભ	

S. No. અનુ. નં.	Name & Designation નામ અને ઊદ્યો	Organization/ Village સંસ્થા/ગામ	Signature સહી
82	કા ના લખ મહા	પડવાલા	કા ના લખ મહા
83	લખમણ મહા	પડવાલા	લખમણ
84	ગુમા ગુરુ	સાગીવાડી	ગુમા ગુરુ
85	સીતલબાઈ	સાગીવાડી	સીતલબાઈ
86	પિંજરા ઈંચા	સાગીવાડી	
87	મીઠીયા પ્રિયુષ	સાગીવાડી	
88	બાબા કૃષ્ણ	સાગીવાડી	
89	કામલકા ઈંચા	સાગીવાડી	કામલકા ઈંચા
90	ભરવા પ્રિયુષ	સાગીવાડી	ભરવા પ્રિયુષ
91	રામયા કામલા	સાગીવાડી	
92	સુભાષકાંત રામ	સાગીવાડી	સુભાષકાંત
93	બા મુરુ સીતલ	સાગીવાડી	બા મુરુ
94	પરબા કાંત	સાગીવાડી	પરબા
95	દાસ બાઈ.	સાગીવાડી.	દાસ બાઈ.
96	સુભાષકાંત મહા	સાગીવાડી	સુભાષકાંત મહા

S. No. અનુ. નં.	Name & Designation નામ અને ધોદો	Organization/ Village સંસ્થા/ગામ	Signature સહી
97	ગીતા પરબત ભાઈ (ઉલ્લા)	અપ્પાચારી	ગીતા પરબત ભાઈ
98	ઉલ્લા દેવી પરબત ભાઈ	અપ્પાચારી	ઉલ્લા દેવી પરબત ભાઈ
99	દેવવેન ડાયાભાઈ	અપ્પાચારી	દેવવેન ડાયાભાઈ
100	અનસુયાબેન ફરહાન	અડગાચારી	અનસુયાબેન ફરહાન
101	ભરત અરશી ભાસ્કર	અડગાચારી	ભરત અરશી
102	દાનવ ભાઈ	અડગાચારી	દાનવ ભાઈ
103	દેવા કુમા કુરમરા	અડગાચારી	
104	મેશાભાઈ કુરમરા	અડગાચારી	મેશાભાઈ
105	રમેશ પાલજ દાંડા	અપ્પાચારી	રમેશ પા દાંડા
106	આવીશા બાલા	અડગાચારી	આવીશાબાલા
107	મુખત દાલા	અડગાચારી	
108	બી. ડી. મોડી	મોખાલા	V-D Modi
109	કે. વેમ. વેમ	મોખાલા	K.V. Vem

S. No. અનુ. નં.	Name & Designation નામ અને હોદ્દો	Organization/ Village સંસ્થા/ગામ	Signature સહી
૧૧૦	જાલ્પરમિંદ્રકાર. રૂ. ૧૧૧ પત્રીર તાલુકા	કોઈપણ ગોડાડો ગુરોઆર	
૧૧૧	મણીલાલ વા. પચ્છીયા	સાંભાલવા	
૧૧૨	આરમીર ભીલા	સાંભાલવારી	દેશભાંગરાહોળ
૧૧૩	વીરમલાલ વજાલાલ	સાંભાલવારી	
૧૧૪	ગાંધી મદ્ય	સાંભાલવા	ગાંધી મદ્ય
૧૧૫	કુંભર મલમુખ કુભાલ		કુંભર મલમુખ
૧૧૬	ટી.કે. પી. ૧૧	સાંભાલવા.	ટી.કે. પી. ૧૧
૧૧૭	જે.જી. ભાંગરા	સાંભાલવા	જે.જી. ભાંગરા
૧૧૮	રામીયા સખાર કરોશભાઈ	સાંભાલવારી	રામીયા. સખાર કરોશ
૧૧૯	દે.પી. સી.પી.	સાંભાલવા	દે.પી. સી.પી.
૧૨૦	સાંભાલવા ડે. પી. ૧૧૪	સાંભાલવા	
૧૨૧	દે.કે. એ. દે.સા.દે	સાંભાલવા	
૧૨૨	દે.કે. એ. એ.કે.	સાંભાલવા	દે.કે. એ. એ.કે.
૧૨૩	બે.કે. એ.કે.	સાંભાલવા	બે.કે. એ.કે.
૧૨૪	દે.કે. એ. એ.કે.	સાંભાલવારી	દે.કે. એ. એ.કે.

ANNEXURE B (ENGLISH)

As per the Ministry of Environment and Forests, Government of India, New Delhi, vide its Notification No. S.O. 1533, dated 14/09/2006 and its amendments S.O. 3067, dated 01/12/2009, Public Hearing has been scheduled for the following project covered under category 'A'. M/s. Tata Chemicals Limited has proposed Limestone mining project with production capacity of 93,000 (0.093 million) metric tons per annum, Mine Lease Area: 16.21 Hectare, at survey number 207/part, Village- Aniali, Taluka- Ranavav, District- Porbandar. The Public Hearing was scheduled and held on 11-12-2013 at 10.30 A. M., Place: Panchayat Ground, Near Pachayat Kacheri, Village Aniali, Taluka Ranavav, District- Porbandar

Shri B L Maru, Regional Officer and representative of Member Secretary Gujarat Pollution Control Board, welcomed all present to the public hearing. He stated that the public hearing is being conducted as per Notification No. S.O. 1533 dated 14/09/2006. He further stated that the advertisements for the public hearing were published in the local language i.e. Gujarati edition of daily newspaper "**Divya Bhaskar**" dated 07/11/2013 and English newspaper namely "**Indian Express**" dated 07/11/2013. As per the new amendment in notification for wide advertisement the same was telecast by the local T V Channel, **GTPL- Porbandar**. Additionally, Project summary and copy of advertisement published in Gujarati newspaper was given to the office of Gram Panchayat to bring to the notice of villagers affected by this projects. He also added that only the locally affected people were allowed to make their representations in public hearing according to the above Notification and also according to a Circular issued by GPCB on 20/09/2007. If people from out station have made their written representations related to the environmental issues in the project would be considered and included in the minutes. He also informed the forum that 3 (three) written representations were received 1. Shri Bhanubhai N Odedra, Porbandar 2. Shri Mahesh Pandya, Paryavaran Mitra, Ahmedabad and 3. Shri. Dayabhai Hun, Sarpanch- Village: Aniali before the public hearing which are included in the proceedings as **Annexure C-1 C-2 and C-3** and respectively along with replies submitted by the project proponent as **Annexure D-1 D- 2 and D-3** respectively. He then opened the Public Hearing forum after due permission from Shri M A Gandhi Collector and District Magistrate, Porbandar. He then invited the Project Proponent to begin their presentation.

Representative of the Tata Chemicals Limited (TCL), Mr. Paresh Tank, General Manager- Corporate Affairs made detailed power point presentation with complete details of the proposed project. He explained about background of Tata Chemicals and its contributions towards Community activities since foundation of Company. He also mentioned that, the proposed project is for the mining of 93,000 Metric Tons per annum of Limestone mining and the area of mine lease is 16.21 hectares. He informed in detail about the proposed measures to be taken to control air, noise and water pollution to protect environment during mining operations. He also explained that there will be very minor impact on environment after implementation of proposed environmental protection measures.

Shri M A Gandhi, Collector and District Magistrate, Porbandar has briefed about the procedure of public hearing as laid down in the notification and this public hearing is organised to receive representations from local people. This public hearing is first step of project proposal and final stage will be from Delhi. He requested gathering one by one for their representations/ suggestions on environmental matters related to proposed project.



Written representations were received before public hearing and it is as under.

Sr. No.	Representation submitted by	Question	Reply
1.	Shri Bhanubhai N Odedra, Porbandar	Annexure: C-1	Annexure : D-1
2	Shri Mahesh Pandya, Paryavaran Mitra, Ahmedabad	Annexure: C-2	Annexure : D-2
3	Sarpanch- Village: Aniali	Annexure: C-3	Annexure : D-3

Written representations were received during public hearing and it is as under.

Sr. No.	Representation submitted by	Question	Reply
1.	Shri Rambhai Rana bhai Chanpa, village Vadvala, Member – Saurashtra Dalit Samaj Sangathan	<p>a. The Road between village Aniali and village Vadvala remains block during monsoon season and difficulties for vehicle movement due to single track.</p> <p>b. The road is passing through middle of village Aniali. This road should pass through eastern part of the village to ensure safety of children and elders, and to avoid accident and vehicular pollution.</p> <p>c. Appealed for priority to local people for employment.</p> <p>d. The impacts caused to environment by mining can be mitigated through plantation activity by company or with help of trust.</p> <p>e. School children to be encouraged by provision of library.</p>	<p>a and b: TCL is presently not operating any mine lease in this area. Prior to starting operation and during early stages of operation, TCL in line with its current practice shall plan out various community development activities in consultation with various nearby local communities. At that time, the question of assistance in rural roads improvement shall be taken up.</p> <p>c: TCL would like to encourage local employment as per its requirement and availability of skills</p> <p>d: TCL has plans to planting trees in the mine area as per mining plan approved by IBM and as proposed in EIA's Environment Management Plan.</p> <p>e: As per above point 1 & 2, TCL shall consult local communities for its proposed community development activities</p>

The statement showing issues raised by the participants orally and responded by the representative of the project proponent during the Public Hearing are as under:

S. No.	Name of the Representative	Representation	Reply given by Mr. Paresh Tank, Representative of M/s. Tata Chemicals Limited
1	Shri Sangabhai Jivabhai Mori, Sarpanch village Ranbordi and District Sarpanch Association.	<p>a. We welcome mining project if it follows regulations as explained during public hearing in presentation.</p> <p>b. This area is hilly. Rain water (runoff) flows away immediately during monsoon due to hilly terrain. Mined out pits will provide storage of rain water. This will improve the availability of water and irrigation.</p> <p>c. Planation of trees like Peeple & Banyan by Company and maintain the plantation till self-sustenance. Plant trees at both sides of road having spacing of 10 to 15 meters.</p> <p>d. Village Dolatgarh is located near Mine. People of the Village go to outside for labour work, hence priority of employment in mining activity to be given to village people.</p>	<p>a. Company shall ensure compliance of all regulators norms.</p> <p>b. Rain water harvesting potential will be maximum in post mining phase.</p> <p>c. Plantation activities will be done as per mining plan approved by IBM and Environment Management Plan (EMP) proposed in Environment Impact Assessment (EIA) study.</p> <p>d. Company believes in encouragement of local employment subject to requirement of company and availability of skill.</p>
2	Shri Babubhai Chauhan – Social worker village – Ranavav	<p>A. Today's hearing is on environmental conservation. The species of Ganda- Babool are observed in the region which are declared as harmful to environment by forest and environment department of government needs to be removed and replaced with other trees with help of NGO.</p> <p>B. We welcome M/s Tata Chemicals Limited as it is beneficial to water and irrigation by creation of rain water storage pit in post mining stage.</p>	<p>a. Plantation activities will be done as per mining plan approved by IBM and Environment Management Plan (EMP) proposed in Environment Impact and Assessment (EIA) study. Company is ready to work in coordination with some NGO, if it comes forward.</p> <p>b. Noted. Rain water harvesting potential will be maximum in post mining phase.</p>

Shri B.L.Maru, Regional Officer has concluded the public hearing with vote of thanks.



B L Maru
Regional Officer, GPCB,
Porbandar as Representative
of the Member Secretary, GPCB



M A Gandhi, I.A.S
Collector and
District Magistrate,
Porbandar

Place: Aniali
Date: 11/12/2013

એનેક્સર - બી ૧

ભારત સરકારના વન અને પર્યાવરણ મંત્રાલય નવી દીલ્હીનાં જાહેરનામા ક્રમાંક એસ. ઓ. ૧૫૩૩(ઇ), તા. ૧૪/૯/૨૦૦૬ અને તેના પછીનાં સુધારા ક્રમાંક એસ.ઓ. ૩૦૬૭ (ઇ), તા. ૧/૧૨/૨૦૦૯ નાં અનુસંધાને કેટેગરી 'એ' માં આવરી લેવાયેલ મેસર્સ. ટાટા કેમિકલ્સ લી. દ્વારા સૂચિત ૯૩,૦૦૦ (૦.૦૯૩ મિલિયન) મેટ્રીક ટન પ્રતિ વર્ષ, લાઇમ સ્ટોન માઇનીંગ, પ્રોજેક્ટ લીઝ વિસ્તાર ૧૬.૨૧ હેક્ટર, સર્વે નં.૨૦૭/પૈકી, ગામ- અણિયારી, તાલુકો-રાણાવાવ જિલ્લો- પોરબંદર માટેની પરિયોજનાની પર્યાવરણની લોક સુનાવણી તા.૧૧/૧૨/૨૦૧૩નાં રોજ સવારે ૧૦.૩૦ કલાકે પંચાયત ગ્રાઉન્ડ, પંચાયત કચેરી ખાસે, ગામ:- અણિયારી, તાલુકો રાણાવાવ, જિલ્લો: પોરબંદર ખાતે યોજવામાં આવેલ.

શ્રી બી.એલ.મારૂ, પ્રાદેશિક અધિકારી અને સભ્ય સચિવશ્રી, ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડના પ્રતિનિધિએ હજાર શ્રોતાગણને પર્યાવરણ લોક સુનાવણીમાં આવકાર્યા અને જણાવ્યું કે, આ પર્યાવરણ લોક સુનાવણી જાહેરનામા ક્રમાંક એસ.ઓ.૧૫૩૩ માં જણાવ્યા પ્રમાણે યોજવામાં આવી રહી છે. અને પર્યાવરણ લોક સુનાવણી માટેની જાહેરાત ગુજરાતી દૈનિક પત્ર "દિવ્ય ભાસ્કર" માં અને અંગ્રેજી દૈનિક પત્ર "ઇન્ડિયન એક્સપ્રેસ" માં તા.૭-૧૧-૨૦૧૩ નાં રોજ પ્રસિધ્ધ કરવામાં આવી હતી. જાહેરનામા નાં નવા સુધારા અંતર્ગત બહોળી પ્રસિદ્ધિ અર્થે લોકલ ટી.વી. ચેનલ જી.ટી.વી.એલ- પોરબંદર, દ્વારા જાહેરાત પ્રસિધ્ધ કરવામાં આવેલ છે. તેમજ પ્રોજેક્ટની અસરગ્રસ્ત વિસ્તારના ગામોમાં પ્રોજેક્ટ સમરી અને ગુજરાતી ચેપરમાં પ્રસિધ્ધ જાહેર બબરની નકલ ગ્રામ પંચાયતની કચેરીએ આપીને ગામ લોકોના ધ્યાન પર લાવવામાં આવેલ હતી. એમણે ઉમેર્યું કે ઉપર જણાવેલ જાહેરનામાંના અને જી.પી.સી.બી.ના તા. ૨૦/૦૯/૨૦૦૭ ના પરિપત્ર પ્રમાણે, ફક્ત પ્રોજેક્ટથી અસરગ્રસ્ત વિસ્તારના સ્થાનિક લોકોની મૌખિક રજૂઆત આ પર્યાવરણ લોક સુનાવણીમાં ધ્યાન પર લેવામાં આવશે અને પર્યાવરણ લોક સુનાવણીની કાર્યનોંધ (મીનીટ્સ)માં ઉમેરવામાં આવશે. બહારથી આવેલ લોકોની પ્રોજેક્ટ વિશે પર્યાવરણને લગતા પ્રશ્નોની લેખિતમા રજૂઆત કરેલ હશે તો ધ્યાન પર લેવામાં આવશે જેનો પ્રત્યુત્તર પર્યાવરણ લોક સુનાવણીની કાર્યનોંધ (મીનીટ્સ)માં લેવામાં આવશે. આવી ત્રણ લેખિત રજૂઆતો, (૧) શ્રી ભાનુભાઈ ઓડેદરા, પોરબંદર અને (૨) એન.જી.ઓ.- પર્યાવરણ મિત્ર - શ્રી મહેશ પંડ્યા, અમદાવાદ અને (૩) સરપંચ શ્રી અણિયારીની તરફથી મળેલ છે. જેનો સમાવેશ આ કાર્યનોંધમાં કરવામાં આવશે. આ રજૂઆત અનુક્રમે પરિશિષ્ટ સી-૧, સી-૨ અને સી-૩ તથા જેનો પ્રત્યુત્તર પ્રોજેક્ટ પ્રપોનન્ટ દ્વારા અનુક્રમે પરિશિષ્ટ ડી-૧, ડી-૨ અને ડી-૩ તરીકે આવરી લેવામાં આવેલ છે. ત્યારબાદ પર્યાવરણ લોક સુનાવણીની સમિતિના અધ્યક્ષ શ્રી કલેક્ટર અને ડીપ્ટીકલ મેજિસ્ટ્રેટ પોરબંદરની મૌખિક મંજૂરી મળ્યેથી પર્યાવરણ લોક સુનાવણી શરૂ કરવા પ્રોજેક્ટ પ્રપોનન્ટને પ્રોજેક્ટનું પ્રેઝન્ટેશન રજૂ કરવા આમંત્રિત કર્યાં.

મેસર્સ. ટાટા કેમિકલ્સ લી.ના પ્રતિનિધિ શ્રી પરેશભાઈ ટાંક, જનરલ મેનેજર કોર્પોરેટ અફેર્સ દ્વારા પાવર પોઈન્ટ પ્રેઝન્ટેશન ગુજરાતી ભાષામાં વિસ્તૃત માહિતી આપવામાં આવેલ તથા પ્રથમ મેસર્સ. ટાટા કેમિકલ્સ લી.નો લોક કાર્યોમાં ફાળો અને કંપનીની સ્થાપના થી આજ દિન સુધીની પ્રગતિ ની માહિતી આપેલ. વધુમાં જણાવ્યું કે, આ પરિયોજનામાં મેસર્સ. ટાટા કેમિકલ્સ લી. કંપનીનું આયોજન ૯૩,૦૦૦ મેટ્રીક ટન પ્રતિ વર્ષના દરે લાઈમસ્ટોનનું ખનન કરવાનું છે. અને આ ખનન પ્રક્રિયા દરમિયાન થનાર પાણી, હવા, ધ્વનિ પ્રદુષણ તથા તેના નિયંત્રણની કામગીરીઓ બાબતે પણ વિસ્તૃત સમજ આપી. આ પરિયોજના માટેનો વિસ્તાર ૧૬.૨૧ હેક્ટર રહેશે. અને લાઈમસ્ટોનના ખનનની સાથે સાથે પર્યાવરણ સંરક્ષણ માટેની બધી બાબતોનું ધ્યાન રાખવામાં આવશે. માઇનીંગ પ્રોજેક્ટ વિશે વિસ્તારથી સૌને માહિતગાર કર્યાં તેમણે

✓

વધુમાં જણાવ્યું કે, પર્યાવરણ જાળવણી યોજના પૂરતી હોવાથી આ પરિયોજનાના કારણે પર્યાવરણને ઘણું ઓછું નુકસાન થશે.

શ્રી એમ.એ.ગાંધી, કલેક્ટર શ્રી પોરબંદર એ સદર નોટીફિકેશન અંતર્ગત પર્યાવરણ લોક સુનાવણીની પ્રક્રિયા અંગે સંબોધન કરતાં જણાવ્યું કે, આ પર્યાવરણ લોક સુનાવણી એ સ્થાનિક લોકોના પ્રશ્નો માટે રાખવામાં આવે છે, અને તેથી લોકોએ તેઓની રજૂઆત કરવા આગળ આવવું જોઈએ અને આ સુનાવણી એ પ્રોજેક્ટ નું પ્રથમ પગલું છે અને અંતિમ ચરણ દિલ્હી ખાતે રહેશે. લોક સુનાવણી માં ઉપસ્થિત જનતા ને પર્યાવરણ લક્ષી પ્રશ્નોની રજૂઆત કરવા વારા કરતી એક પછી એક આવવા જણાવ્યું.

લોક સુનાવણી પહેલા લેખિતમાં મળેલ રજૂઆત નીચે પ્રમાણે છે.

અનુ.નં	રજૂઆત કરનાર	પ્રશ્ન નં.	ઉત્તર
૧	શ્રી ભાનુભાઈ એન. ઓડેદરા, પોરબંદર	પરિશિષ્ટ - સી-૧	પરિશિષ્ટ - ડી-૧
૨	પર્યાવરણ મિત્ર, અમદાવાદ, શ્રી મહેશભાઈ પંડ્યા	પરિશિષ્ટ -સી-૨	પરિશિષ્ટ - ડી-૨
૩	સરપંચશ્રી અણિયારી ગ્રામ પંચાયત	પરિશિષ્ટ -સી-૩	પરિશિષ્ટ - ડી-૩

લોક સુનાવણી દરમિયાન લેખિતમાં મળેલ રજૂઆત નીચે પ્રમાણે છે.

અનુ.નં	રજૂઆત કરનાર	પ્રશ્ન	ઉત્તર
૧	શ્રી રામભાઈ રાણાભાઈ ચાનપા, ગામ - વડવાળા, સૌરાષ્ટ્ર દલિત સમાજ સંગઠન - મેમ્બર.	<ul style="list-style-type: none"> • વડવાળાગામ થી અણિયારી ગામ આવવા માટે એકજ રસ્તો છે, વરસાદ ના કારણે રસ્તો બંધ રહે છે અને આ રસ્તો એક માર્ગીય હોય વાહન ની અવર જવર માં અગવડતા પડે છે. • અણિયારી ગામ ની મધ્ય માં થી રસ્તો પસાર થતો હોય નાના બાળકો અને વૃધ્ધ લોકો ની સલામતીની યોગ્ય વ્યવસ્થા માટે, આ રસ્તો ગામની પૂર્વ દિશામાંથી ખારા વિસ્તારમાંથી કાઢવામાં આવે તો અકસ્માત અને પ્રદૂષણ અટકાવી શકાય છે. 	<ul style="list-style-type: none"> • ટાટા કેમિકલ્સ લિમિટેડ હાલમાં આ વિસ્તારમાં કોઈપણ ખાણલિજ ચલાવતી નથી. ખાણ કામ શરૂ કરતાં પહેલા અને શરૂઆતના પારંપરિક તબક્કામાં ટાટા કેમિકલ્સ લિમિટેડ તેની હાલની પ્રણાલી મુજબ સ્થાનિક લોકો ની સલાહ લઈને જુદા જુદા લોક વિકાસના કાર્યો કરવાનું વિચારી રહી છે. તે વખતે ગામડાના રોડની સુધારાનો પ્રશ્ન ધ્યાનમાં લેવામાં આવશે.

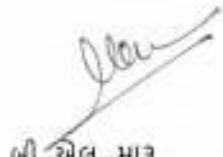
	<ul style="list-style-type: none"> • અહીં ના સ્થાનિક લોકો ને મજૂરી કામ અર્થે અગ્રતા આપવા ની પહેલ કરેલ છે. • ખાણકામ થી પર્યાવરણ ને નુકશાન થાય તો તેની ભરપાઈ વૃક્ષારોપણ કરી કંપની દ્વારા અથવા સંસ્થા દ્વારા કરવી શકાય છે. • શાળા માં અભ્યાસ કરતાં બાળકો ના પ્રોત્સાહન માટે પુસ્તકાલય બનાવવાનું સૂચન કરેલ છે. 	<ul style="list-style-type: none"> • જરીરિયાત પ્રમાણે અને ઉપલબ્ધ કુશળતા મુજબ સ્થાનિક લોકોમાં રોજગારીની તકો વધે તેમ કંપની માને છે. • EIA રિપોર્ટના પર્યાવરણ પ્રબંધન યોજના પ્રમાણે અને IBM દ્વારા પ્રમાણિત થયેલા માઇનિંગ પ્લાન મુજબ ટાટા કેમિકલ્સ લિમિટેડે ખાણ વિસ્તારમાં વૃક્ષારોપણનું આયોજન કરશે. • ઉપરના મુદ્દા નં ૧ અને ૨ મુજબ ટાટા કેમિકલ્સ લિમિટેડ લોક વિકાસના કાર્યો માટે સ્થાનિક લોકોનો સંપર્ક કરશે.
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

લોકો તરફથી લોક સુનાવણી દરમ્યાન મળેલ મૌખિક રજૂઆતો તેમજ પ્રોજેક્ટ પ્રોપોઝન્ટ દ્વારા આપવામાં આવેલ પ્રત્યુત્તર નીચે પ્રમાણે છે.

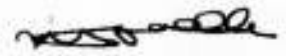
અનુ. નં.	અરજદાર નું નામ, સરનામું તથા તેઓની રજૂઆતના મુદ્દા	મેસર્સ ટાટા કેમિકલ્સ લી.ના પ્રતિનિધી શ્રી પરેશભાઈ ટાંક દ્વારા અપાયેલ પ્રત્યુત્તર
૧.	<p>શ્રી સાંગાભાઈ જીવાભાઈ મોરી, સરપંચ રાણાબોરડી તથા જીલ્લા સરપંચ એસોસિએશન પ્રમુખ.</p> <ul style="list-style-type: none"> • પર્યાવરણ લોક સુનાવણી માં જણાવ્યા પ્રમાણે નિયમઅનુસાર ખનન કાર્ય કંપની દ્વારા કરવામાં આવે તો તેને આવકારીએ છીએ. • આ વિસ્તાર ડુંગરાળ છે. ચોમાસા દરમ્યાન વરસાદી પાણી ડુંગરાળ હોવાથી તાત્કાલિક વહી જાય છે, જો ખાણ ખનન કરવાથી તળાવો બનશે તો વરસાદી પાણી નો તેમાં સંગ્રહ થશે તથા આ વિસ્તાર ના પાણી તથા સિંચાઈ નો પ્રશ્ન હલ થશે. • કંપની દ્વારા વડલા તથા પીપળા જેવા વૃક્ષોનું વધુ પ્રમાણ માં વાવેતર કરવું તથા તેનો પૂરો ઉછેર થાય ત્યાં સુધી માવજત કરવી તથા રોડ ની આજુ બાજુમાં ૧૦ થી ૧૫ મીટર ના અંતરે વૃક્ષારોપણ 	<ul style="list-style-type: none"> • કંપની લાગુપડતા તમામ કાયદાકીય નિયમો નું પાલન કરશે. • ખનન પ્રક્રિયા પૂર્ણ થયા બાદ વરસાદી પાણી નો સંગ્રહ ની ક્ષમતા ઉચ્ચતમ રહેશે. • આઈ.બી.એમ દ્વારા મંજૂરીત માઇનિંગ પ્લાન મુજબ અને EIA રિપોર્ટમાં દર્શાવ્યા પ્રમાણે

	<p>કરવું</p> <ul style="list-style-type: none"> • દોલતગઢ ગામ ખાણ ની નજદીક આવેલ હોઇ ત્યાના લોકો ને મજૂરી કામ અર્થે બહાર જવું પડે છે, તો ગામના લોકો ને ખાણકામ માં રોજગારી ની અગ્રતા મળવી જોઈએ. 	<p>વૃક્ષારોપણ કરવામાં આવશે</p> <ul style="list-style-type: none"> • કંપની સ્થાનિક માણસોના રોજગારને પ્રોત્સાહિત કરી માણસોની જરૂરિયાત અને સ્થાનિક ધોરણે કુશળતાની ઉપલબ્ધિને ધ્યાન માં લઈ યોગ્ય નિર્ણય લેવામાં આવશે.
૨	<p>શ્રી બાબુ ભાઈ ચૌહાણ, સામાજિક કાર્યકર, ગામ રાણાવાવ,</p> <ul style="list-style-type: none"> • આજ ની સુનાવણી એ પર્યાવરણ જાળવણી ની છે. આ વિસ્તારમાં આજુ બાજુ માં ગાંડા બાવળ દેખાય છે જેને સરકાર શ્રી ના વન અને પર્યાવરણ વિભાગ દ્વારા પર્યાવરણ માટે નુકસાન કર્તા છે તેવું કહેવામા આવેલ હોય આ વિસ્તાર ના ગાંડા બાવળ ને વિચ્છેદ કરી અહિયાં અવેજી માં બીજા વૃક્ષો નું વાવેતર અન્ય NGO સાથે રહી સહયોગથી કરવામાં આવે. • ખાણ ખનન થી તળાવ બનશે તો પાણી સિચાઈ ના પ્રશ્નો હલ થશે જો મેસર્સ ટાટા કેમિકલ્સ આ વિસ્તારમાં આવે તો આવકારીએ છીએ. 	<ul style="list-style-type: none"> • આઈ.બી.એમ દ્વારા મંજૂરીત માઇનિંગ પ્લાન મુજબ અને EIA રિપોર્ટમાં દર્શાવ્યા પ્રમાણે વૃક્ષારોપણ કરવામાં આવશે. જે NGO સ્વેચ્છિક રીતે પહેલ કરશે તો કંપની તેની સાથે રહીને કામ કરવા માટે તૈયાર છે. • નોંધ લીધેલ છે. ખનન પ્રક્રિયા પૂર્ણ થયા બાદ વરસાદી પાણી નો સંગ્રહ ની ક્ષમતા ઉચ્ચતમ રહેશે.

પર્યાવરણ લોક સુનાવણીને શ્રી. બી.એલ.મારૂ, પ્રાદેશિક અધિકારીશ્રી દ્વારા આભારવિધિ સાથે પુર્ણ જાહેર કરવામાં આવી.



બી.એલ. મારૂ
પ્રાદેશિક અધિકારી, પોરબંદર અને ગુજરાત પ્રદુષણ નિયંત્રણ
બોર્ડના સભ્ય સચિવશ્રી ના પ્રતિનિધિ
સ્થળ : અણિયારી
તારીખ : ૧૧/૧૨/૨૦૧૩



એમ.એ.ગાંધી, IAS
કલેક્ટર અને જીલ્લા મેજિસ્ટ્રેટશ્રી,
પોરબંદર

Translation

Date: 26-11-2013

To,

Member Secretary,

Gujarat Pollution Control Board,

Gandhinagar,

Sub: Application of Objections from my side against Public Hearing

Reference: Tata Chemicals Limited, Limestone Mine at production rate 0.093 Million MT at Village Aniali, Survey No: 207, Area 16.21 Hectare.

Respected Sir,

The public hearing is scheduled on 11/12/2013 at 10:30 AM at Aniali Village for proposed project of Mining of Lime stone, I submit herewith objections from my side to protest mining near Barda wild life sanctuary region as serious loss is expected to nearby flora, fauna, deer, neelghay, and villagers and farmers staying nearby area.

After we communicate, due to mining and blasting the damages to natural beauty is expected and destruction of precious medicinal and sweet trees is expected due to above mining. If excavation is to be carried out the large and heavy vehicles the noise pollution and air pollution is expected at Wild Life Sanctuary and nearby areas due to operation of vehicles.

It is danger to human and children by suffering to serious eye disease like colour blindness if mining is allowed.

I request to consider my application for objection at public hearing prior to take any decision.

Bhanubhai N Odera,

Advocate

(Gujarat High Court)

Copy :

- 1) Chief Conservator of Forest
Department of Environment and Forest
Regional Office
Bhopal
- 2) Regional Office
GPCB, Porbandar

PH-3

26/11/23

BHANUBHAI N. ODEDARA

B.A., LL.B.

ADVOCATE (Guj. High Court)

Mo. 94267 10171

Off. Bhavsinhji Hospital Road,
Nr. Sheetal Complex,
Porbandar - 360 575



ભનુભાઈ એન. ઓડેદરા

બી.એ., એલ.એલ.બી.

એડવોકેટ (ગુજરાત હાઈકોર્ટ)

મો. ૯૪૨૬૭ ૧૦૧૭૧

રેસી. ૨૯૨, હાઈસીન પ્લોટ, શ્રી.આઈ.ડી.સી.
પોસ્ટ : ઉદ્યોગ નગર
પોરબંદર - ૩૬૦ ૫૭૫

Enrolment No. G/3093/2010

સંદર્ભ નં.

પ્રતિ,

સાબ્ય સચિવાળી,

ગુજરાત પ્રદૂષણ નિયંત્રણ વોર્ડ,

ગાંધીનગર,

તા. ૨૬/૧૧/૨૦૨૩,



વિષય:- થર્સ્ટવર્લ ની ભાગ મુનાવલી વખતે, મલા ભુક્ષી- વાંઘા વચ્ચે.

સંદર્ભ:- મોજે અભિયાની- સર્વે નંબર ૨૦૭ વી. સી.આ.વા. જી. ચૌરખંદ.

૨૧૨૧ ડેમિસલ લીમીટેડ દ્વારા- લાઈમ સ્ટોન- ખાલકીપ - ૦.૦૬૩ મિલિયન કેટીડ રૂબ - વિસ્તાર ૧૬.૨૧ હે, મો,

માનસર અવનુકે,

ચૌરખંદ જિલ્લાના સી.આ.વા. લાલુકાનલ-અભિયાની ગામે.

લાઈમ સ્ટોન - ના ચોંદકામ માટે, લાઈમ મુનાવલી- ૨૬/૧૨/૨૦૧૩ ના ૧૦/૩૦ કલાકે અભિયાની ગામે નોંધવવામાં આવેલ રોડ, આ મુનાવલી વખતે અને આપ સહિત ને માત્ર વાંઘા સુબુજવાનલ રોડ, અચી ઉપરોક્ત મુનાવલી વખતે- માત્ર વાંઘા સુબુકી- ઉપરોક્ત લાઈમ સ્ટોન ખાલકીપ - ન કાપા- લથા ચોંદકામ અવળી વાળુમાં આવેલ. બાકી અવળી ૧૫૧. આબુવાળુ માં વિસ્તાર માં - વાળા પંચુ. પંચી. અબ, રોડ, લથા મંગલે) પૂલી સેન- અને, આબુવાળુ માં વાળા કાપા- ગામનું અંકુશ, ને ઉપરોક્ત પ્રોજેક્ટ. થી વચાંતર સુતરાનલ થશે,

વાંઘા સુબુકી- આ પ્રોજેક્ટ અવળી- ઉપરોક્ત. લથા ચોંદકામ કાપા સુદરની સોદર ને લાની

BHANUBHAI N. ODEDARA

B.A., LL.B.
ADVOCATE (Guj. High Court)

Mo. 94267 10171

Off. Bhavsinhji Hospital Road,
Nr. Sheetal Complex,
Porbandar - 360 575



મનુભાઈ એન. ઓડેદરા

બી.એ., એલ.એલ.બી.
એડવોકેટ (ગુજરાત હાઈકોર્ટ)
મો. ૯૪૨૬૭ ૧૦૧૭૧

રેસી. ૨૯૨, ઠાઉસીંગ પ્લોટ, જી.આઈ.કી.સી.
પોસ્ટ : ઉદ્યોગ નગર
પોરબંદર - ૩૬૦ ૫૭૭

Enrolment No. G/3093/2010

સંદર્ભ નં.

૭૭

તા.

પરો, લ્હા - ઉપરોક્ત વ્યક્તિના ના સંબંધમાં કોઈપણ અંગત અથવા વ્યાજબી વૃત્તિ આપવા હોવાથી લેખનો નાશ કરો. લ્હા ને પરોક્ત કામમાં આપણે - મોટા હોવાથી. લ્હાના વાલિયાની અવગણના કરી - અભ્યાસ લ્હા આમમાં ના પાલનમાં દેખાતી પ્રકૃતિ લ્હા - લ્હામાં - ધૂળનું ક્રમમાં પલાળી ગોથ થાયે થયા નો સંબંધ છે.

આ ક્રમમાં લ્હાનું કો - લાખરોન કાઢવામાં આવે તો મનુભાઈ - લ્હા વાલિયામાં ૨ લાખમાં વધુ - જેમાં આપણે લખે તે રીતે લેવાય છે. લ્હા ઉપરોક્ત વાલિયાને - આપે કોઈ અર્થમાં લેવા થઈ શકે - લોક સુનાવણીમાં આ અર્થમાં દેખાતે લેવા આપણે લખે તે યોગ્ય છે.

ગમલવાળા:

૧) મુખ્ય વાલિયાની તરીકે.
પર્યાવરણ અને વાલિયાની તરીકે.
પ્રદેશી કચેરી, વાલિયા.

૨) પ્રદેશી તરીકે.
ગુજરાત ક્રમમાં અધિકારીઓ.
વાલિયા,



મનુભાઈ એન. ઓડેદરા
Bhanubhai N. Odedra
Advocate
(Gujarat High Court)

G.P.C.B. PORBANDAR
Invoice No 3716
Date 26/11/18
Sign

Ref: PM/MP/1240/2013

Date: 09/12/2013

To,
Shri. Hardik Shah
Member Secretary
Gujarat Pollution Control Board
Gandhinagar

Sub. : Environmental public hearing of Tata Chemical Limited.(Mine Lease Area 16.21 Ha) for its proposed project at Village: Aniali, Ta. Ranavav, Dist. Porbandar on 11/12/2013.

Sir,

We have studied the draft EIA report of the above-mentioned project. Following are our observation/comments/questions regarding project and draft EIA report.

1. Why the mine Lease is idle since 1994? Why the company now wants to start mining?
2. What is the distance of mining lease from other mining project of Tata Chemical Ltd in the same area?
3. Although, there is no forest land involved in the area to be leased out for mining, it falls within the eco-sensitive zone of **Barda Wildlife Sanctuary at a distance of 3.92 Km towards NW and Naliyadhar Reserved Forest at a distance of 0.11 Km towards SW. Moreover, project is located very near to Aniali village.** The nature of mining will be opencast and semi-mechanized, which involves drilling and blasting. Mining includes noise from vehicle engines, loading and unloading of rock into steel dumpers, chutes, power generation, and other sources. Cumulative impacts of blasting, transport, crushing, grinding, and stock-piling can significantly affect wildlife and nearby residents. Also mobile wildlife species, like game animals, birds, and predators, leave these areas. So mining should not be allowed in this eco-sensitive zone.
4. EIA illustrates that there are many limestone leases of Tata Chemicals and other owners within the area, so has the industry done cumulative impact study of these limestone leases?
5. As per the EIA, after commissioning of mining activities the rain water will get collected in the mined out pits and as a common practice is used for dust suppression and greenbelt development. Will this reduce the ground water requirement for the project?
6. What would be impact of land, noise, and air pollution from this mining activity to the surrounding agriculture activities?
7. What is the socio-economic developmental activities industry has done as a part of CSR activity till now and what is the future plan and budget for CSR activity for proposed project?
8. How many skilled and unskilled people from surrounding area (local people) will get employment in proposed project?

Yours truly,

Mahesh Pandya

CC: 1. Collector, Porbandar

2. Regional officer, GPCB Porbandar

Paryavaran Mitra

502, Raj Avenue, Bhaikakanagar road

Thaltej, Ahmedabad - 380059

Telefax - 079-26851321

email - paryavaranmitra@yahoo.com

website - www.paryavaranmitra.org.in

Translation

From: Sarpanch
Gram Panchayat, Aniali
Taluka: Ranavav
Dist: Porbandar
Date: 11.12.2013

To,
11.12.2013
Regional Officer
Gujarat Pollution Control Board
First Floor, Sandip Complex,
Narsang Tekri, Porbandar

Sub: Request for lease by Tata Chemicals: Suggestion as under - regarding

Sir,

With Jay Bharat like to say that I am elected Sarpanch of Village Aniali. We present following suggestions with reference to your office letter No. GPCB/R.O. PBR/PH-T-58(3)/1960/13 dated 08/11/2013. We request your kind notice of these suggestions:

Point 1: Many existing leases are there in village Aniali. These are operated since many years. Mining material is being extracted illegally in large quantities. Minerals are extracted illegally by lease holders along with their business partners and mafias.

Point 2: Lease holders are not following any mining rules and regulations such as overloading, pollution, cutting of trees in nearby lease area, not displaying of signing boards and there is no marking of boundary pillars showing boundary of mine lease area and no sprinkling of water etc. are not being taken care.

Point 3: These lease holders are doing business here and not paying royalty. And they have not funded anything to this village till today.

Point 4: If village people are explaining regarding the above thing to them they are threatening to the village people and creating nuisance in the village. Hence no body is raising voice against them.

Point 5: Not only that too much dusting is created due to mining activities carried out by existing mine operators. They are not doing water spray to control dust emissions as per rules, because of that surrounding environment is polluted and local people are suffering respiratory disease. And many village people are suffering from asthma because to this. And many other are facing problem. During allotment of new leases it must be taken care that all rules and regulations should be followed because existing steps are not being taken care at present.

Point 6: In those leases many village roads are encroached because of that farmer are getting affected.

Point 7: To avoid such problem in future and development of our village at the time of granting new lease preferences should be given to local village people for generating employment and contract opportunity.

Point 8: With the above mentioned points keeping in mind the Gram Panchayat and the leaders of the village strongly demanding that Tata company should not promote such kind of problematic person to come in the picture and if any work allotted to such kind of person then prior permission from the Aniali Gram Panchayat is to be taken to avoid and this resolution has been passed in Gram sabha with agreement of all in Gram Sabha.

Point 9: there is provision for recovery of toll tax as per Clause 200 (6) of Gujarat Panchayat Rule 2006, on vehicle passing through the village limit. Accordingly, toll tax should be paid on trucks carrying materials from Company's lease.

Point 10: As per new Act some amount of that income is spent for development of village every year so that the social upliftment of the village people will improve and will help in development of the village. Tata chemicals are mining limestone quantity and income arise from the limestone mining.

પ્રેષક :- સરપંચશ્રી,

અણીયારી ગ્રામ પંચાયત,

મું. અણીયારીતા. રાણાવાવ

જી. પોરબંદર.

તા. 11/12/2013

પ્રતિ,

શ્રી પ્રાદેશીક અધિકારી શ્રી,

ગુજરાત પોલ્યુશન કંટ્રોલ બોર્ડ,

વર્સ્ટેકલોર, સંદિપ કોમ્પ્લેક્સ,

નરસંગટેકરી, પોરબંદર.

બાબત:- ટાટા કેમીકલ્સ લીમીટેડ દ્વારા લીઝની માંગણી અન્વયે સજ્જશન અરજી.

મહે. સાહેબશ્રી,

જયભારત સાથે જણાવાનું કે, અમો અણીયારી ગામના ચુંટાયેલા સરપંચ છીએ. અને આપની કચેરી દ્વારા પત્ર ક્રમાંક: જી. પી. સી. બી/પ્રા. ક. પોર. પી. એચ. - ટી. - 58(3)/1960/13 તારીખ :- 08/11/2013 નાં પત્ર અનુસંધાને નીચે મુજબના સજ્જશનો રજૂ કરીએ છીએ. જેને ધ્યાને લેવા અમારી

નમ્ર વિનંતી છે.

- > 1. અણીયારી ગામમાં ઘણીબધી લીઝો આવેલી છે. જે ઘણા વર્ષોથી ચાલે છે. અહીં ખુબજ વિપુલ માત્રામાં ખનીજ ચોરી થયેલ છે. અને લજ પાણખનીજ ચોરીના ઘણા બનાવ બને છે. અહિં લીઝો ધરાવતા લીઝ ધારકો, તથા તેમના મળતીયાઓ, ખનન માફીયાઓ માથાભારે તત્વો અને મુંડા ઓ દ્વારા ખનીજ ચોરી કરવામાં આવે છે.
- > 2. લીઝ ધારકો દ્વારા ખનીજ ના કોઈપણ નિયમોનું પાલન કરવામાં આવતું નથી. જેમા ઓવર લોડીંગ, પ્રદુષણ કેલાવવું, લીઝનીબાજુમાં વૃક્ષો કાપીનાખવા, પ્લોટીંગ, સાઈન બોર્ડ નરાખવું, તથા બાઉન્ડરી દર્શાવતા ખુટા નરાખવા, પાણી ન છાંટવું વગેરે બાબતો ધ્યાનમાં લેતા નથી.

P.M.
5/12/13

G.P.C.B. PORBANDAR	
Invoice No	3745
Date	5/12/13
Sign	<i>T</i>

- 3.આ લીઝ વાળા અર્થિ વ્યવસાય કરવા છતા પણ લીઝોનો વ્યવસાય વેરો ભરતા નથી. અને તે લોકોએ હજી સુધીમાં ક્યારેય પણ ગામમાં ને કંડ આપેલ નથી.
- 4.અર્થિ લીઝધારકો ને આવી કોઈપણ જાતની પંચાયત કે ગ્રામજનો દ્વારા રજુઆત કરવામાં આવેતો ધાકધમકી આપે છે. તેમજ ગામમાં ભય ફેલાવમાં આવે છે. જેથી કોઈપણ તેઓની સામે અવાજ ઉઠાવી શકતુ નથી.
- 5.એતલુ જ નહીં લીઝ નાં કારણે આજુ-બાજુના ખેતરીમાં ખુબ જ ડરટીંગ થાય છે. અને નિયમ મુજબ પાણીની છટકાવ કરીને ખોદકામ કરવાને બદલે ડાયરેક્ટ ખોદકામ કરવામાં આવતુ હોય તેના કારણે આખા વાતાવરણમાં ખુબ જ ડરટીંગ થાય છે. અને ગામના અસંખ્ય લોકોને આનાકારણે દમ-શ્વાસ ની બીમારી ઓ થઈ ગયેલ છે. અને તે રીતે હવાના પ્રદૂષણ ના કારણે ગામ લોકોને ખુબ જ મુશ્કેલીઓની સામનો કરવો પડે છે. અને તેથી નિયમ મુજબ કાર્યવાહી થતી ન હોવાના કારણે નવી લીઝ મંજૂર કરવા વિકલ્પે નિયમોનુ ચુસ્તપણે પાલન થાય તેથી તકેદારી રાખવા વિનંતી છે.
- 6.આવી લીઝોમાં ઘણા રસ્તાઓ દબાય ગયેલ હોવાના કારણે ઘણા ખેડુતો ને તકલીફ થાય છે.
- 7.જેથી આવી લીઝ મંજૂર કરવામાં આવે તો અણીયારી ગામના લોકોને મજૂરી નાની-મોટીનોકરીઓ અને કિન્દાકટઆપવામાં અગ્રતા આપવામાં આવે તો અમારા ગામનો વિકાસ થાય અને ભવિષ્યમાં આવી તકલીફ ન થાય.
- 8.ઉપર જણાવેલ વિગતો ને ધ્યાને લઈને અમે ગ્રામ પંચાયત તથા ગામના આગેવાનો એવી પ્રબળ માંગણી કરીએ છીએકે ટાટા કંપનીમાં આવા આવારા તત્વો ને ધુસવા ન દે અને તે કોઈપણ માણસ ને કામ આપે તેને પંચાયત માંથી મંજૂરી મેળવી ને જ કામ આપે એવી અમે અણીયારી ગામ શરત રાખવા વિનંતી કરીએ.
- 9.ગુજરાત પંચાયત અધિનિયમની કલમ 200(6) મુજબ ગામની રેવન્યુ લદમાં આવતા કોઈપણ વાહનો પર ગામ ને ટોલ વસુલ કરવા સતા છે તે મુજબ કંપનીની લીઝમાંથી ટક કાર્યો માલ ઉપાડવામાં આવે તે પ્રતિ ટક દીઠ ગ્રામપંચાયત જે નક્કી કરેત ટોલ ભરવાનો સહમત થાય.
- 10.અમારા ગામમાંથી ટાટા કેમિકલ કંપની જેટલો લાઇમસ્ટોન ઉપાડે અને તેમાંથી જેટલી આવક થાય તે પૈકી નવા કંપની એક્ટ-મુજબ અમારા ગામ માંથી ઉપજેલ લાઇમસ્ટોનની કિમત નો અમુક ટકા ફિરસો અમારા ગામના વિકસ માં પ્રતિવર્ષ વાપરવાનો રહેશે. જેથી ગ્રામ લોકોનુ સામાજિક જીવનસ્તર સુધરે અને ગામજાનો વિકાસ થાય...

Translation

Rambhai Rana bhai Chanpa,
Village- Vadvala, Ta- Ranavav
Dist- Porbandar
Date: 10.12.2013

To
Chairman
Gujarat Pollution Control Board
Village- Aniali, Taluka- Ranavav
Dist- Porbandar

Sub: Request to resolve questions – regarding
Proposed mining 16.21 Ha, Survey No. 207/p in Village Aniali

With the above reference, we request to resolve following:

1. The Road between village Aniali and village Vadvala remains block during monsoon season and difficulties for vehicle movement due to single track.
2. The road is passing through middle of village Aniali. This road should pass through eastern part of the village to ensure safety of children and elders, and to avoid accident and vehicular pollution.
3. Most of the people of village fulfil their daily needs with labour work. Company shall give priority to local people in employment opportunity
4. The impacts on environment due to mining can be mitigated through plantation activity by company or with help of trust.
5. School children to be encouraged by provision of library

Rambhai Ranabhai

Applicant

રામભાઈ રાજાભાઈ ચાંડપા
મુ.વરવાડા તા.રાજાવાવ.
જી.પોરબંદર તા. ૦૦૧૧૨૨૦૧૩

પ્રતિશ્રી
ચેરમેન સાહેબશ્રી
ગુજરાત પ્રદુષણ નીયંત્રણ બોર્ડ
મુ.અણીયારી
તા.રાજાવાવ જી.પોરબંદર.

બાબત : રજૂ કરેલા પ્રશ્નોનો હલ કરવા અંગે.

ઉપરોક્ત કામના અમો અરજદારની માનસાથ નામ અરજ કે :-
અણીયારી ગામે સર્વે નંબર ૨૦૭ પૈકી ૧૬.૦૦ હેક્ટર ના ~~૨૦૦૦૦~~
મીલીયન) મેટ્રિકટન પ્રતિ વર્ષ લાઈમ સ્ટોન માઈનીંગ થવાનું હોય જેમાં હાલ
ગામના નીચે મુજબના પ્રશ્નો હોય જે હલ કરવા આપ સાહેબશ્રીને અમારી
માનસાથ નામ અરજ છે.

૧. હાલ આ પ્રોજેક્ટ બનાવવાથી ગામમાં આવવા જવા માટેનો એક
માત્ર રસ્તો વરવાડા ગામથી આવતો હોય જેમાં વર્ષરિતુને કારણે વરવાડા ગામથી
હાલનો રસ્તો પુર પાણી આવવાથી બંધ થઈ જતો હોય તે ચોમાસાના ચાર
માસ બંધ રહેશે તે અંગે યોગ્ય કાર્યવાહી કરવા અરજ છે.

૨. હાલ અણીયારી ગામમાં આવવા જવા માટેનો રસ્તો કે જે ગામની
વચ્ચેથી નીકળતો હોય તે રસ્તા પરથી પસાર થતા બાજકો વૃદ્ધોને કોસ કરવામાં
ઘણી મુશ્કેલીઓ ઉભી થાય છે. કારણ કે હાલ આ રસ્તા પરથી વાહનો ની સતત
અવર-જવર રહેશે અને શાળા-મજૂરીએ જવા માટે હાલ એક માત્ર રસ્તો
આવેલો છે. ઉપરોક્ત રસ્તો રોડ ઉપર (પુર્વ) ની સાઈડ એવા ખારા
વિસ્તારમાંથી કાઢવામાં આવે તો હાલના આ પ્રશ્નનું નીરાકરણ આવી શકે છે
અને ભવિષ્યમાં થવા પાત્ર અકસ્માત અટકાવી શકાય તેમજ ગામની વચ્ચેથી
પસાર થતા વાહનો દ્વારા ફેલાતું પ્રદુષણ પણ અટકાવી શકાય છે.

--૨--

Received
Juniy P.H.

11/12/13

૩. અણીયારી ગામમાં લગભગ મજૂરી કામ કરી અને પોતાનું ગુજરાન ચલાવતા હોય જે મજૂરોને હાલ આ કુ. દ્વારા મજૂરી આપવામાં આવતા સ્થાનિક શ્રમીકો દ્વારા પણ સરસ એવું કામ થાય અને કુ.ને પણ તેમાં સારો એવો ફાયદો થાય તેમ છે તો આ બાબતે ઘટતું કરવા અરજ છે.

૪. હાલ લાઈમ સ્ટોન માઈનીંગથી પરીવારણને નુકસાન થાય તો વૃક્ષારોપણ કરીને પણ આવા પ્રશ્નો નો હાલ કરી શકાય જેથી કુ.દ્વારા તેમજ લાગતા વળગતા જવાબદાર સંસ્થાઓએ એવી ભૂમીકામાં રસ ધરાવીને વૃક્ષારોપણો કરવા નમ્ર અરજ છે.

૬. શાળામાં વિદ્યાર્થીઓ માટે પુસ્તકાલય બનાવવાથી બાળકોના ભણતરનો પાયો મજબૂત બને આ બાબતે સ્થાનિક સ્કૂલ શાળાની જરૂરીયાત મુજબ વ્યવસ્થા કરવા આપ સાહેબને નમ્ર અરજ છે.
અણીયારી તા. ૧૦/૧૨/૨૦૧૩

21/11/2013

અરજદાર.



Annexure - DI

By hand delivery
AWG/0909-O/2013
December 11, 2013

**The Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan
Sector 10 A
Gandhinagar 382 010**

Sub: Tata Chemicals Limited- Public Hearing for proposed Limestone Mine lease Area 16.21 Ha., S. No. 207/p, Village Aniali, Taluka Ranavav, District- Porbandar
Ref: letter dated 26.11.2013 received from Mr. Bhanubhai N Odedra

Dear Sir,

We hereby submit our response to the suggestions given in above said letter:

The subject mine lease area is an existing mine lease due for renewal and it falls under the land use of Government waste land.

A detailed study to assess the potential impacts due to proposed project activities on sanctuary and other forest areas was conducted by Gujarat Institute of Desert Ecology, Bhuj. The study concludes that due to the proposed mining activity will not have any impact on the wildlife of the sanctuary. At Post mining stage of proposed project, the existing waste land shall be converted to water harvesting bodies and green belts. It will improve the water availability and biodiversity in these areas.

Further mining activities will be carried out as per mining plan approved by IBM.

Thanking you

**Rahul J Buch
General Manager- Safety Health Environment**

**CC: Regional Officer
Gujarat Pollution Control Board
Porbandar**

TATA CHEMICALS LIMITED

Mithapur Dikhamandal Gujarat 361 345

Tel +91 (02892) 665991 / 2 / 3 / 4 Fax +91 (02892) 223361 e-mail mithapur_tatachemicals@tata.com www.tatachemicals.com

Registered Office: Bombay House 24 Homi Mody Street Mumbai 400 001



By hand delivery
AWG/0909-P/2013
December 11, 2013

The Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan
Sector 10 A
Gandhinagar 382 010

Sub: Tata Chemicals Limited- Public Hearing for proposed Limestone Mine lease Area 16.21 Ha., S. No. 207/p, Village Aniali , Taluka Ranavav, District- Porbandar
Ref: Paryavaran Mitra letter No. PM/MP/1240/2013 dated 09.12.2013

Dear Sir,

We reference to the above referred letter our point wise reply are as follows:

1. This lease has been idle since 1994 as TCL requirements were met from other areas. Company now wants to start this lease to meet its requirements
2. Distance to other TCL mines in Aniali village 12.27 Ha (common boundary), 21.04 (common boundary) 15.99 Ha (3.35 Km.) and 6.07 Ha (4.27 km)
3. A detailed study to assess the potential impacts due to proposed project activities on sanctuary and other forest areas was conducted by Gujarat Institute of Desert Ecology, Bhuj. The study concludes that due to the proposed mining activity will not have any impact on the wildlife of the sanctuary. At Post mining stage of proposed project, the existing waste land shall be converted to water harvesting bodies and green belts. It will improve the water availability and biodiversity in these areas.
4. EIA studies have been conducted for the other five TCL Limestone mines which are also idle like the subject mine. The modelling of the various environmental parameters indicates that impact of these mining activities is minor.
5. No. The rain water harvesting potential will be maximum in post mining phase.
6. Impact assessment has been conducted for various environmental parameters and the modelling indicates that impact of the mining activities will be minor and the parameters will remain within specified standard.
7. Companies CSR activities are carried out in consultation with the beneficiaries. Recently the company has helped the communities nearby in developing gardens and drinking water facilities etc. The future plans shall be developed in consultation with local community.
8. More than 78 unskilled persons are likely to find employment in mining related activities

Thanking you

Rahul J Buch
General Manager- Safety Health Environment

CC: Regional Officer
Gujarat Pollution Control Board
Porbandar

TATA CHEMICALS LIMITED

Mithapur Okhamandal Gujarat 361 345

Tel +91 (02892) 665991 / 2 / 3 / 4 Fax +91 (02892) 223361 e-mail mithapur_tatachemicals@tata.com www.tatachemicals.com

Registered Office: Bombay House 24 Horni Mody Street: Mumbai 400 001



By hand delivery
A/WG/0909-L/2013
December 11, 2013

The Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan
Sector 10 A
Gandhinagar 382 010

Sub: Tata Chemicals Limited- Public Hearing for proposed Limestone Mine lease Area 16.21 Ha., S. No. 207/p, Village Aniali, Taluka Ranavav, District- Porbandar
Ref: letter dated 11.12.2013 received from Shri. Dayabhai Hun, Sarpanch- Village: Aniali

Dear Sir,

We hereby submit our response to the suggestions/concerns given in above said letter:

Point 1: concern is not applicable on proposed project.

Point 2: concern is not applicable on proposed project as company is not operating any mine lease in this village area. Company shall ensure compliance of prevailing regulations i at the time of mining.

Point 3: concern is not applicable on proposed project.

Point 4: concern is not applicable on proposed project.

Point 5: Since no work has been initiated by TCL, concern is not applicable.

Point 6: Since no work has been initiated by TCL, concern is not applicable.

Point 7: Company believes in encouraging local employment based on availability of skill and requirement of the company.

Point 8: Company shall ensure compliance of all regulatory norms. Mining rules will be followed during mining operations. Chairman of public hearing has made clear that permission of Gram Panchayat is not required for the proposed project activities as it is not in purview of Gram Panchayat.

Point 9: Chairman of the public hearing has made clear that it will require permission from Jila Panchayat or other appropriate authority.

Point 10: Such law is not yet enacted. Company shall follow any such rule when it comes into force.

Thanking you

Rahul J Buch
General Manager- Safety Health Environment

CC: Regional Officer
Gujarat Pollution Control Board
Porbandar

TATA CHEMICALS LIMITED

Mithapur Okhamandal, Gujarat 361 345

Tel +91 (02892) 665991 / 2 / 3 / 4. Fax +91 (02892) 223361 e-mail mithapur_tatachemicals@tata.com www.tatachemicals.com

Registered Office: Bombay House 24 Homi Mody Street, Mumbai 400 001



Annexure D4.

By hand delivery
AWG/0909-R/2013
December 11, 2013

The Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan
Sector 10 A
Gandhinagar 382 010

Sub: Tata Chemicals Limited- Public Hearing for proposed Limestone Mine lease Area 16.21 Ha., S. No. 207/p, Village Aniali, Taluka Ranavav, District- Porbandar

Ref: letter dated 11.12.2013 received from Shri. Rambhai Ranabhai Chanpa

village Vadvala, Tal. Ranavav.
Dear Sir,

We hereby submit our response to the suggestions/concerns given in above said letter:

Point 1 & 2: TCL is presently not operating any mine lease in this area. Prior to starting operation and during early stages of operation, TCL in line with its current practice shall plan out various community development activities in consultation with various nearby local communities. At that time, the question of assistance in rural roads improvement shall be taken up.

Point3: TCL would like to encourage local employment as per its requirement and availability of skills

Point 4: TCL has plans to planting trees in the mine area as per mining plan approved by IBM and as proposed in EIA's Environment Management Plan.

Point 6: As per above point 1 & 2, TCL shall consult local communities for its proposed community development activities

Thanking you

Rahul J Buch
General Manager- Safety Health Environment

CC: Regional Officer
Gujarat Pollution Control Board
Porbandar

TATA CHEMICALS LIMITED

Mithapur Okhamandal Gujarat 361 345

Tel +91 (02892) 865991 / 2 / 3 / 4 Fax +91 (02892) 223361 e-mail mithapur_tatachemicals@tata.com www.tatachemicals.com

Registered Office Bombay House 24 Horni Mody Street Mumbai 400 001



October 25, 2012

NABET/EIA/SA003/1012
The Executive Director
MANTEC Consultants Pvt. Ltd.
D-36, Sector 6, Noida - 201301
(Kind Attention: Mr. Sanjeev Sharma)

Dear Sir,

Sub: Surveillance Assessment

This has reference to the Surveillance Assessment (SA) carried out in your organization on June 27-29, 2012. Based on the SA, the Accreditation Committee has recommended continuation of conditional accreditation of your organization under the QCI-NABET Accreditation Scheme for EIA Consultant Organizations as per the following details:

1. Annexure I – Scope of accreditation
2. Annexure II – List of experts with approved sectors/ functional areas
3. Annexure III – Non-Conformances/ Observations/ Alerts (NCs/ Obs./ Alerts)
4. Annexure IV – Terms and conditions of accreditation
5. Annexure V – Result of assessment.
6. Annexure VI – Guidelines for addressing Non-Conformances/ Observations/ Alerts

Non-Conformances/ Observations/ Alerts/ (NCs/ Obs./ Alerts) applicable to your organization as per SA are also posted on QCI website vide minutes of the Accreditation Committee meeting held on July 20, 2012. You are requested to take necessary actions to close the NCs/ Obs. as per guidelines and timeframe mentioned in Annexure V of this letter.

You are required to make all payments to NABET as applicable, within one month of receipt of this letter. Continuation of accreditation of your organization is subject to the clearance of all dues by your organization and satisfactory compliance to Annexure III and IV.

With best regards,

Yours sincerely,

(Vipin Sahni)
C.E.O.



Scope of Accreditation

Annexure I

NAME OF THE CONSULTANT ORGANIZATION:

MANTEC Consultants Pvt. Ltd.
D-36, Sector 6, Noida - 201301

<u>Sl. No.</u>	<u>Sector No.</u>	<u>Name of Sector</u>	<u>Category A/B</u>
1.	1	Mining of minerals (Opencast only)	A
2.	3	River valley, Hydel, Drainage and Irrigation projects	A
3.	4	Thermal Power Plants	A
4.	10	Petroleum refining industry	A
5.	16	Chemical fertilizers	A
6.	33	Ports, harbours, jetties, marine terminals, breakwaters and dredging	B
7.	34	Highways , railways, transport terminals, mass rapid transport systems	B

Total = 07 Sectors*

**Sectors allocated to individual EIA Coordinators are mentioned in Annexure II*


(Vipin Sahni)
C.E.O.

NABET

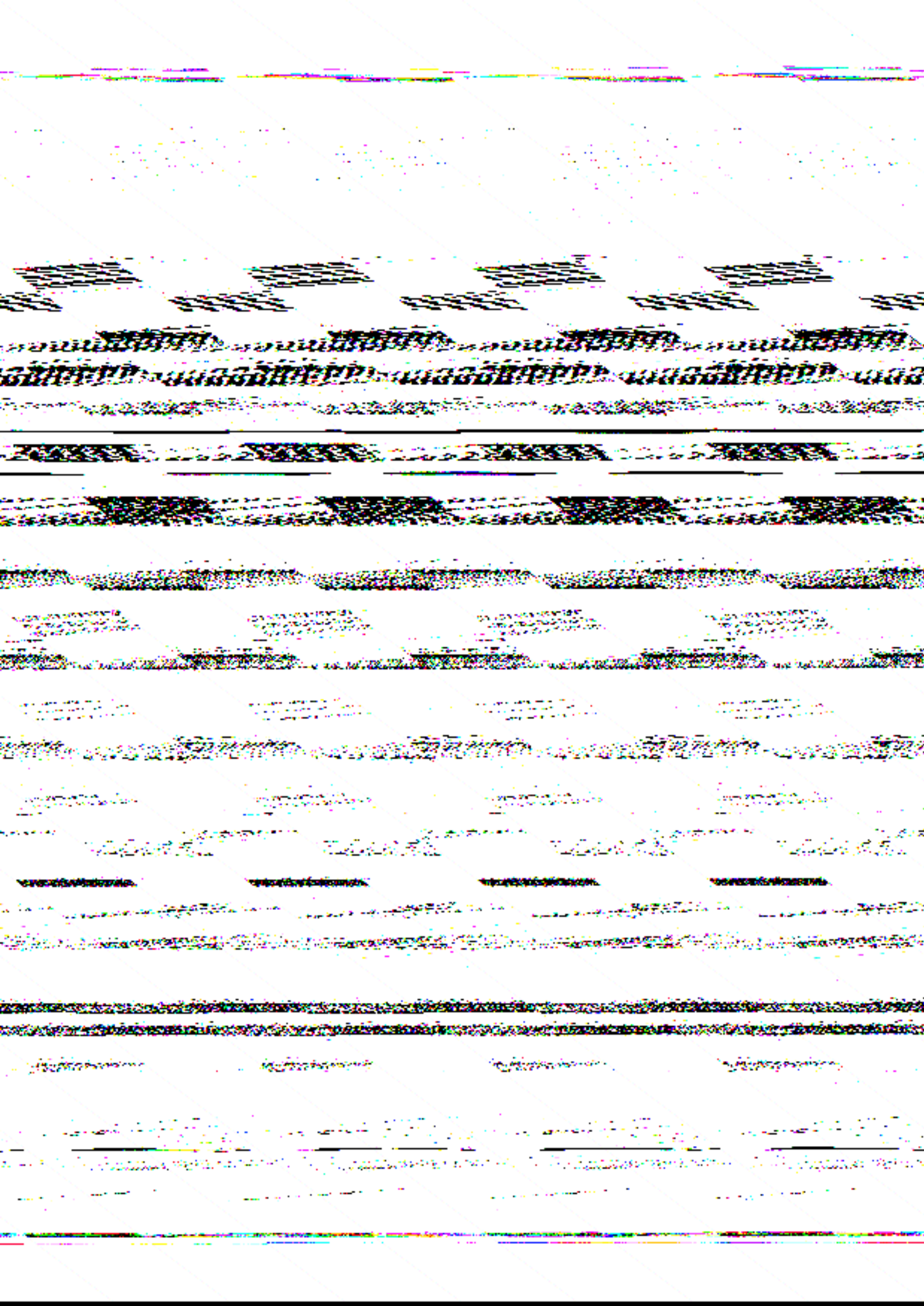




TABLE OF CONTENT

Sr. No	Particular
1	Ambient Air Quality Analysis Reports
2	Ground Water Quality Analysis Reports
3	Surface Water Quality Analysis Reports
4	Soil Quality Analysis Reports
5	Noise Quality Analysis Reports



1. Introduction 2. Methodology 3. Results 4. Discussion 5. Conclusion

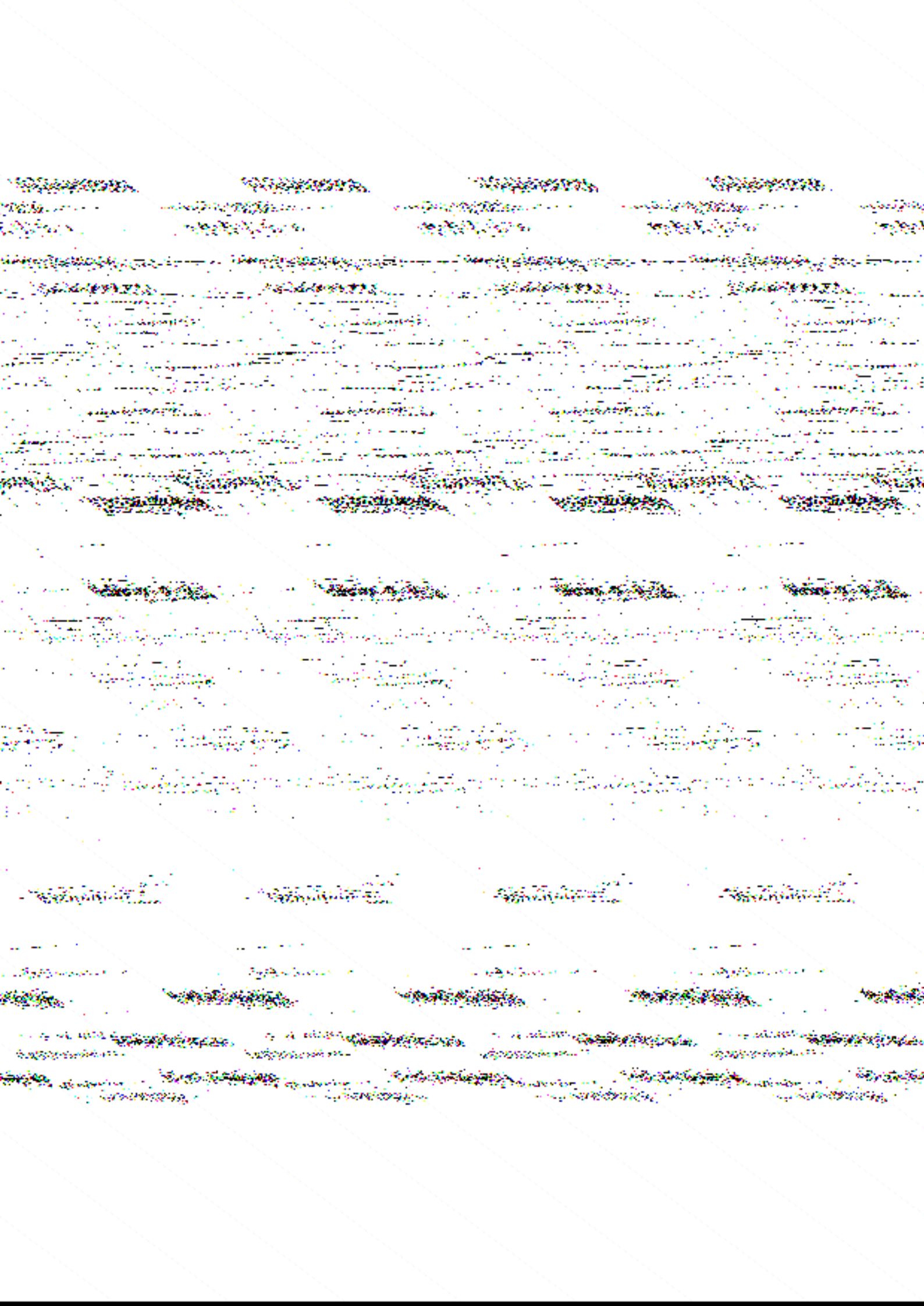
The first section of the report provides a brief overview of the study's objectives and the research questions that guided the investigation. The methodology section details the research design, data collection methods, and the statistical analyses used to interpret the findings. The results section presents the data obtained from the study, and the discussion section explores the implications of these findings in relation to the research questions and existing literature. Finally, the conclusion summarizes the key findings and offers suggestions for future research.

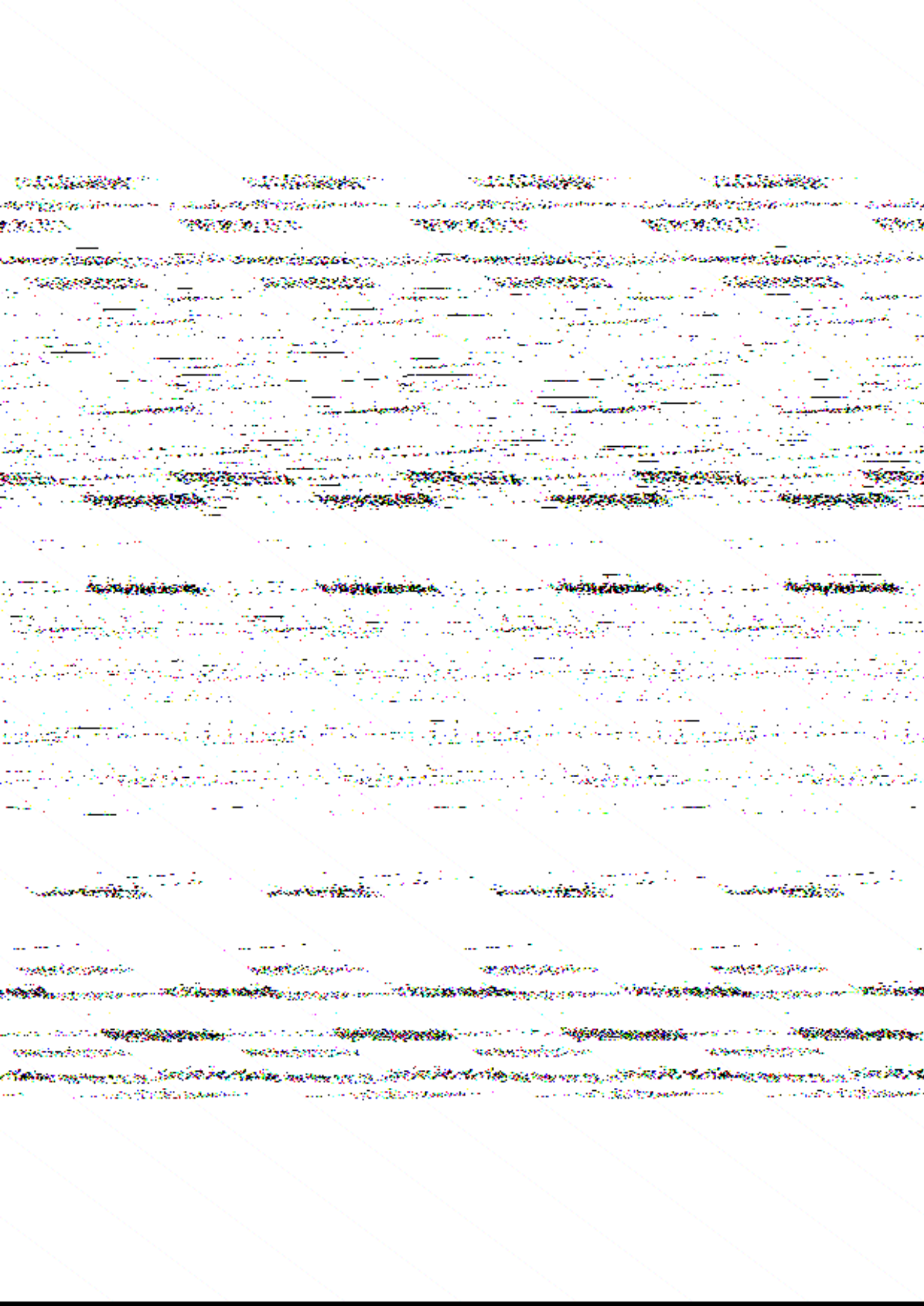
The study was conducted using a quantitative research design, which allowed for the collection of numerical data that could be analyzed statistically. The data were collected through a series of surveys administered to a representative sample of the population. The results of the study indicate that there is a significant positive correlation between the variables being investigated. This finding is consistent with the theoretical framework that guided the study and has important implications for the field of research. The discussion section of the report provides a detailed analysis of these findings and their potential applications in practice.

1. Introduction 2. Methodology 3. Results 4. Discussion 5. Conclusion

The second section of the report provides a more detailed analysis of the data and discusses the implications of the findings. The results section presents the data obtained from the study, and the discussion section explores the implications of these findings in relation to the research questions and existing literature. Finally, the conclusion summarizes the key findings and offers suggestions for future research.







Handwritten text on lined paper, appearing to be a list or index of names and dates. The text is heavily obscured by horizontal black lines and significant digital noise, making it largely illegible. Some faint words like "Handwritten" and "List" are visible at the top. The text is organized into columns and rows, suggesting a structured list.

1. Introduction

2. Background

3. Methodology

4. Results

5. Conclusion

6. References

7. Appendix

8. Index

9. Table of Contents

10. Summary

11. Abstract

12. Keywords

13. Author's Note

14. Correspondence

15. Conflict of Interest

16. Disclaimer

17. Copyright

18. Reprints

19. Permissions

20. Other

21. Notes

22. Footnotes

23. Endnotes

24. References

25. Appendix

26. Index

27. Table of Contents

28. Summary

29. Abstract

30. Keywords

31. Author's Note

32. Correspondence

33. Conflict of Interest

34. Disclaimer

35. Copyright

36. Reprints

37. Permissions

38. Other

39. Notes

40. Footnotes

41. Endnotes

42. References

43. Appendix

44. Index

45. Table of Contents

46. Summary

47. Abstract

48. Keywords

49. Author's Note

50. Correspondence

51. Conflict of Interest

52. Disclaimer

53. Copyright

54. Reprints

55. Permissions

56. Other

57. Notes

58. Footnotes

59. Endnotes

60. References

61. Appendix

62. Index

63. Table of Contents

64. Summary

65. Abstract

66. Keywords

67. Author's Note

68. Correspondence

69. Conflict of Interest

70. Disclaimer

71. Copyright

72. Reprints

73. Permissions

74. Other

75. Notes

76. Footnotes

77. Endnotes

78. References

79. Appendix

80. Index

81. Table of Contents

82. Summary

83. Abstract

84. Keywords

85. Author's Note

86. Correspondence

87. Conflict of Interest

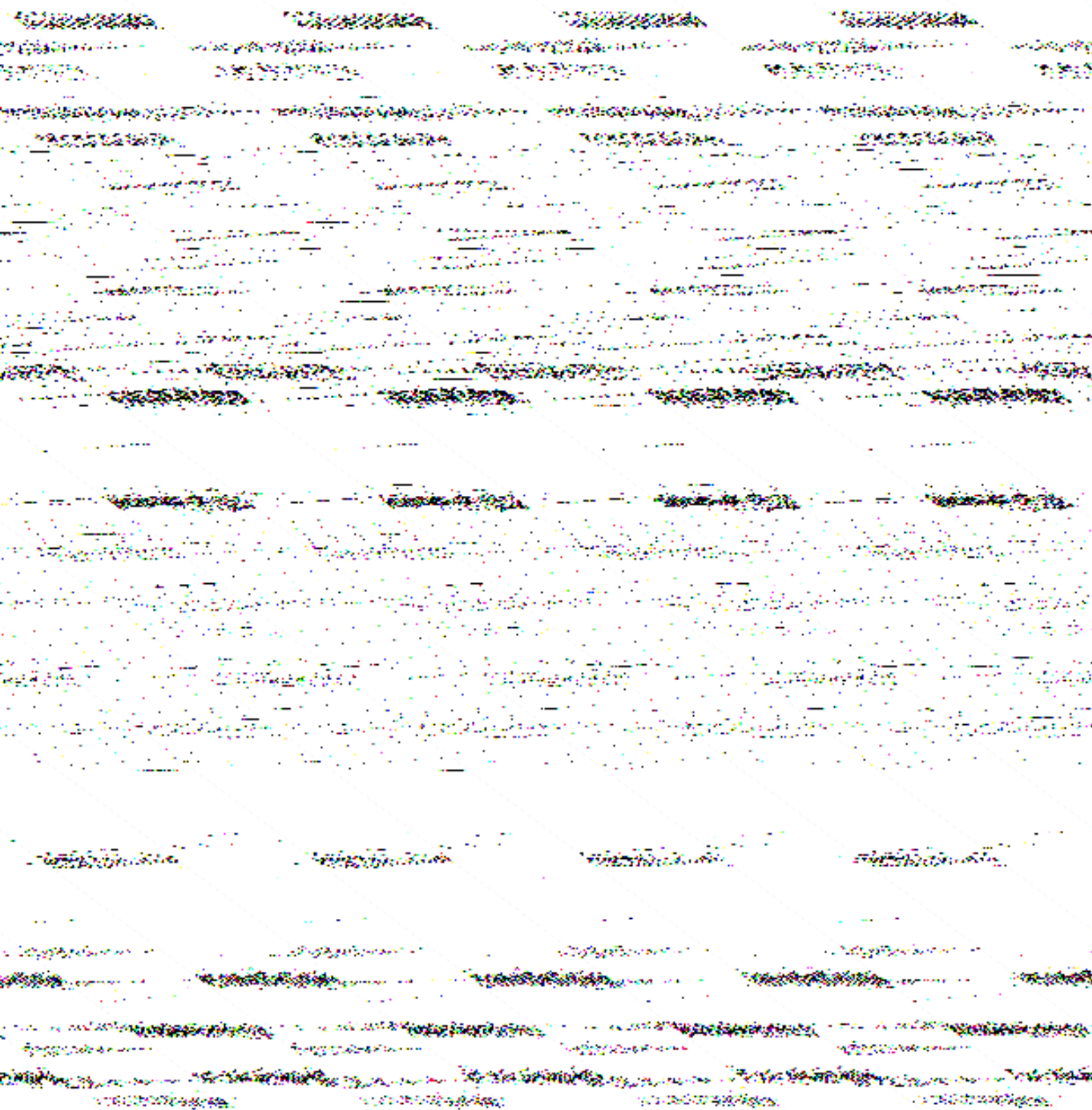
88. Disclaimer

89. Copyright

90. Reprints

91. Permissions

92. Other



1. *Handwritten text, possibly a header or title.*

2. *Handwritten text, possibly a date or location.*

3. *Handwritten text, possibly a name or subject.*

4. *Handwritten text, possibly a description or notes.*

5. *Handwritten text, possibly a signature or date.*

6. *Handwritten text, possibly a list or items.*

7. *Handwritten text, possibly a paragraph or notes.*

8. *Handwritten text, possibly a signature or date.*

9. *Handwritten text, possibly a list or items.*

10. *Handwritten text, possibly a paragraph or notes.*

11. *Handwritten text, possibly a signature or date.*

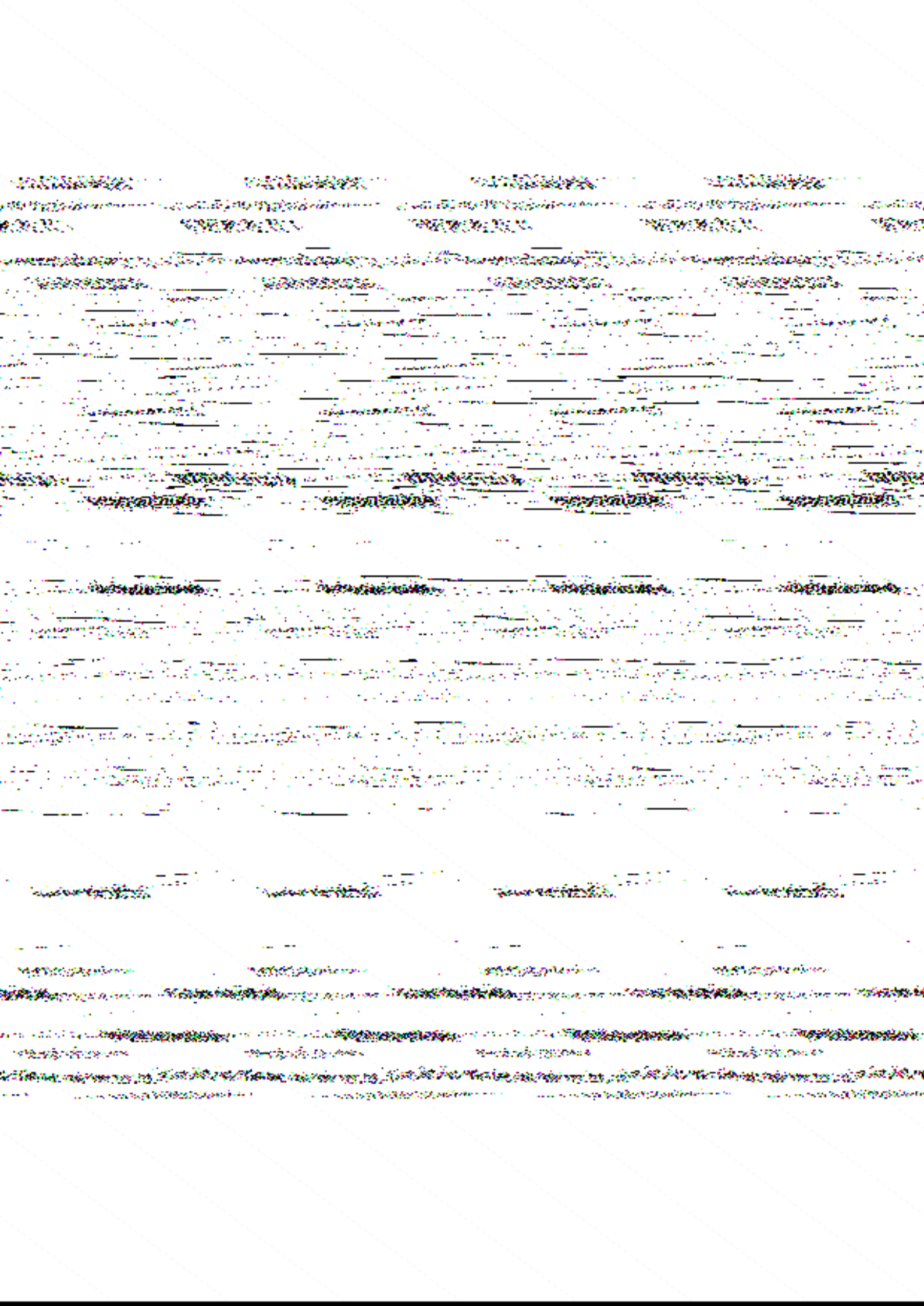
12. *Handwritten text, possibly a list or items.*

13. *Handwritten text, possibly a paragraph or notes.*

14. *Handwritten text, possibly a signature or date.*

15. *Handwritten text, possibly a list or items.*

16. *Handwritten text, possibly a paragraph or notes.*



DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
10/15/2023	DEPOSIT	1000.00		CHASE
10/16/2023	DEPOSIT	500.00		CHASE
10/17/2023	DEPOSIT	750.00		CHASE
10/18/2023	DEPOSIT	200.00		CHASE
10/19/2023	DEPOSIT	300.00		CHASE
10/20/2023	DEPOSIT	400.00		CHASE
10/21/2023	DEPOSIT	150.00		CHASE
10/22/2023	DEPOSIT	250.00		CHASE
10/23/2023	DEPOSIT	350.00		CHASE
10/24/2023	DEPOSIT	450.00		CHASE
10/25/2023	DEPOSIT	550.00		CHASE
10/26/2023	DEPOSIT	650.00		CHASE
10/27/2023	DEPOSIT	750.00		CHASE
10/28/2023	DEPOSIT	850.00		CHASE
10/29/2023	DEPOSIT	950.00		CHASE
10/30/2023	DEPOSIT	1050.00		CHASE
10/31/2023	DEPOSIT	1150.00		CHASE

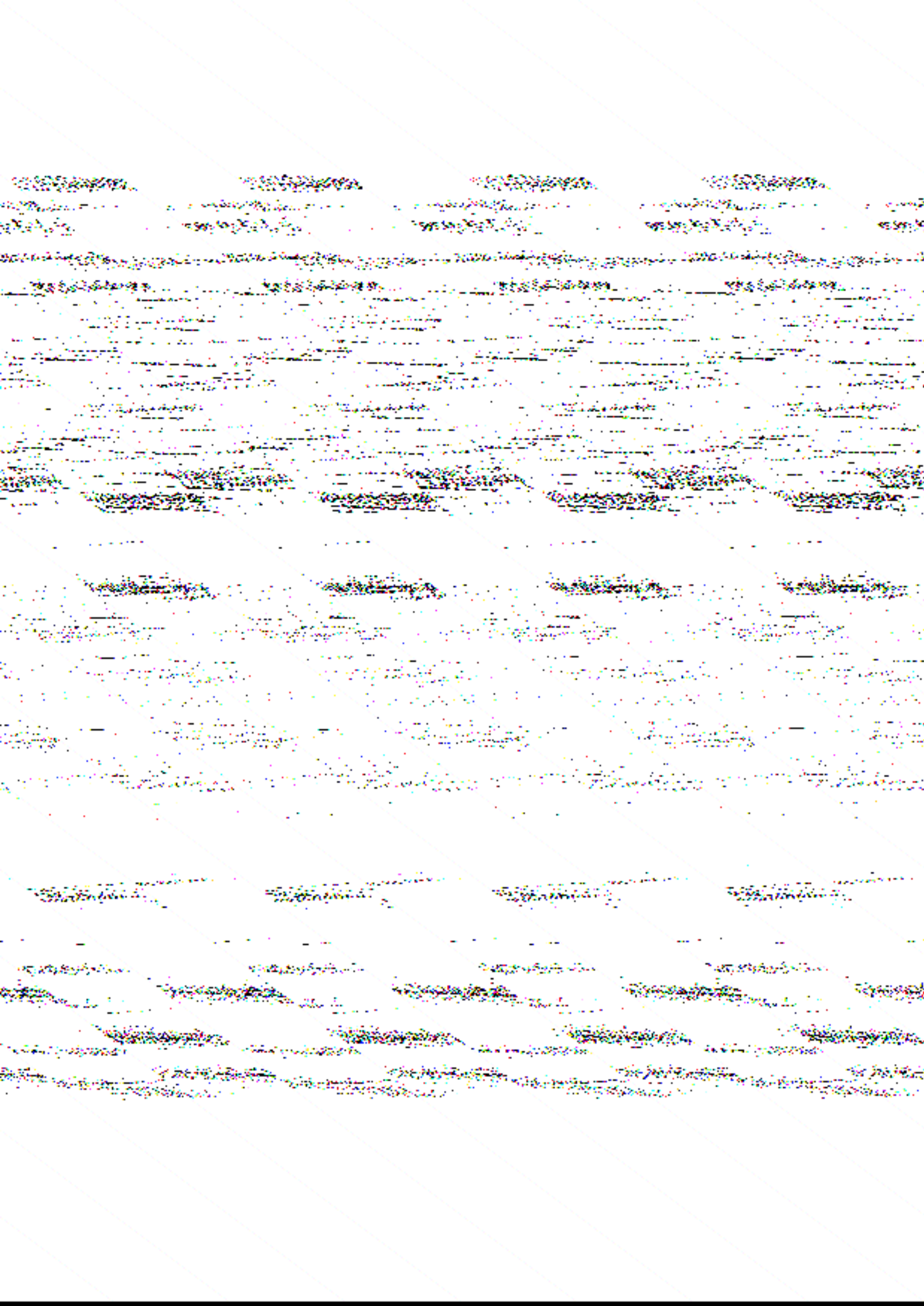
DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
10/15/2023	DEPOSIT	1200.00		CHASE
10/16/2023	DEPOSIT	600.00		CHASE
10/17/2023	DEPOSIT	900.00		CHASE
10/18/2023	DEPOSIT	300.00		CHASE
10/19/2023	DEPOSIT	400.00		CHASE
10/20/2023	DEPOSIT	500.00		CHASE
10/21/2023	DEPOSIT	200.00		CHASE
10/22/2023	DEPOSIT	300.00		CHASE
10/23/2023	DEPOSIT	400.00		CHASE
10/24/2023	DEPOSIT	500.00		CHASE
10/25/2023	DEPOSIT	600.00		CHASE
10/26/2023	DEPOSIT	700.00		CHASE
10/27/2023	DEPOSIT	800.00		CHASE
10/28/2023	DEPOSIT	900.00		CHASE
10/29/2023	DEPOSIT	1000.00		CHASE
10/30/2023	DEPOSIT	1100.00		CHASE
10/31/2023	DEPOSIT	1200.00		CHASE

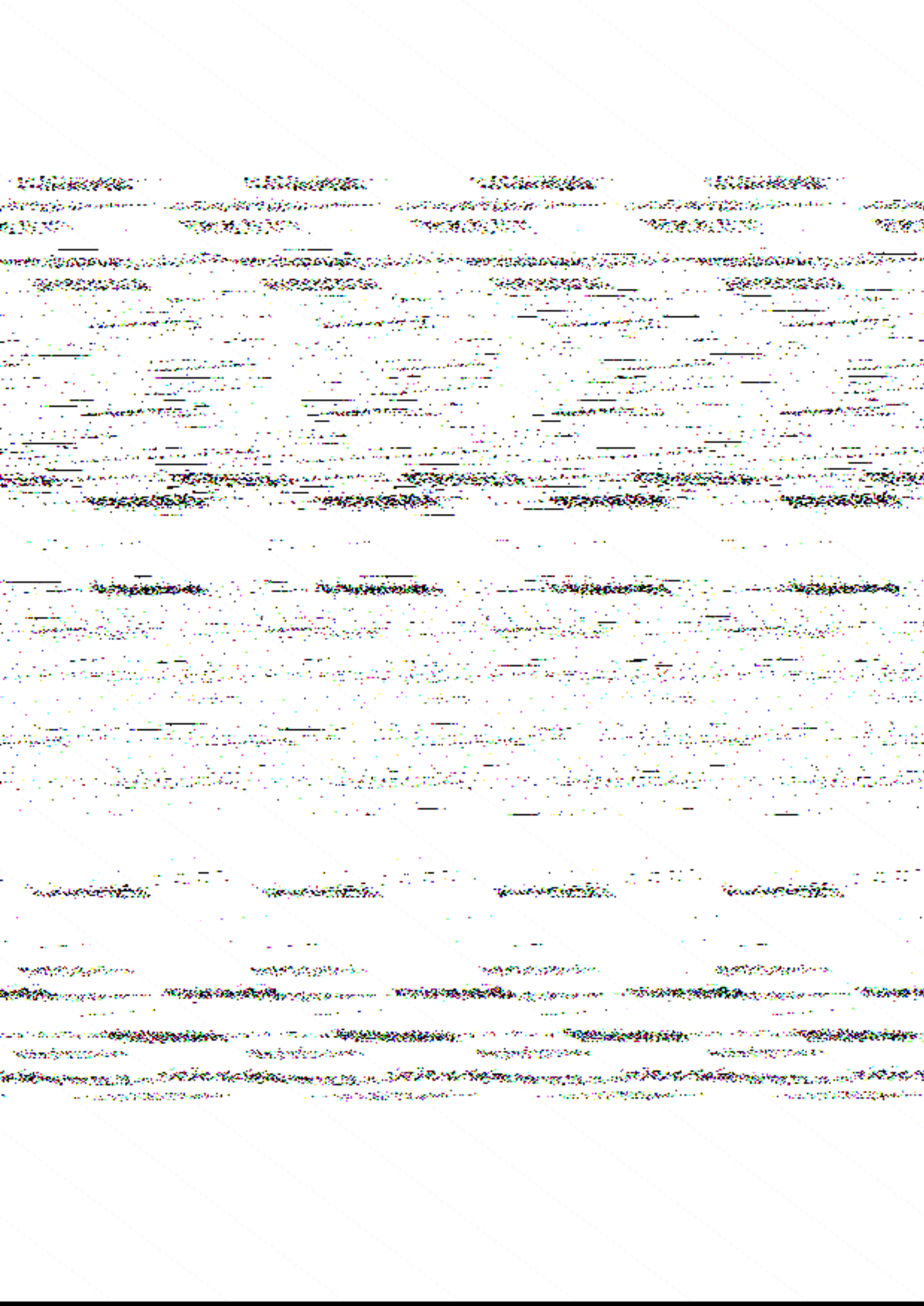
DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
10/15/2023	DEPOSIT	1300.00		CHASE
10/16/2023	DEPOSIT	650.00		CHASE
10/17/2023	DEPOSIT	950.00		CHASE
10/18/2023	DEPOSIT	350.00		CHASE
10/19/2023	DEPOSIT	450.00		CHASE
10/20/2023	DEPOSIT	550.00		CHASE
10/21/2023	DEPOSIT	250.00		CHASE
10/22/2023	DEPOSIT	350.00		CHASE
10/23/2023	DEPOSIT	450.00		CHASE
10/24/2023	DEPOSIT	550.00		CHASE
10/25/2023	DEPOSIT	650.00		CHASE
10/26/2023	DEPOSIT	750.00		CHASE
10/27/2023	DEPOSIT	850.00		CHASE
10/28/2023	DEPOSIT	950.00		CHASE
10/29/2023	DEPOSIT	1050.00		CHASE
10/30/2023	DEPOSIT	1150.00		CHASE
10/31/2023	DEPOSIT	1250.00		CHASE





Handwritten text, likely bleed-through from the reverse side of the page. The text is arranged in approximately four columns and is mostly illegible due to the low contrast and heavy noise. Some faint words like "The" and "and" are visible. The text appears to be a list or series of entries, possibly names or dates, with some lines starting with "The" and others with "and".



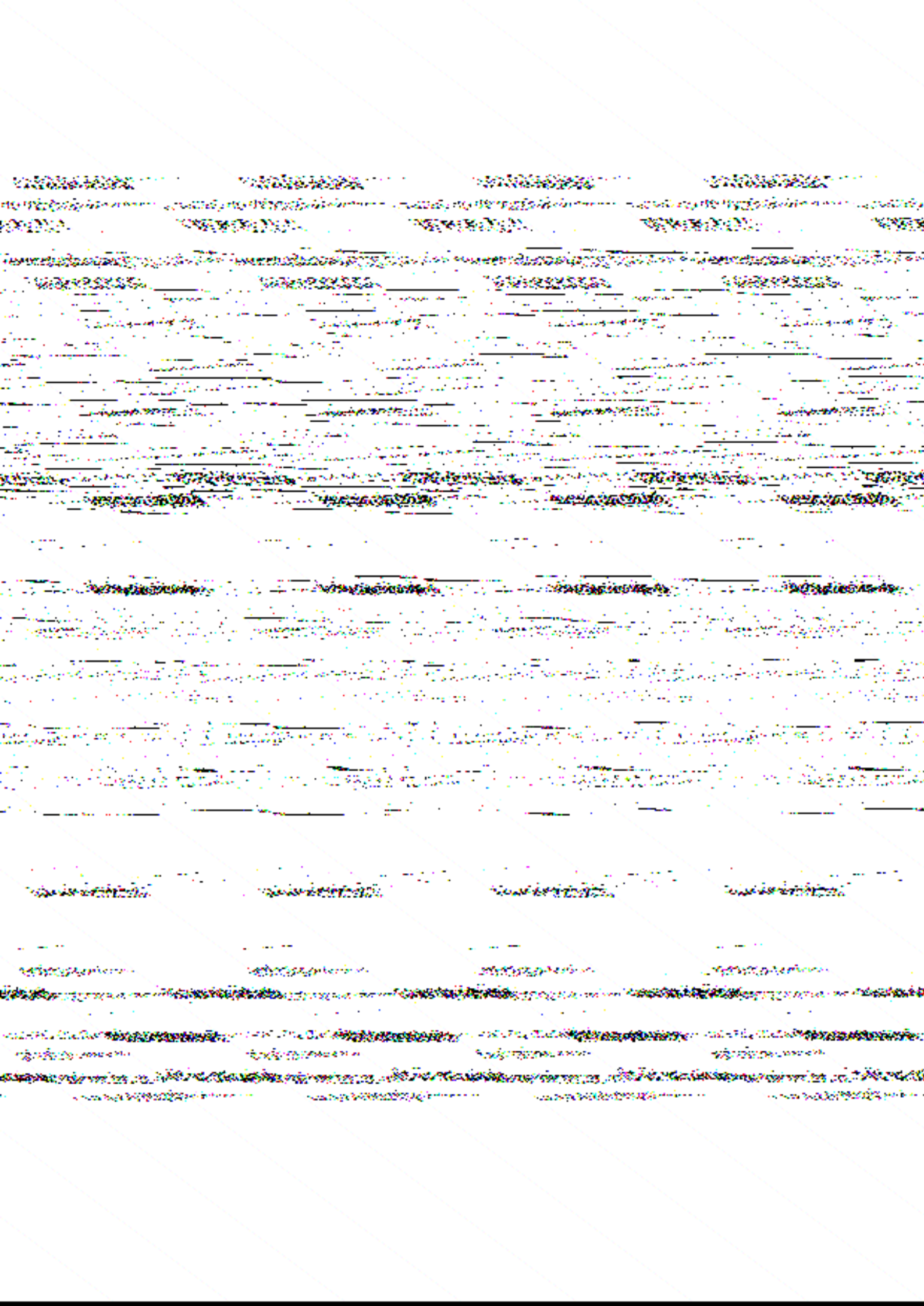


1	2	3	4	5
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50
51	52	53	54	55
56	57	58	59	60
61	62	63	64	65
66	67	68	69	70
71	72	73	74	75
76	77	78	79	80
81	82	83	84	85
86	87	88	89	90
91	92	93	94	95
96	97	98	99	100





Handwritten text, likely bleed-through from the reverse side of the page. The text is arranged in several horizontal lines and is mostly illegible due to the quality of the scan and the nature of the bleed-through. Some faint words and phrases are visible, but they do not form a coherent message.





1. *Staphylococcus aureus* 2. *Staphylococcus aureus* 3. *Staphylococcus aureus* 4. *Staphylococcus aureus*

5. *Staphylococcus aureus* 6. *Staphylococcus aureus* 7. *Staphylococcus aureus* 8. *Staphylococcus aureus*

9. *Staphylococcus aureus* 10. *Staphylococcus aureus* 11. *Staphylococcus aureus* 12. *Staphylococcus aureus*

13. *Staphylococcus aureus* 14. *Staphylococcus aureus* 15. *Staphylococcus aureus* 16. *Staphylococcus aureus*

17. *Staphylococcus aureus* 18. *Staphylococcus aureus* 19. *Staphylococcus aureus* 20. *Staphylococcus aureus*

21. *Staphylococcus aureus* 22. *Staphylococcus aureus* 23. *Staphylococcus aureus* 24. *Staphylococcus aureus*

25. *Staphylococcus aureus* 26. *Staphylococcus aureus* 27. *Staphylococcus aureus* 28. *Staphylococcus aureus*

29. *Staphylococcus aureus* 30. *Staphylococcus aureus* 31. *Staphylococcus aureus* 32. *Staphylococcus aureus*

33. *Staphylococcus aureus* 34. *Staphylococcus aureus* 35. *Staphylococcus aureus* 36. *Staphylococcus aureus*

37. *Staphylococcus aureus* 38. *Staphylococcus aureus* 39. *Staphylococcus aureus* 40. *Staphylococcus aureus*

41. *Staphylococcus aureus* 42. *Staphylococcus aureus* 43. *Staphylococcus aureus* 44. *Staphylococcus aureus*

45. *Staphylococcus aureus* 46. *Staphylococcus aureus* 47. *Staphylococcus aureus* 48. *Staphylococcus aureus*

49. *Staphylococcus aureus* 50. *Staphylococcus aureus* 51. *Staphylococcus aureus* 52. *Staphylococcus aureus*

53. *Staphylococcus aureus* 54. *Staphylococcus aureus* 55. *Staphylococcus aureus* 56. *Staphylococcus aureus*

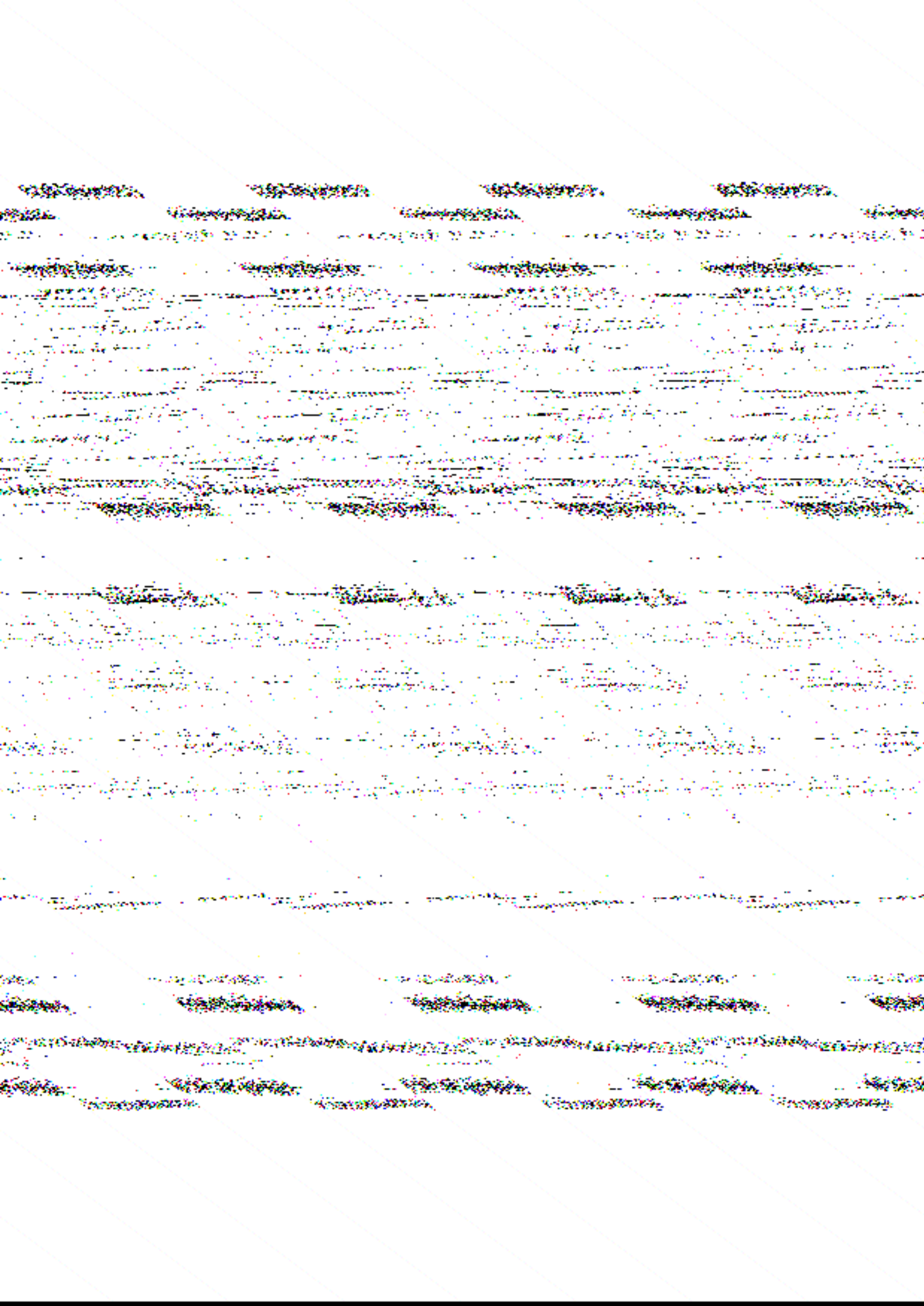
57. *Staphylococcus aureus* 58. *Staphylococcus aureus* 59. *Staphylococcus aureus* 60. *Staphylococcus aureus*

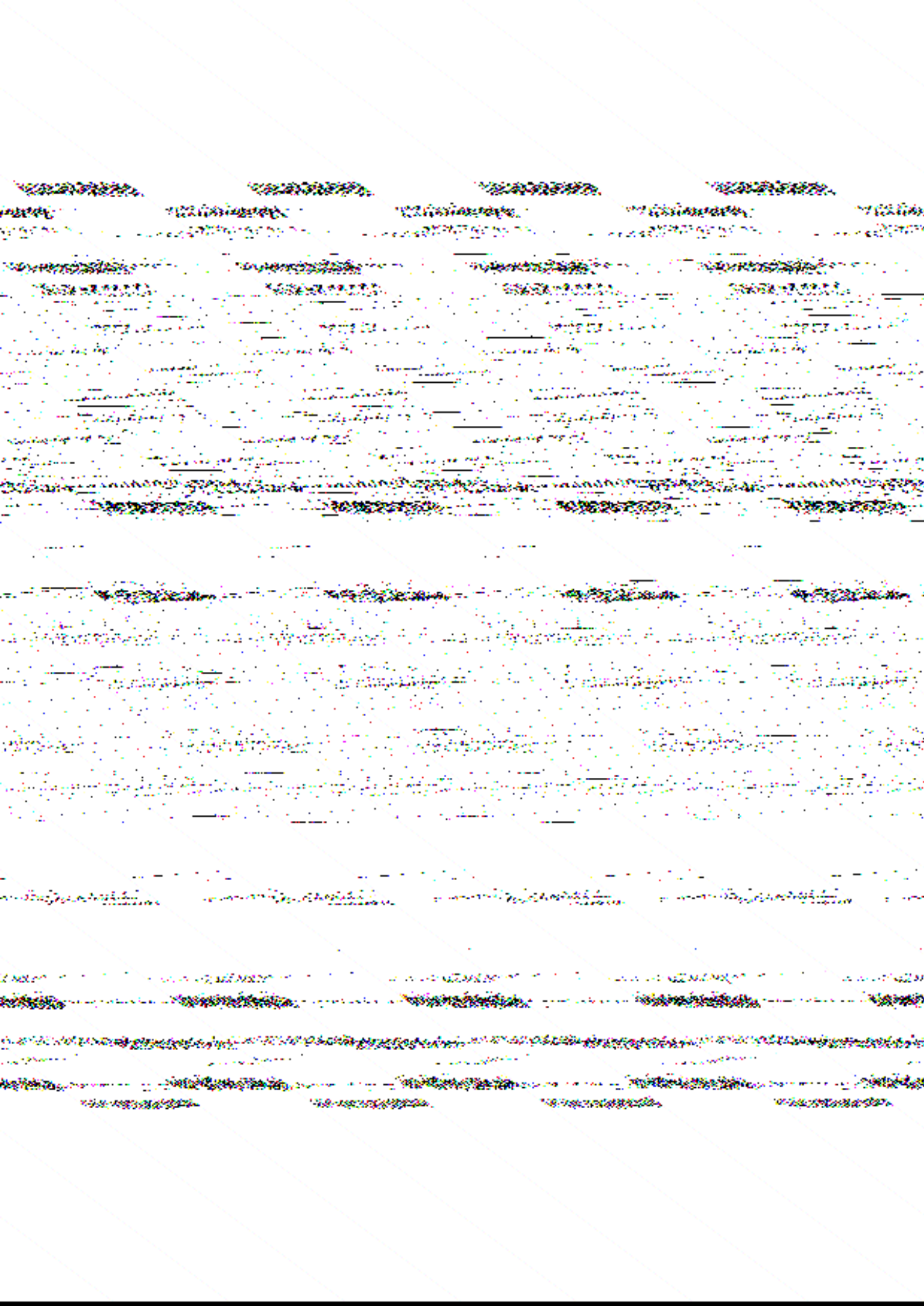
61. *Staphylococcus aureus* 62. *Staphylococcus aureus* 63. *Staphylococcus aureus* 64. *Staphylococcus aureus*

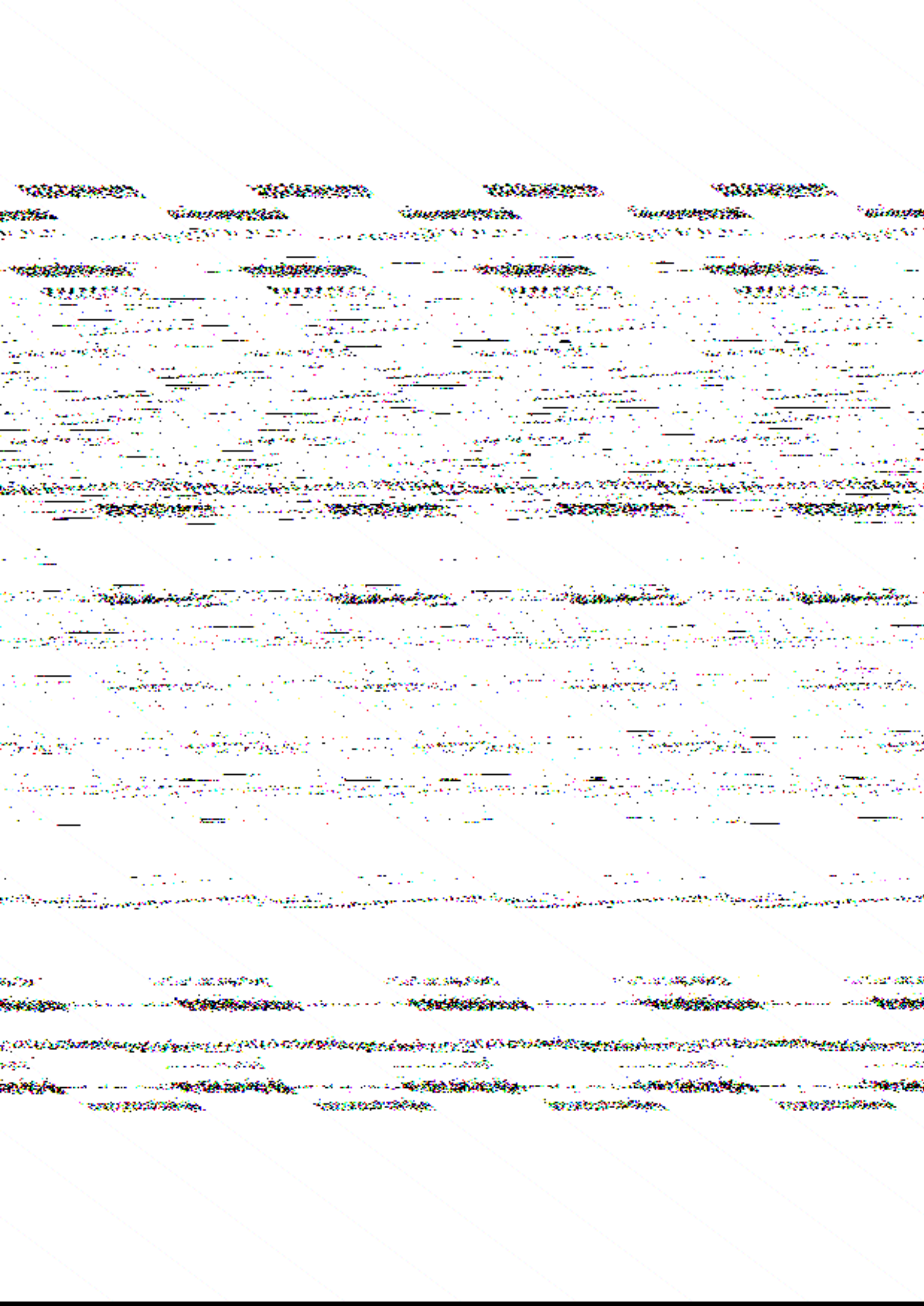
65. *Staphylococcus aureus* 66. *Staphylococcus aureus* 67. *Staphylococcus aureus* 68. *Staphylococcus aureus*

69. *Staphylococcus aureus* 70. *Staphylococcus aureus* 71. *Staphylococcus aureus* 72. *Staphylococcus aureus*

73. *Staphylococcus aureus* 74. *Staphylococcus aureus* 75. *Staphylococcus aureus* 76. *Staphylococcus aureus*







1. Introduction

2. Background

3. Methodology

4. Results

5. Conclusion

6. References

7. Appendix

8. Index

9. Summary

10. Final Remarks

11. Notes

12. Footnotes

13. Endnotes

14. References

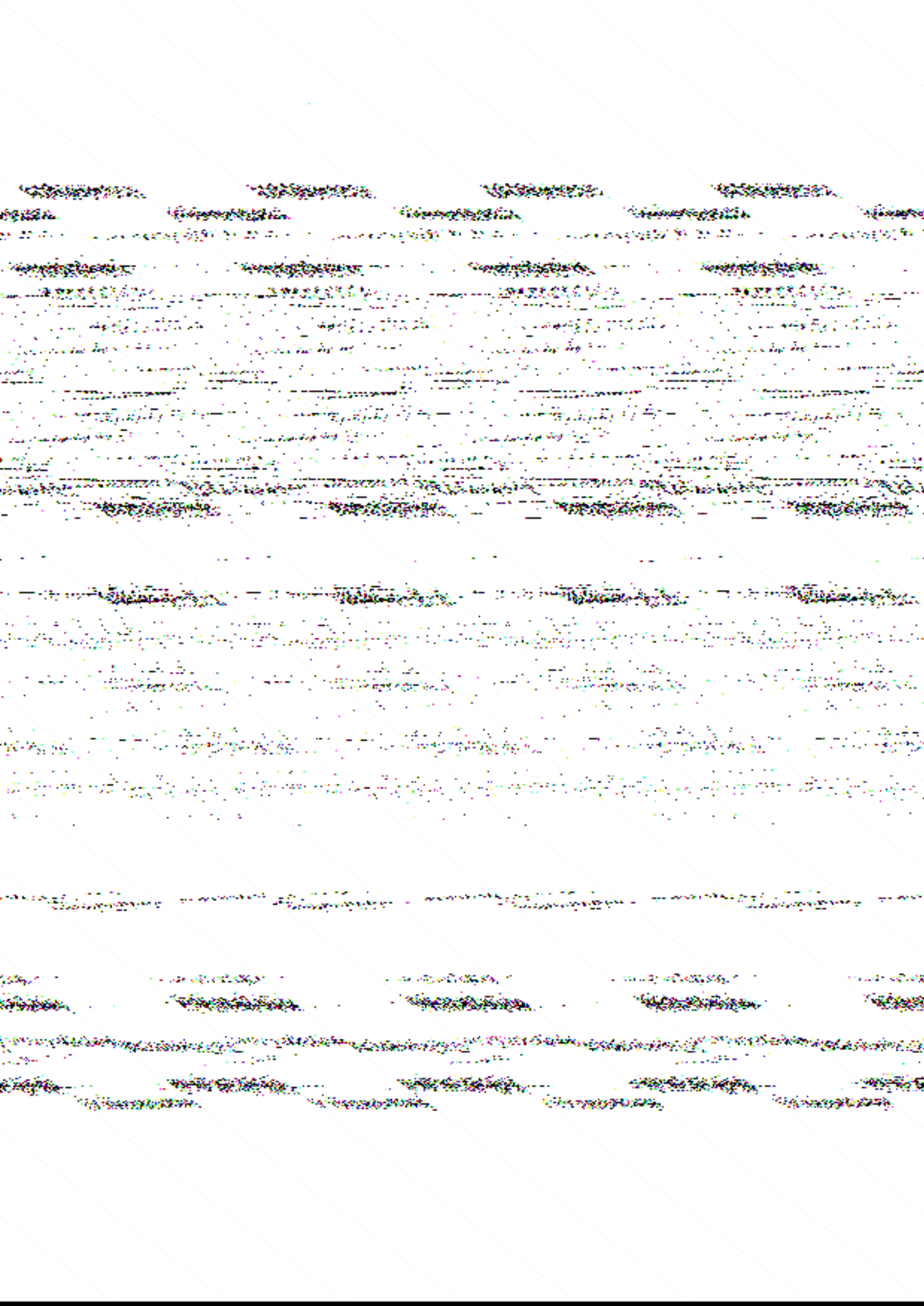
15. Appendix

16. Index

17. Summary

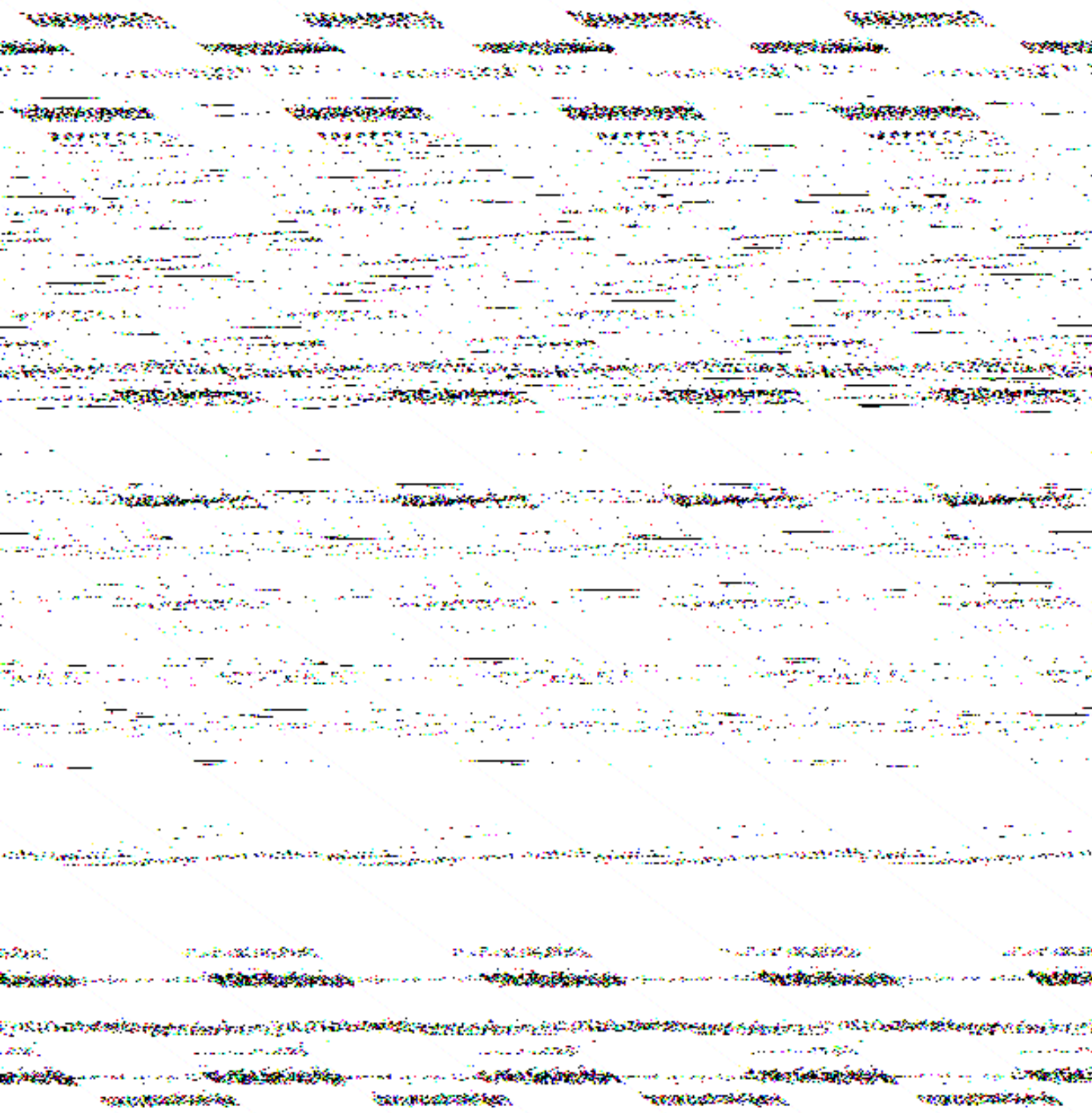
18. Final Remarks



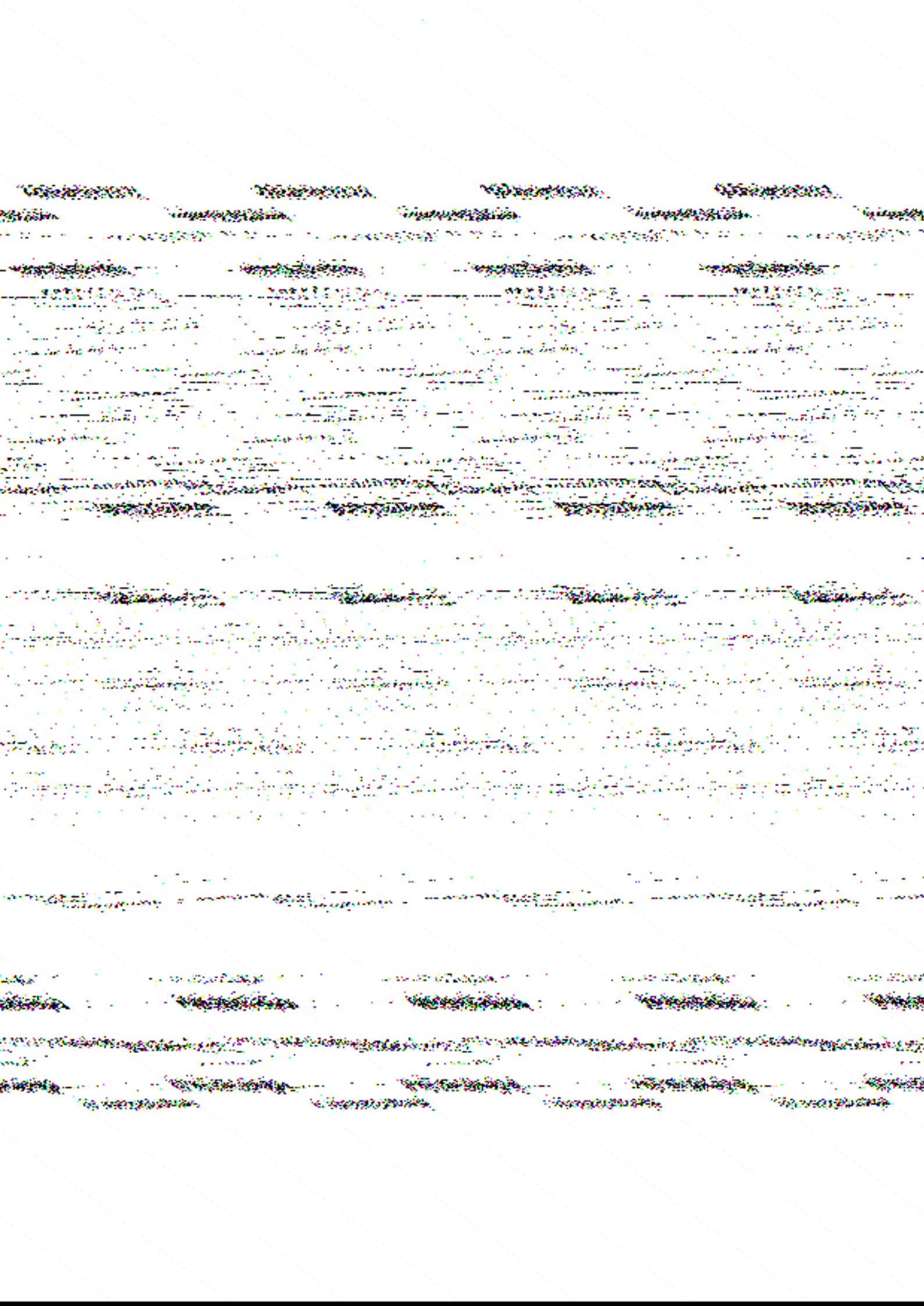


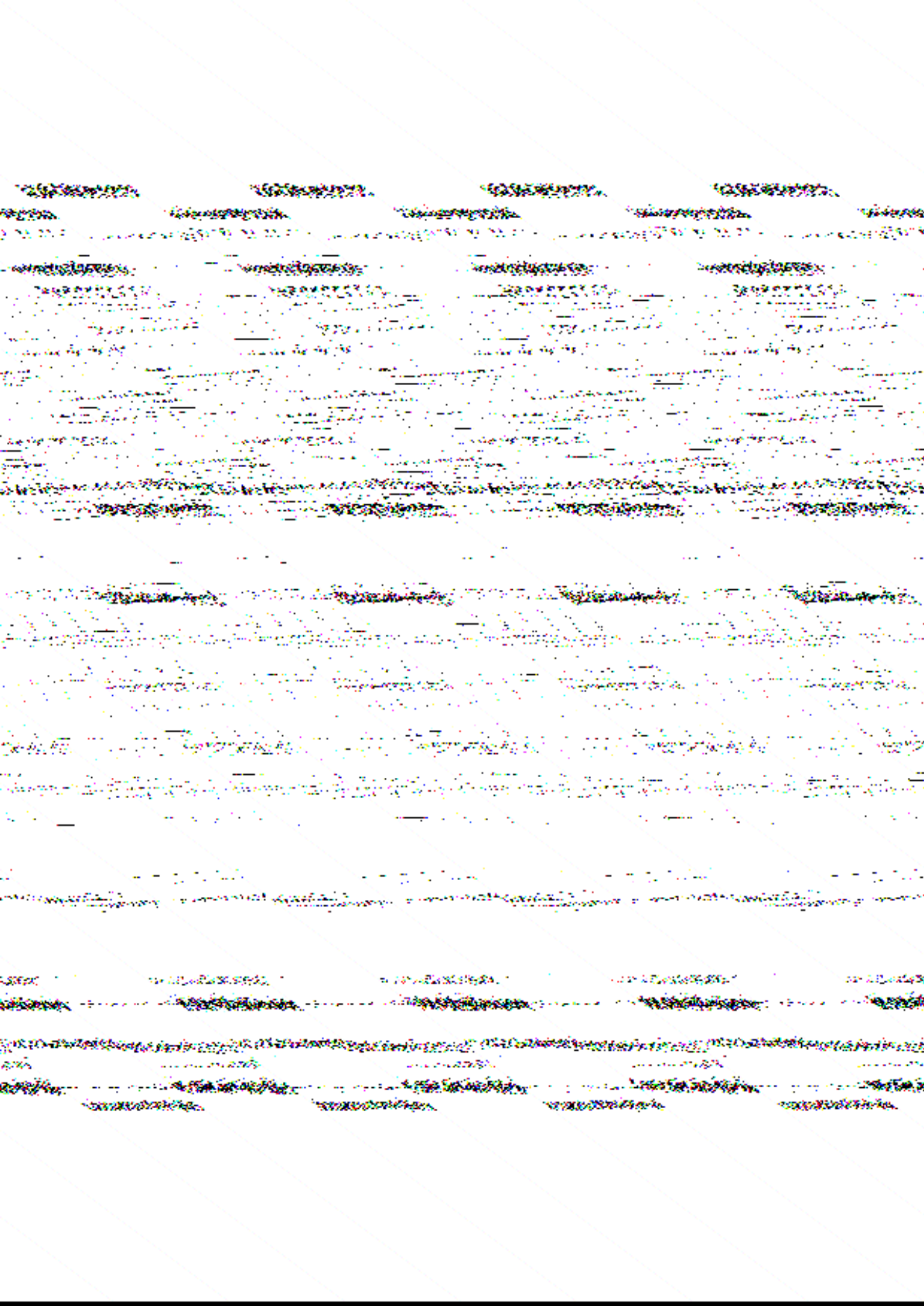


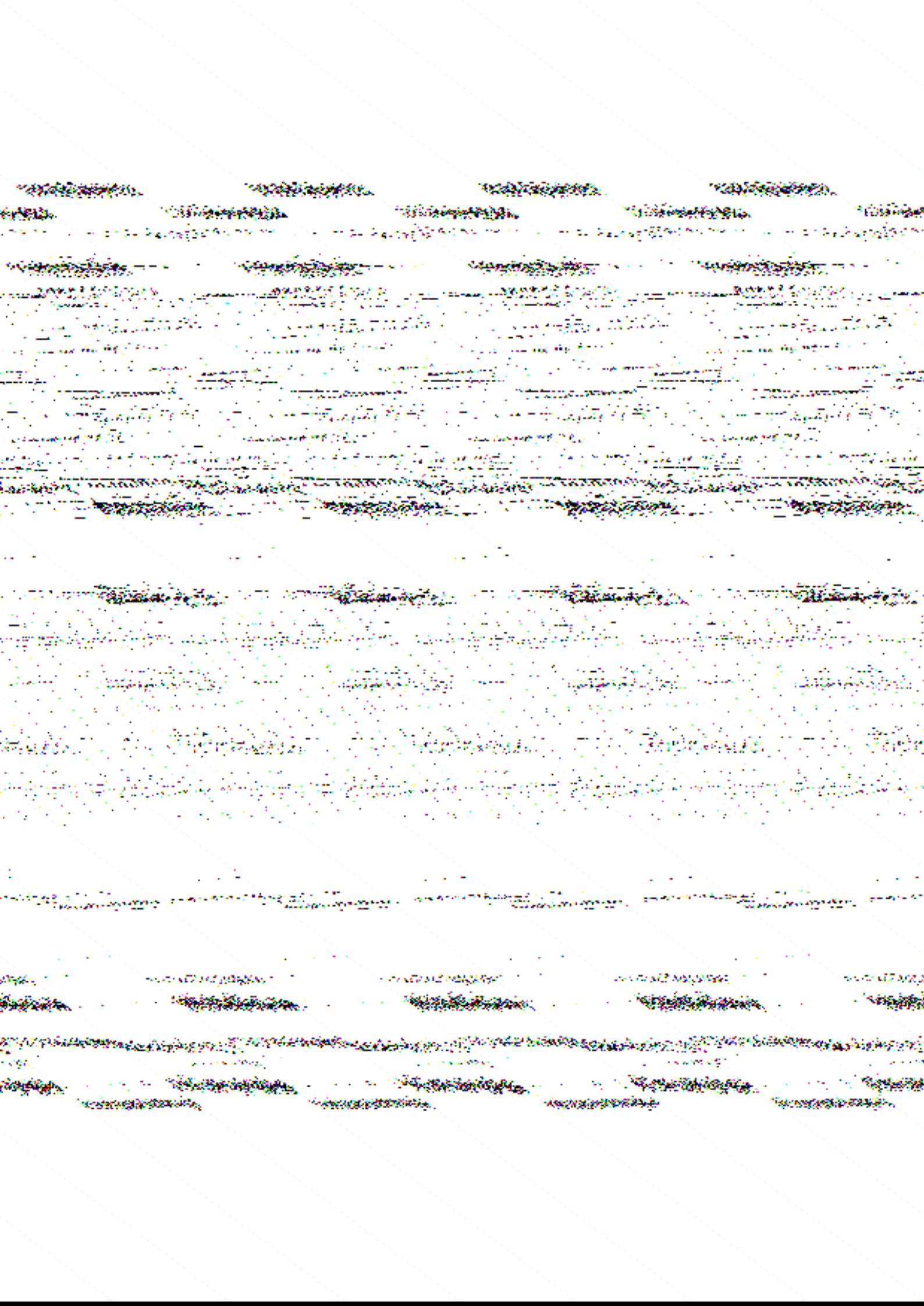




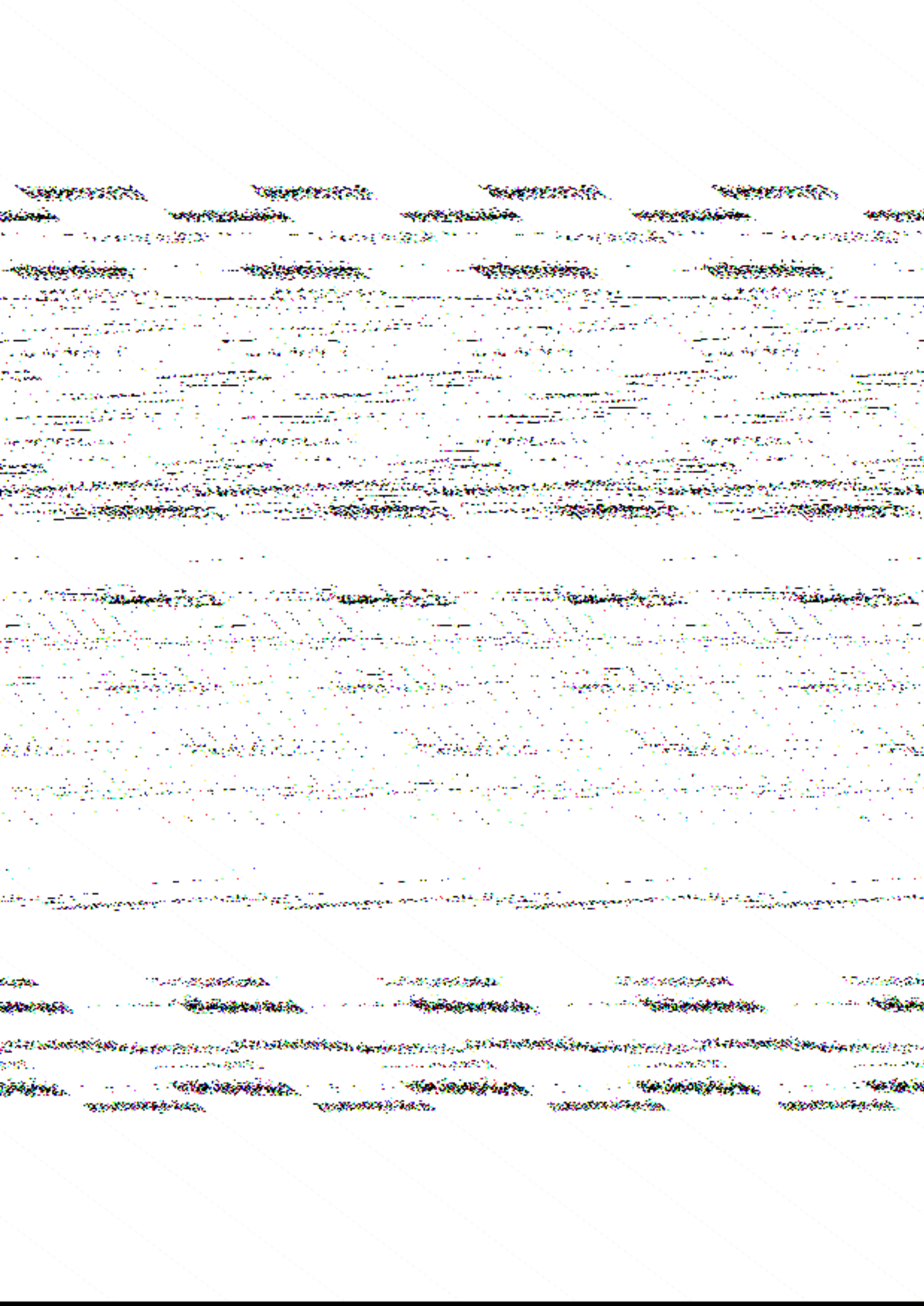




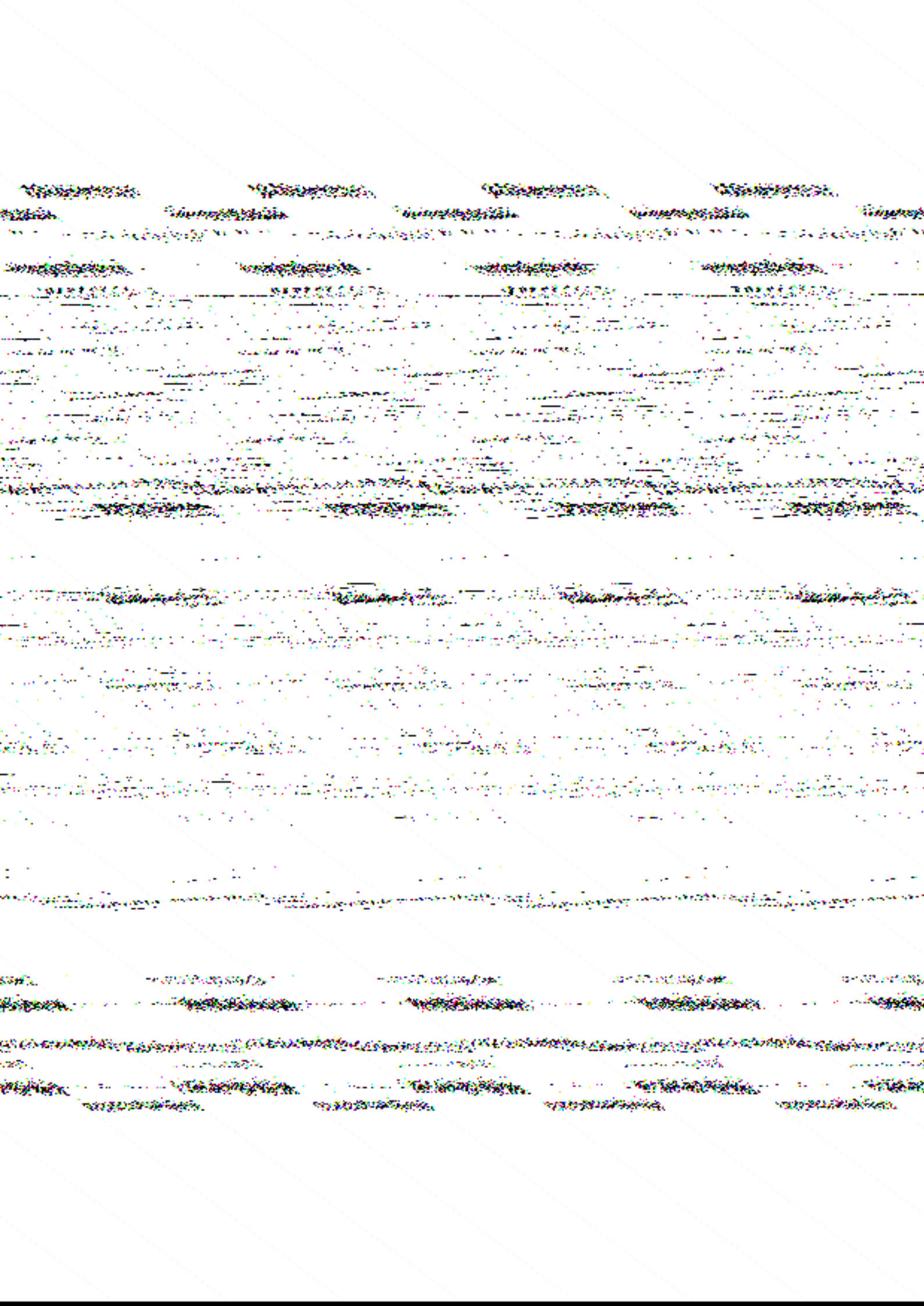








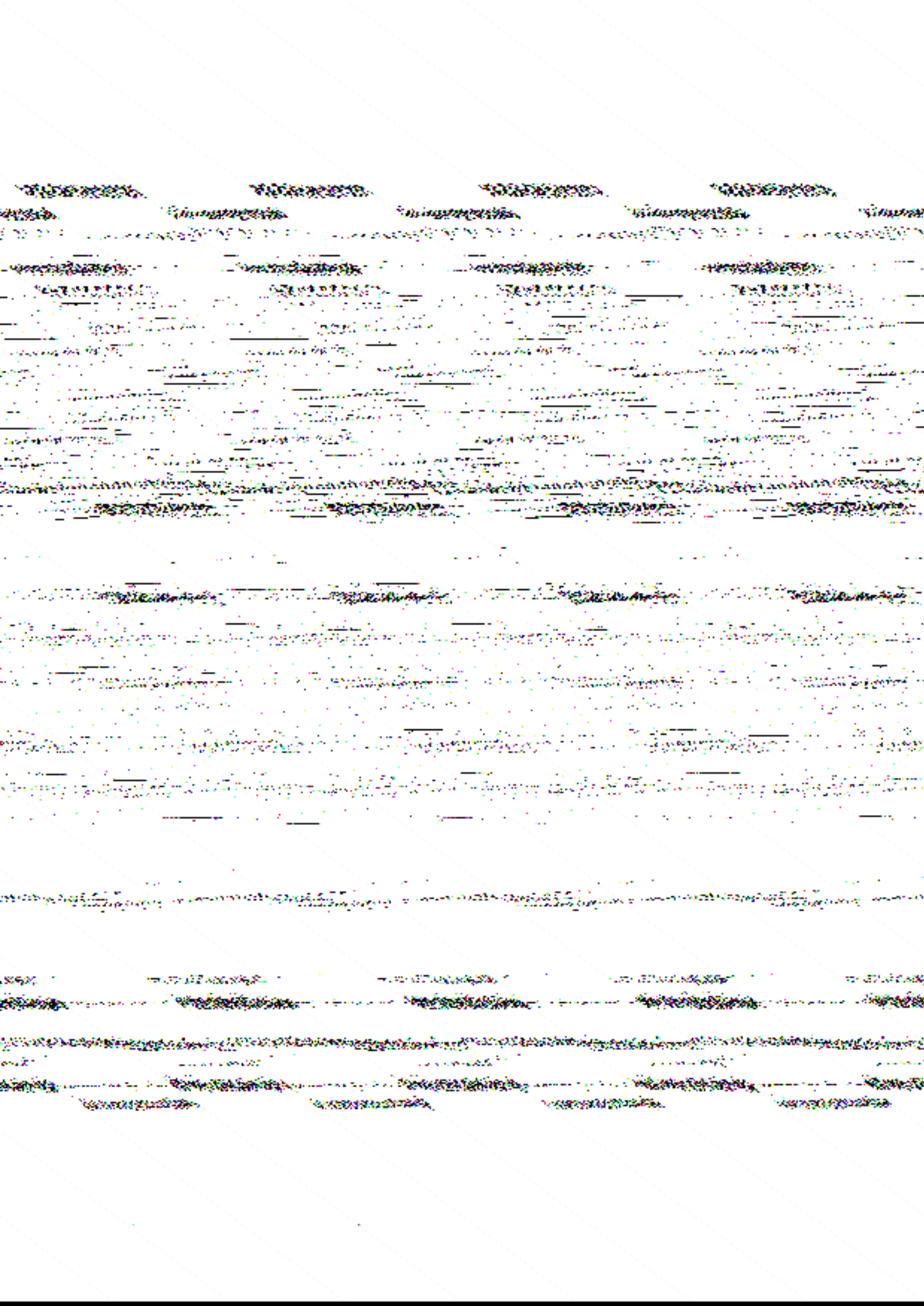


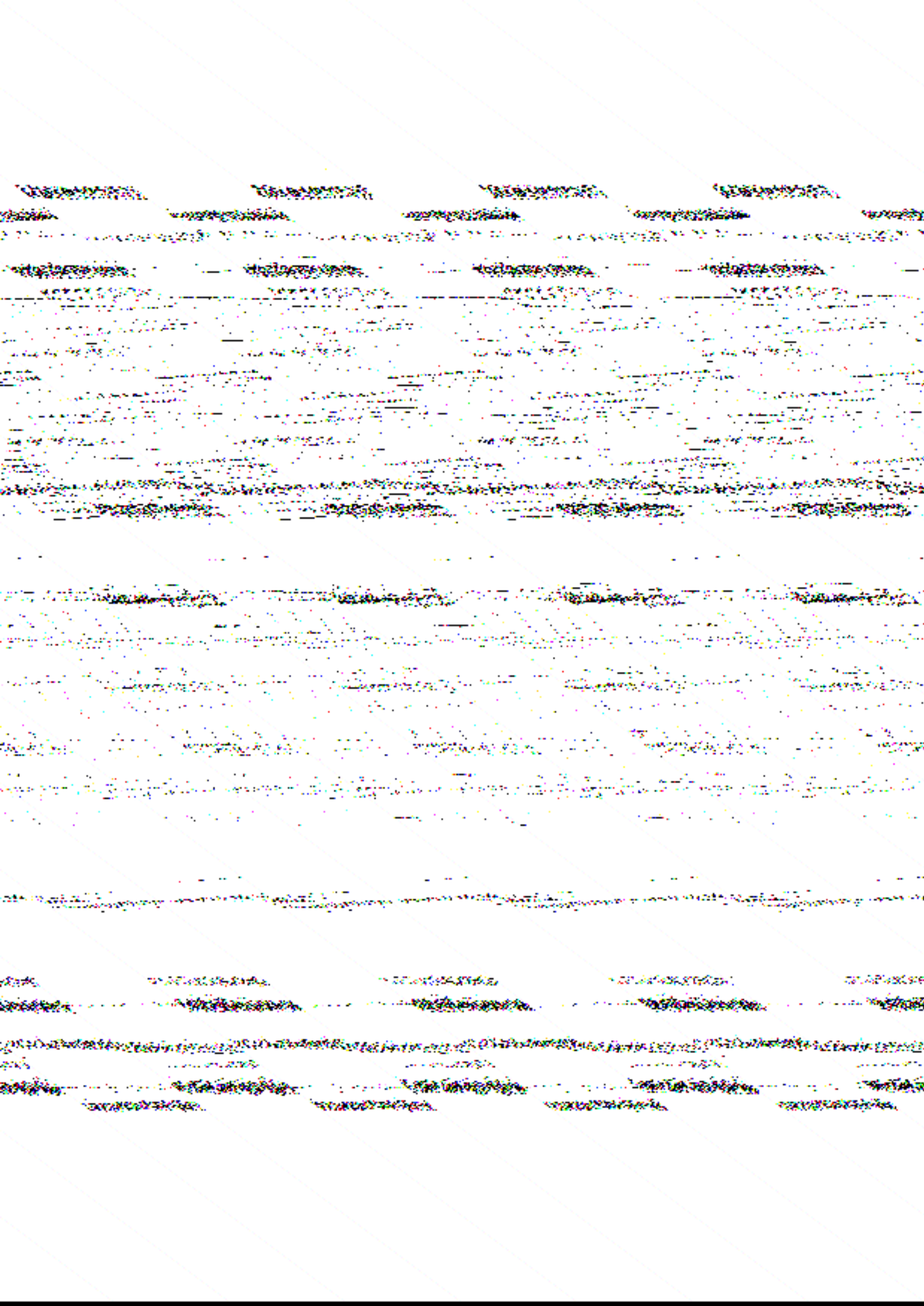












1. Introduction 2. Methodology 3. Results 4. Discussion 5. Conclusion

6. References 7. Appendix 8. Index 9. Glossary 10. Notes

11. Footnotes 12. Endnotes 13. Tables 14. Figures 15. Equations

16. Tables 17. Figures 18. Equations 19. Tables 20. Figures

21. Equations 22. Tables 23. Figures 24. Equations 25. Tables

26. Figures 27. Equations 28. Tables 29. Figures 30. Equations

31. Tables 32. Figures 33. Equations 34. Tables 35. Figures

36. Equations 37. Tables 38. Figures 39. Equations 40. Tables

41. Figures 42. Equations 43. Tables 44. Figures 45. Equations

46. Tables 47. Figures 48. Equations 49. Tables 50. Figures

51. Equations 52. Tables 53. Figures 54. Equations 55. Tables

56. Figures 57. Equations 58. Tables 59. Figures 60. Equations

61. Tables 62. Figures 63. Equations 64. Tables 65. Figures

66. Equations 67. Tables 68. Figures 69. Equations 70. Tables

71. Figures 72. Equations 73. Tables 74. Figures 75. Equations

76. Tables 77. Figures 78. Equations 79. Tables 80. Figures

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management. The text outlines various methods and tools that can be used to ensure the integrity and reliability of the data collected.

2. The second part of the document focuses on the challenges associated with data collection and analysis. It highlights the need for standardized procedures and protocols to ensure consistency across different departments and regions. The text also discusses the importance of training staff and providing them with the necessary resources to effectively manage and analyze the data. Additionally, it addresses the issue of data security and the need to implement robust measures to protect sensitive information from unauthorized access and misuse.

3. The third part of the document explores the role of technology in improving data management and analysis. It discusses the benefits of using modern software solutions and digital tools to streamline processes and reduce the risk of human error. The text also mentions the importance of investing in infrastructure and ensuring that the necessary hardware and network capabilities are in place to support the use of these technologies. Furthermore, it touches upon the need for ongoing evaluation and updates to the systems to keep them relevant and effective in a rapidly changing environment.

4. The fourth part of the document discusses the importance of collaboration and communication in the data management process. It emphasizes that data is often shared across different departments and organizations, and therefore, it is crucial to establish clear lines of communication and define roles and responsibilities. The text also mentions the need for regular meetings and reports to ensure that everyone is on the same page and that any issues are identified and resolved promptly. Additionally, it discusses the importance of sharing best practices and lessons learned to improve the overall performance of the data management system.

5. The fifth part of the document concludes by summarizing the key points discussed and reiterating the importance of a comprehensive and integrated approach to data management. It emphasizes that data is a valuable asset and that its proper management is essential for making informed decisions and achieving organizational goals. The text also mentions the need for ongoing monitoring and evaluation to ensure that the data management system remains effective and efficient over time.

6. The sixth part of the document discusses the importance of data quality and the need to implement measures to ensure its accuracy and reliability. It highlights that poor data quality can lead to incorrect conclusions and decisions, which can have significant negative impacts on the organization. The text outlines various techniques and tools that can be used to identify and correct data errors, such as data validation, data cleaning, and data auditing. Additionally, it discusses the importance of establishing data quality standards and metrics to monitor and measure the performance of the data management system.

7. The seventh part of the document discusses the importance of data privacy and the need to comply with relevant regulations and standards. It highlights that organizations have a responsibility to protect the personal information of their customers and employees, and that failure to do so can result in legal penalties and reputational damage. The text outlines various measures that can be taken to ensure data privacy, such as implementing access controls, encryption, and data retention policies. Additionally, it discusses the importance of conducting regular privacy audits and updates to the data management system to ensure compliance with the latest regulations and standards.

8. The eighth part of the document discusses the importance of data governance and the need to establish a clear framework for managing data. It highlights that data governance is a critical component of data management and that it involves defining the roles and responsibilities of different stakeholders, as well as establishing policies and procedures for data collection, storage, and use. The text outlines various steps that can be taken to implement a data governance framework, such as identifying data owners, establishing data stewardship, and conducting data impact assessments. Additionally, it discusses the importance of ongoing communication and collaboration to ensure that the data governance framework is effectively implemented and maintained.

9. The ninth part of the document discusses the importance of data literacy and the need to provide training and education to staff. It highlights that data literacy is a key skill for anyone working with data, and that it involves the ability to understand, interpret, and use data effectively. The text outlines various methods and tools that can be used to provide data literacy training, such as workshops, seminars, and online courses. Additionally, it discusses the importance of creating a data-driven culture within the organization, where data is used to inform decision-making and drive performance improvements.

10. The tenth part of the document concludes by summarizing the key points discussed and reiterating the importance of a comprehensive and integrated approach to data management. It emphasizes that data is a valuable asset and that its proper management is essential for making informed decisions and achieving organizational goals. The text also mentions the need for ongoing monitoring and evaluation to ensure that the data management system remains effective and efficient over time.

11. The eleventh part of the document discusses the importance of data security and the need to implement measures to protect data from unauthorized access and misuse. It highlights that data security is a critical component of data management and that it involves protecting data from both internal and external threats. The text outlines various measures that can be taken to ensure data security, such as implementing access controls, encryption, and data backup and recovery procedures. Additionally, it discusses the importance of conducting regular security audits and updates to the data management system to ensure compliance with the latest security standards and regulations.

12. The twelfth part of the document discusses the importance of data integration and the need to ensure that data from different sources is effectively combined and analyzed. It highlights that data integration is a key challenge in data management, particularly when dealing with data from multiple departments and organizations. The text outlines various techniques and tools that can be used to integrate data, such as data warehousing, data lakes, and data integration platforms. Additionally, it discusses the importance of establishing data integration standards and protocols to ensure consistency and interoperability across different systems and organizations.

13. The thirteenth part of the document discusses the importance of data visualization and the need to present data in a clear and understandable way. It highlights that data visualization is a key tool for communicating data insights and that it involves using charts, graphs, and other visual elements to represent data. The text outlines various techniques and tools that can be used to create data visualizations, such as data visualization software and dashboards. Additionally, it discusses the importance of designing data visualizations that are easy to interpret and that provide clear and actionable insights.

14. The fourteenth part of the document discusses the importance of data archiving and the need to ensure that data is preserved for long-term use. It highlights that data archiving is a critical component of data management and that it involves storing data in a secure and accessible way for future reference. The text outlines various techniques and tools that can be used to archive data, such as data archiving software and cloud storage solutions. Additionally, it discusses the importance of establishing data archiving standards and protocols to ensure consistency and interoperability across different systems and organizations.

15. The fifteenth part of the document concludes by summarizing the key points discussed and reiterating the importance of a comprehensive and integrated approach to data management. It emphasizes that data is a valuable asset and that its proper management is essential for making informed decisions and achieving organizational goals. The text also mentions the need for ongoing monitoring and evaluation to ensure that the data management system remains effective and efficient over time.

1. Introduction

2. Background

3. Methodology

4. Results

5. Conclusion

6. References

7. Appendix

8. Index

9. Table of Contents

10. Summary

11. Abstract

12. Keywords

13. Author's Note

14. Correspondence

15. Conflict of Interest

16. Disclaimer

17. Copyright

18. Reprints

19. Permissions

20. Other

21. Notes

22. Footnotes

23. Endnotes

24. References

25. Appendix

26. Index

27. Table of Contents

28. Summary

29. Abstract

30. Keywords

31. Author's Note

32. Correspondence

33. Conflict of Interest

34. Disclaimer

35. Copyright

36. Reprints

37. Permissions

38. Other

39. Notes

40. Footnotes

41. Endnotes

42. References

43. Appendix

44. Index

45. Table of Contents

46. Summary

47. Abstract

48. Keywords

49. Author's Note

50. Correspondence

51. Conflict of Interest

52. Disclaimer

53. Copyright

54. Reprints

55. Permissions

56. Other

Handwritten text, possibly a list or index, with several lines of illegible script.

Handwritten text, possibly a list or index, with several lines of illegible script.

Handwritten text, possibly a list or index, with several lines of illegible script.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The document outlines the various types of records that should be maintained, including receipts, invoices, and bank statements, and provides detailed instructions on how to properly document each type of transaction.

2. The second part of the document focuses on the importance of regular audits and reviews. It explains that audits are a critical component of any financial system, as they help to identify errors, discrepancies, and potential areas of fraud. The document provides a clear framework for conducting audits, including the selection of auditors, the scope of the audit, and the reporting process. It also discusses the importance of maintaining a strong internal control system to prevent errors and fraud from occurring in the first place.

3. The third part of the document discusses the importance of transparency and accountability in financial reporting. It explains that transparency is essential for building trust and confidence in the financial system, and that accountability is necessary to ensure that all transactions are properly documented and reported. The document provides detailed instructions on how to prepare financial statements, including the use of standardized accounting principles and the importance of providing clear and concise explanations for all transactions.

4. The fourth part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The document outlines the various types of records that should be maintained, including receipts, invoices, and bank statements, and provides detailed instructions on how to properly document each type of transaction.

5. The fifth part of the document focuses on the importance of regular audits and reviews. It explains that audits are a critical component of any financial system, as they help to identify errors, discrepancies, and potential areas of fraud. The document provides a clear framework for conducting audits, including the selection of auditors, the scope of the audit, and the reporting process. It also discusses the importance of maintaining a strong internal control system to prevent errors and fraud from occurring in the first place.

6. The sixth part of the document discusses the importance of transparency and accountability in financial reporting. It explains that transparency is essential for building trust and confidence in the financial system, and that accountability is necessary to ensure that all transactions are properly documented and reported. The document provides detailed instructions on how to prepare financial statements, including the use of standardized accounting principles and the importance of providing clear and concise explanations for all transactions.

7. The seventh part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The document outlines the various types of records that should be maintained, including receipts, invoices, and bank statements, and provides detailed instructions on how to properly document each type of transaction.

8. The eighth part of the document focuses on the importance of regular audits and reviews. It explains that audits are a critical component of any financial system, as they help to identify errors, discrepancies, and potential areas of fraud. The document provides a clear framework for conducting audits, including the selection of auditors, the scope of the audit, and the reporting process. It also discusses the importance of maintaining a strong internal control system to prevent errors and fraud from occurring in the first place.

9. The ninth part of the document discusses the importance of transparency and accountability in financial reporting. It explains that transparency is essential for building trust and confidence in the financial system, and that accountability is necessary to ensure that all transactions are properly documented and reported. The document provides detailed instructions on how to prepare financial statements, including the use of standardized accounting principles and the importance of providing clear and concise explanations for all transactions.

1. Introduction

2. Background

3. Methodology

4. Results

5. Conclusion

6. References

7. Appendix

8. Index

9. Table of Contents

10. Summary

11. Abstract

12. Keywords

13. Author's Note

14. Correspondence

15. Conflict of Interest

16. Disclaimer

17. Copyright

18. Reprints

19. Permissions

20. Other Information

21. Notes

22. Footnotes

23. Endnotes

24. References

25. Appendix

26. Index

27. Table of Contents

28. Summary

29. Abstract

30. Keywords

31. Author's Note

32. Correspondence

33. Conflict of Interest

34. Disclaimer

35. Copyright

36. Reprints

37. Permissions

38. Other Information

39. Notes

40. Footnotes

41. Endnotes

42. References

43. Appendix

44. Index

45. Table of Contents

46. Summary

47. Abstract

48. Keywords

49. Author's Note

50. Correspondence

51. Conflict of Interest

52. Disclaimer

53. Copyright

54. Reprints

55. Permissions

56. Other Information

Handwritten text on a lined page, appearing to be a list or index of names and dates. The text is mostly illegible due to blurring and low resolution.

Handwritten text on a lined page, appearing to be a list or index of names and dates. The text is mostly illegible due to blurring and low resolution.

Handwritten text on a lined page, appearing to be a list or index of names and dates. The text is mostly illegible due to blurring and low resolution.

Handwritten text in a cursive script, likely a letter or document, with several lines of text visible. The text is dense and difficult to decipher due to the cursive style and some fading.

Handwritten text in a cursive script, continuing from the previous section. The text is dense and difficult to decipher due to the cursive style and some fading.

Handwritten text in a cursive script, continuing from the previous section. The text is dense and difficult to decipher due to the cursive style and some fading.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of financial data. This section also outlines the various methods and tools used to collect and analyze data, highlighting the need for consistency and precision in data entry and reporting.

2. The second part of the document focuses on the role of technology in modern data management. It explores how advanced software solutions and cloud-based platforms have revolutionized the way organizations store, access, and analyze their data. This section discusses the benefits of automation and the challenges associated with data security and privacy in a digital environment.

3. The third part of the document addresses the importance of data governance and compliance. It discusses the various regulations and standards that govern the collection, use, and disposal of data, and provides guidance on how organizations can ensure they are meeting these requirements. This section also highlights the role of data governance in promoting transparency and accountability in data management practices.

4. The fourth part of the document discusses the importance of data quality and the impact of poor data on decision-making. It outlines the various factors that can lead to data quality issues, such as incomplete or inconsistent data, and provides strategies for identifying and correcting these problems. This section also emphasizes the need for ongoing monitoring and maintenance of data quality to ensure the accuracy and reliability of the information used for analysis and reporting.

5. The fifth part of the document focuses on the importance of data security and the protection of sensitive information. It discusses the various threats to data security, such as cyberattacks and data breaches, and provides guidance on how organizations can implement effective security measures to protect their data. This section also highlights the importance of regular security audits and updates to ensure the ongoing protection of data assets.

6. The sixth part of the document discusses the importance of data integration and the benefits of having a unified view of data across different systems and departments. It outlines the various challenges associated with data integration, such as data silos and inconsistent data formats, and provides strategies for overcoming these challenges. This section also emphasizes the role of data integration in improving operational efficiency and enabling better decision-making across the organization.

7. The seventh part of the document focuses on the importance of data visualization and the use of charts and graphs to present complex data in a clear and concise manner. It discusses the various types of data visualization tools and techniques, and provides guidance on how to choose the most appropriate tool for a given data set. This section also emphasizes the importance of clear labeling and formatting to ensure that the data is easy to understand and interpret.

8. The eighth part of the document discusses the importance of data archiving and the long-term storage of data. It outlines the various challenges associated with data archiving, such as data loss and corruption, and provides strategies for ensuring the long-term integrity and availability of data. This section also emphasizes the importance of regular backups and disaster recovery plans to protect data assets in the event of a system failure or disaster.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

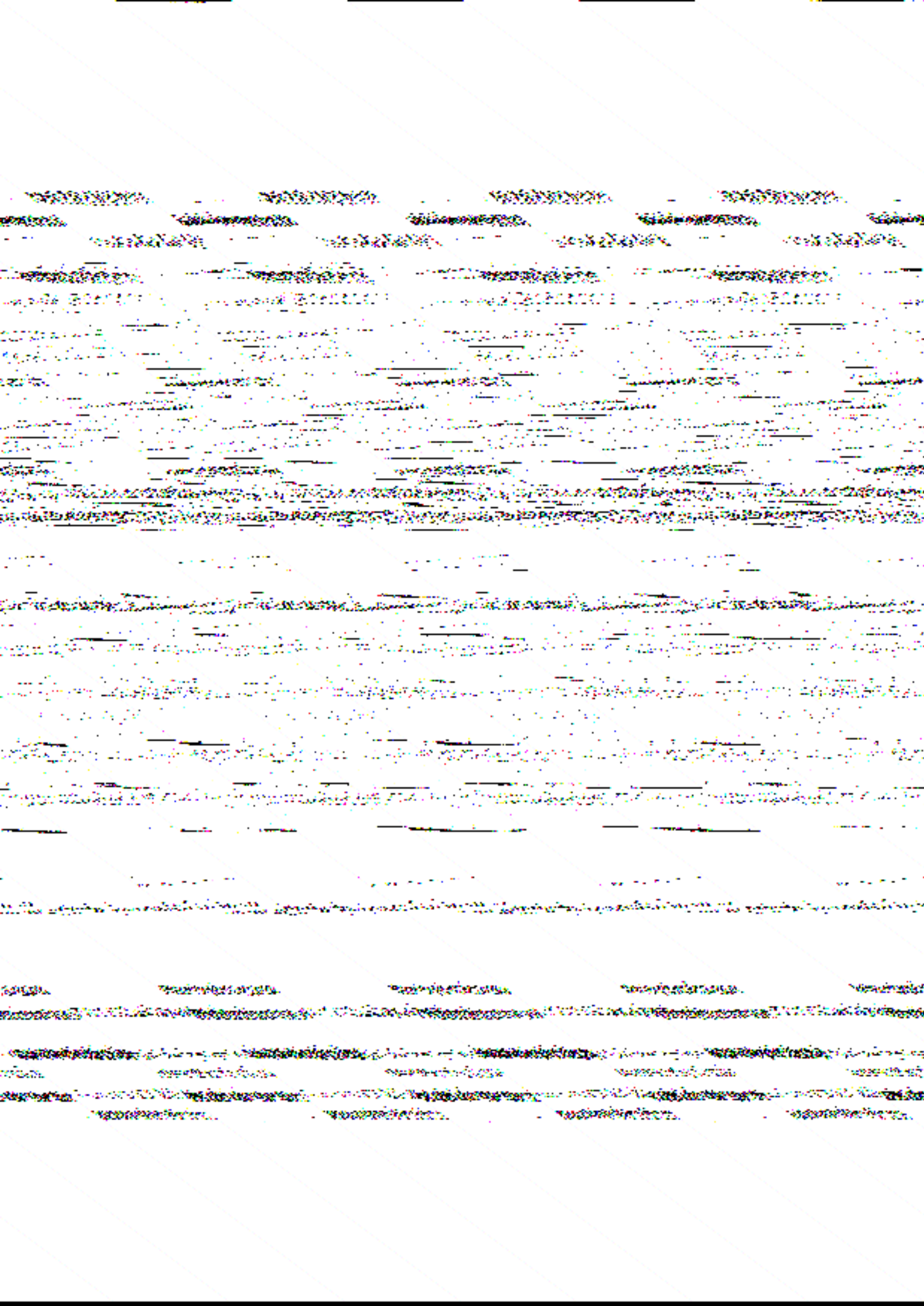
.....

.....

.....







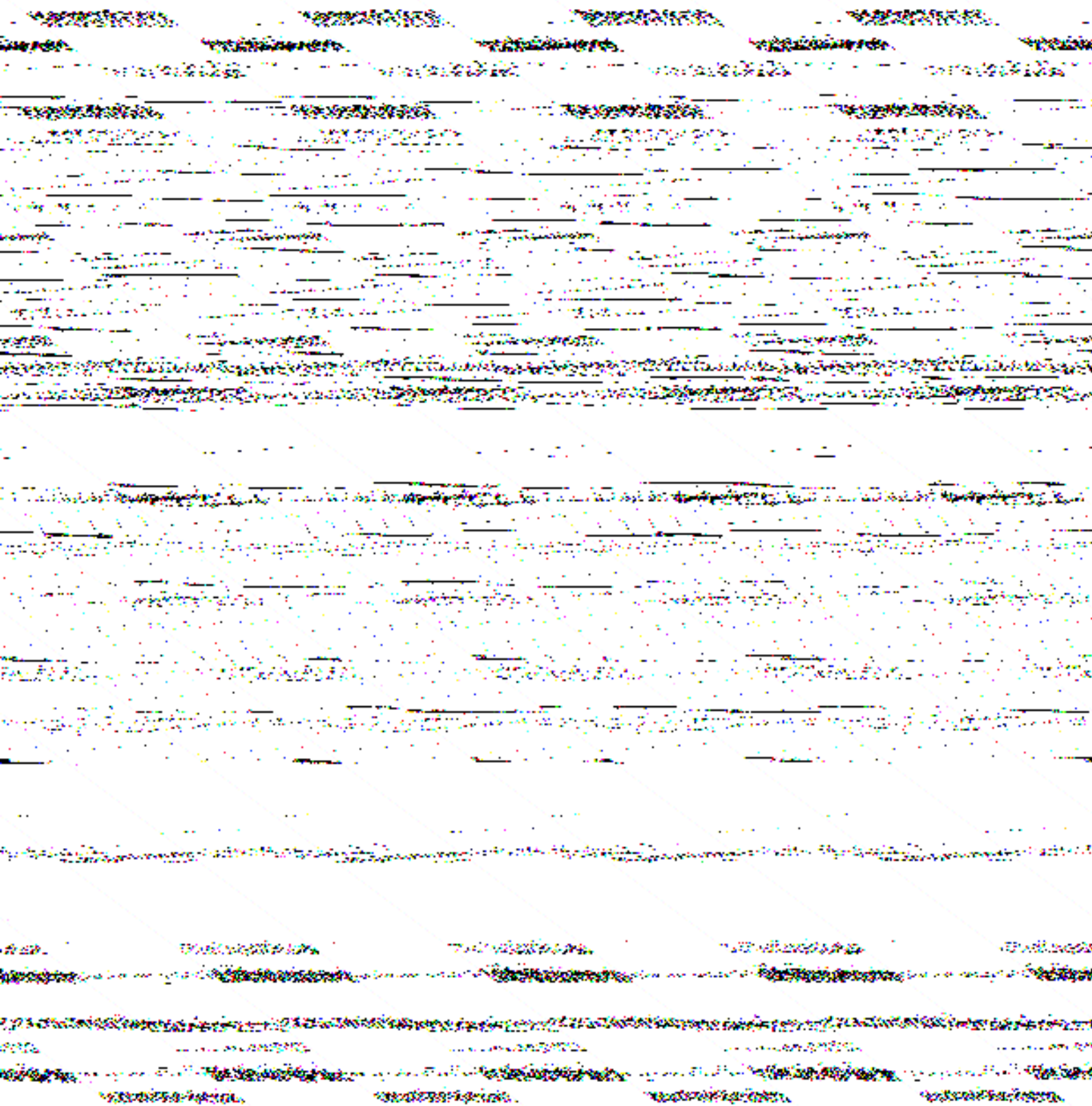


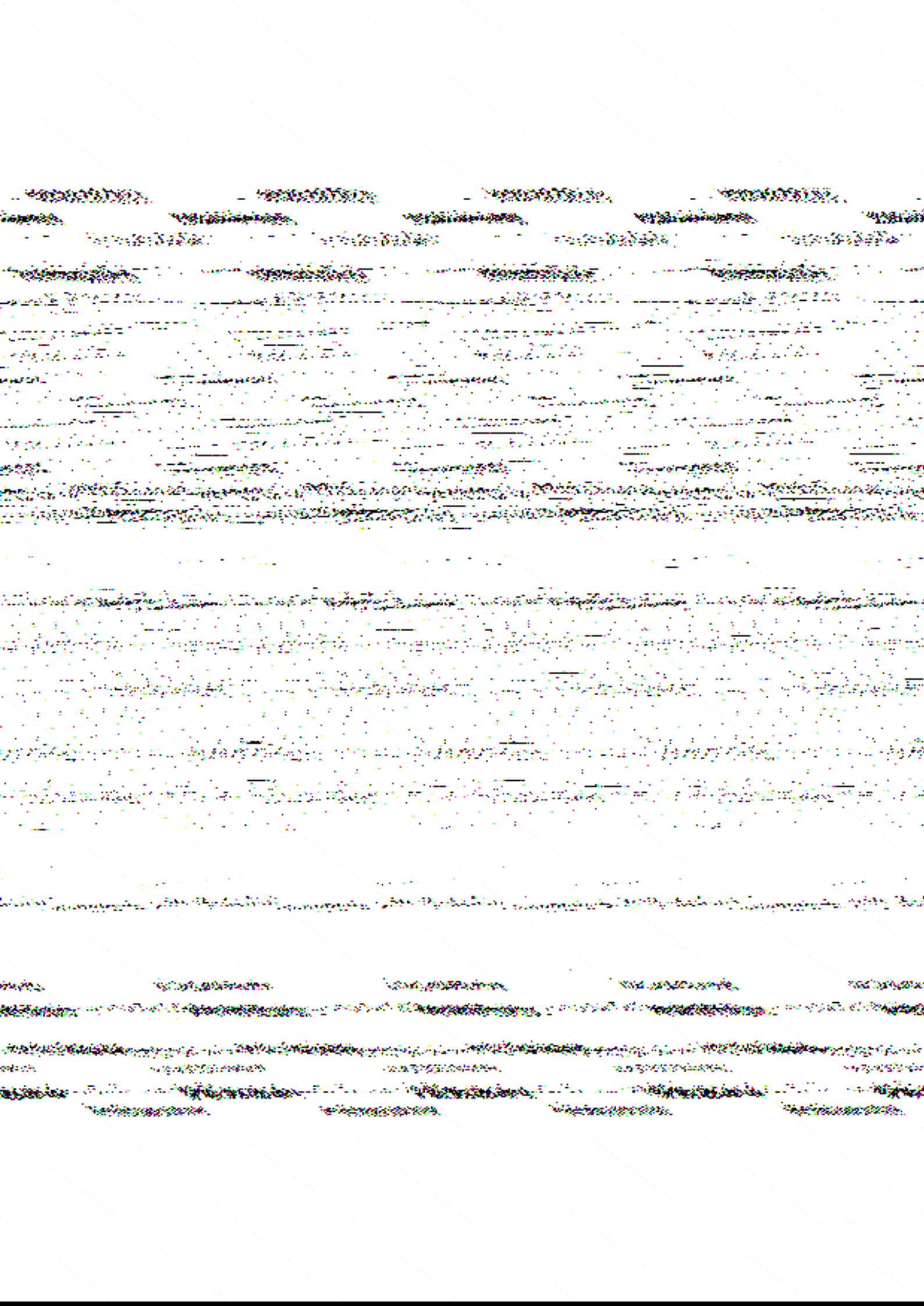


Handwritten text, possibly bleed-through from the reverse side of the page. The text is mostly illegible due to the quality of the scan and the angle of the handwriting.

Handwritten text, possibly bleed-through from the reverse side of the page. The text is mostly illegible due to the quality of the scan and the angle of the handwriting.

Handwritten text, possibly bleed-through from the reverse side of the page. The text is mostly illegible due to the quality of the scan and the angle of the handwriting.





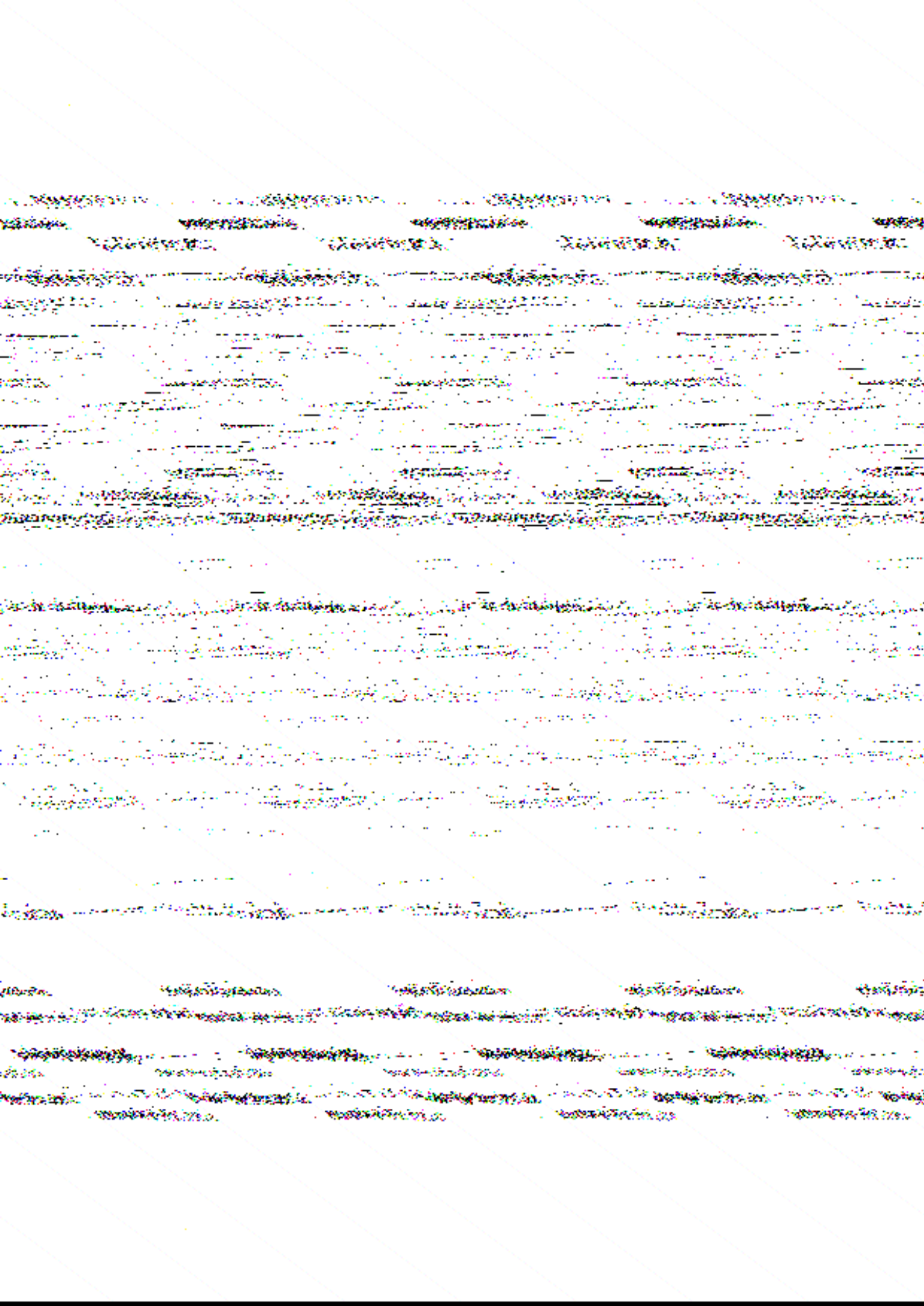


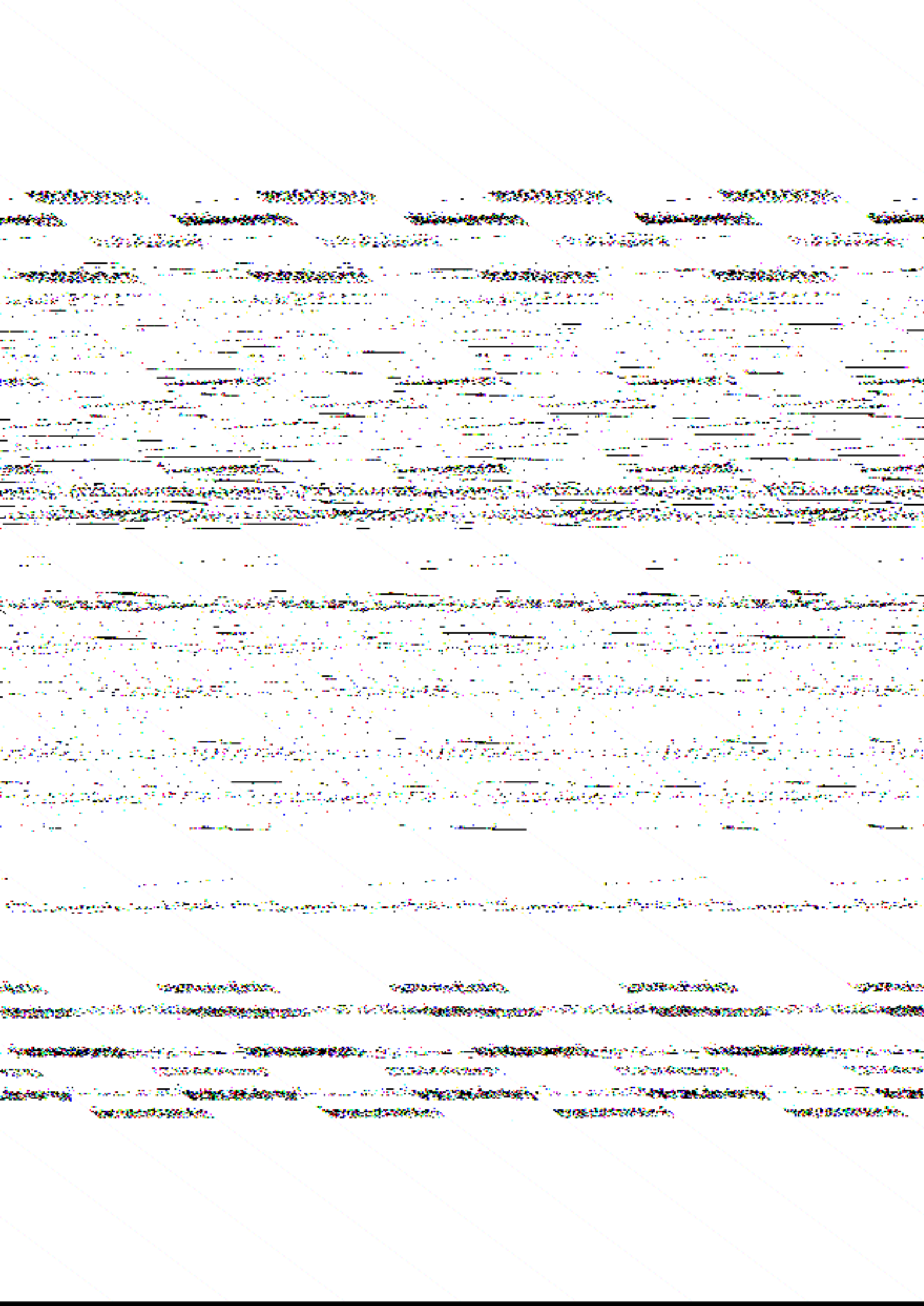
Handwritten text on a lined page, appearing to be a list or index of items. The text is written in a cursive script and is organized into columns. The first column contains numbers, and the subsequent columns contain names or descriptions of items. The text is somewhat faded and difficult to read.

Handwritten text on a lined page, appearing to be a list or index of items. The text is written in a cursive script and is organized into columns. The first column contains numbers, and the subsequent columns contain names or descriptions of items. The text is somewhat faded and difficult to read.

Handwritten text on a lined page, appearing to be a list or index of items. The text is written in a cursive script and is organized into columns. The first column contains numbers, and the subsequent columns contain names or descriptions of items. The text is somewhat faded and difficult to read.









1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management. The text highlights that without reliable records, it becomes difficult to track expenditures, identify inefficiencies, and ensure that funds are used for their intended purposes.

2. The second part of the document focuses on the role of technology in enhancing record-keeping and data management. It notes that modern digital tools and software solutions can significantly improve the efficiency and accuracy of data collection and storage. By leveraging technology, organizations can reduce the risk of human error, streamline processes, and ensure that data is easily accessible and secure. The text also mentions that digital records can facilitate better decision-making and reporting to stakeholders.

3. The third part of the document addresses the challenges associated with maintaining comprehensive records. It identifies several key obstacles, including limited resources, lack of training, and outdated systems. The text suggests that organizations should invest in staff development and infrastructure to overcome these challenges. It also emphasizes the need for clear policies and procedures to guide record-keeping practices and ensure consistency across different departments and units.

4. The fourth part of the document discusses the importance of data security and privacy in the context of record-keeping. It notes that as organizations collect and store more data, the risk of data breaches and unauthorized access increases. The text stresses the need for robust security measures, such as encryption, access controls, and regular security audits, to protect sensitive information. Additionally, it highlights the importance of complying with relevant data protection regulations to maintain trust and integrity.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It reiterates that effective record-keeping is a cornerstone of good governance and financial management. The text encourages organizations to adopt a proactive approach to record-keeping, embracing technology and investing in resources to ensure the long-term reliability and security of their data. It also calls for ongoing monitoring and evaluation to identify areas for improvement and ensure that record-keeping practices remain up-to-date and effective.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for ensuring transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to ensure the validity of the results.

3. The third part of the document describes the different types of data that are collected and analyzed. It includes information on both quantitative and qualitative data, as well as the specific variables and metrics used in the analysis.

4. The fourth part of the document discusses the various statistical methods and techniques used to analyze the data. It covers topics such as descriptive statistics, inferential statistics, and regression analysis.

5. The fifth part of the document describes the different types of results and findings that are generated from the analysis. It includes information on the interpretation of the data and the implications of the findings for the study.

6. The sixth part of the document discusses the various methods and techniques used to present and communicate the results of the analysis. It highlights the importance of clear and concise communication in conveying the findings to the intended audience.

7. The seventh part of the document describes the different types of conclusions and recommendations that are drawn from the analysis. It includes information on the overall findings of the study and the specific actions that are recommended based on the results.

8. The eighth part of the document discusses the various methods and techniques used to evaluate the quality and reliability of the data and the analysis. It highlights the need for rigorous quality control measures to ensure the accuracy and integrity of the results.

9. The ninth part of the document describes the different types of limitations and challenges that are encountered during the analysis process. It includes information on the potential sources of error and the steps that are taken to minimize these risks.

10. The tenth part of the document discusses the various methods and techniques used to ensure the ethical and responsible use of the data and the analysis. It highlights the importance of transparency and accountability in the research process.

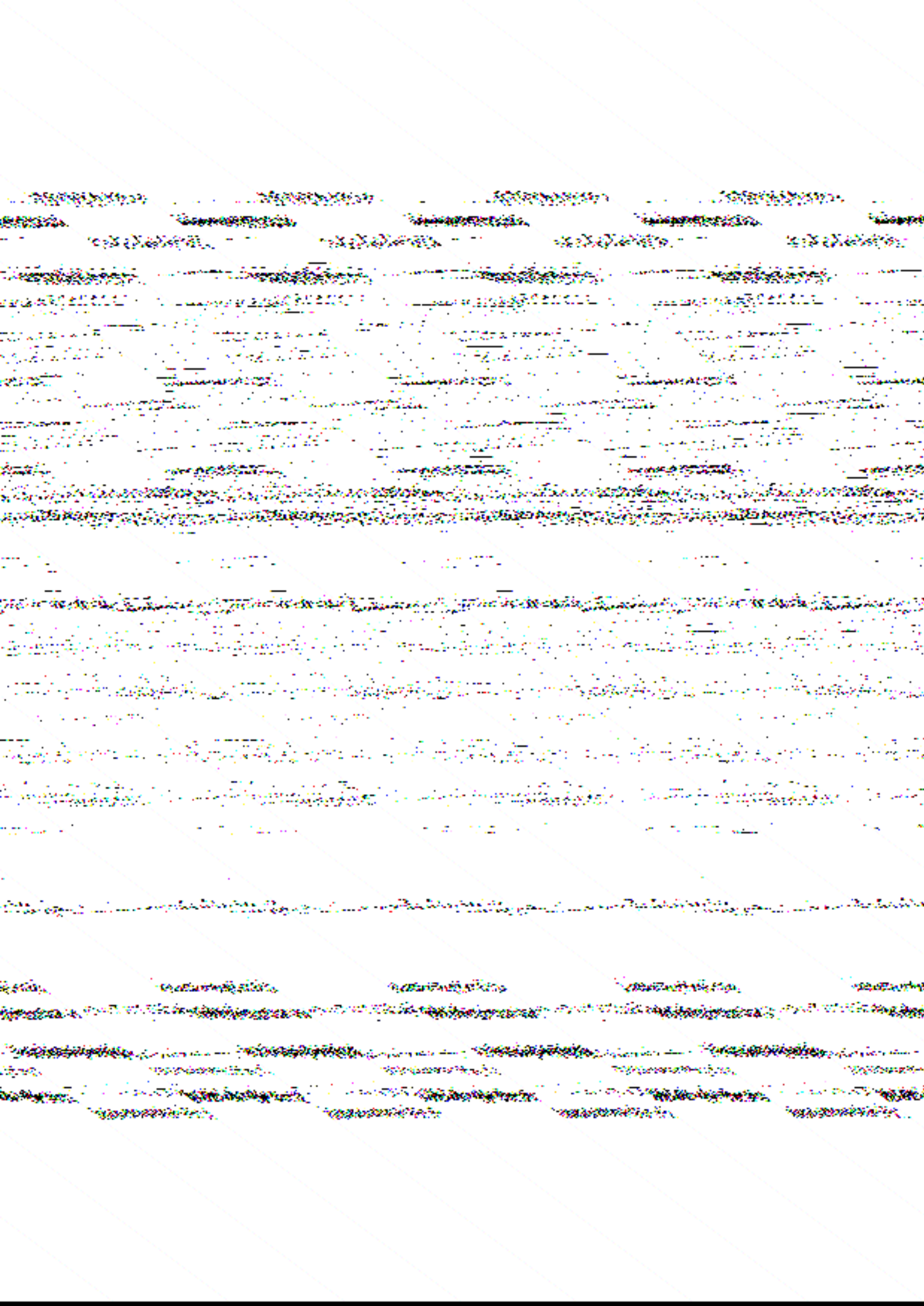
11. The eleventh part of the document describes the different types of future research and developments that are expected in the field. It includes information on the latest trends and innovations in data analysis and the potential for further research.

12. The twelfth part of the document discusses the various methods and techniques used to disseminate and share the results of the analysis. It highlights the importance of open access and transparency in the research process.

13. The thirteenth part of the document describes the different types of resources and tools that are used in the analysis process. It includes information on the various software packages and databases that are commonly used in data analysis.

14. The fourteenth part of the document discusses the various methods and techniques used to ensure the long-term sustainability and maintenance of the data and the analysis. It highlights the importance of regular updates and backups to ensure the availability and integrity of the data.

15. The fifteenth part of the document describes the different types of conclusions and recommendations that are drawn from the analysis. It includes information on the overall findings of the study and the specific actions that are recommended based on the results.



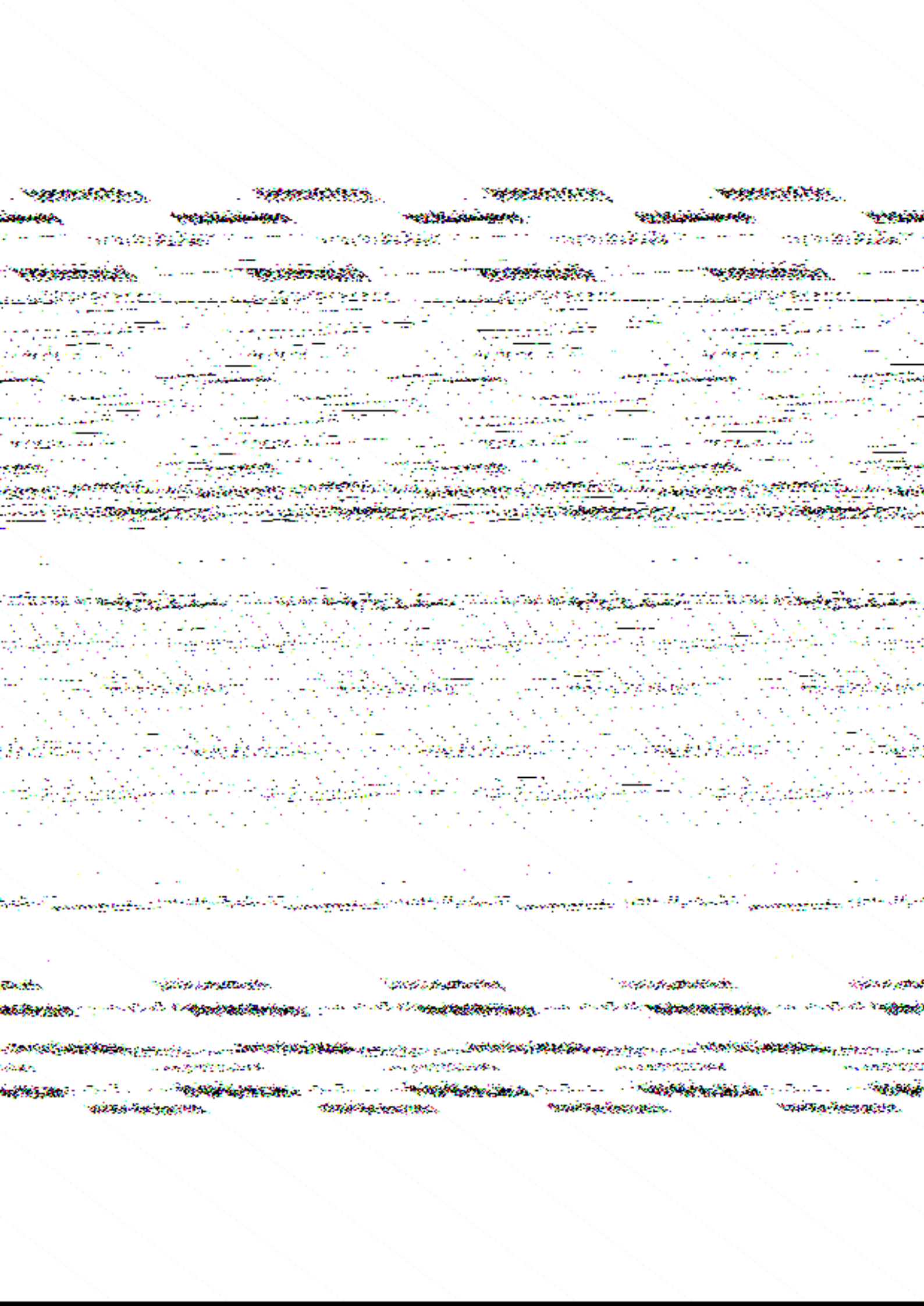
Handwritten text on a page with horizontal lines. The text is mostly illegible due to heavy noise and artifacts, but appears to be organized into several lines of writing.

Handwritten text on a page with horizontal lines. The text is mostly illegible due to heavy noise and artifacts, but appears to be organized into several lines of writing.

Handwritten text on a page with horizontal lines. The text is mostly illegible due to heavy noise and artifacts, but appears to be organized into several lines of writing.







Year	1990	1991	1992	1993	1994
1990	1991	1992	1993	1994	1995
1995	1996	1997	1998	1999	2000
2000	2001	2002	2003	2004	2005
2005	2006	2007	2008	2009	2010
2010	2011	2012	2013	2014	2015
2015	2016	2017	2018	2019	2020
2020	2021	2022	2023	2024	2025
2025	2026	2027	2028	2029	2030
2030	2031	2032	2033	2034	2035
2035	2036	2037	2038	2039	2040
2040	2041	2042	2043	2044	2045
2045	2046	2047	2048	2049	2050
2050	2051	2052	2053	2054	2055
2055	2056	2057	2058	2059	2060
2060	2061	2062	2063	2064	2065
2065	2066	2067	2068	2069	2070
2070	2071	2072	2073	2074	2075
2075	2076	2077	2078	2079	2080
2080	2081	2082	2083	2084	2085
2085	2086	2087	2088	2089	2090
2090	2091	2092	2093	2094	2095
2095	2096	2097	2098	2099	2100

1. Introduction

2. Background

3. Methodology

4. Results

5. Discussion

6. Conclusion

7. References

8. Appendix

9. Index

10. Summary

11. Abstract

12. Keywords

13. Subject

14. Author

15. Editor

16. Reviewer

17. Editorial Board

18. Editorial Office

19. Editorial Assistant

20. Editorial Board Member

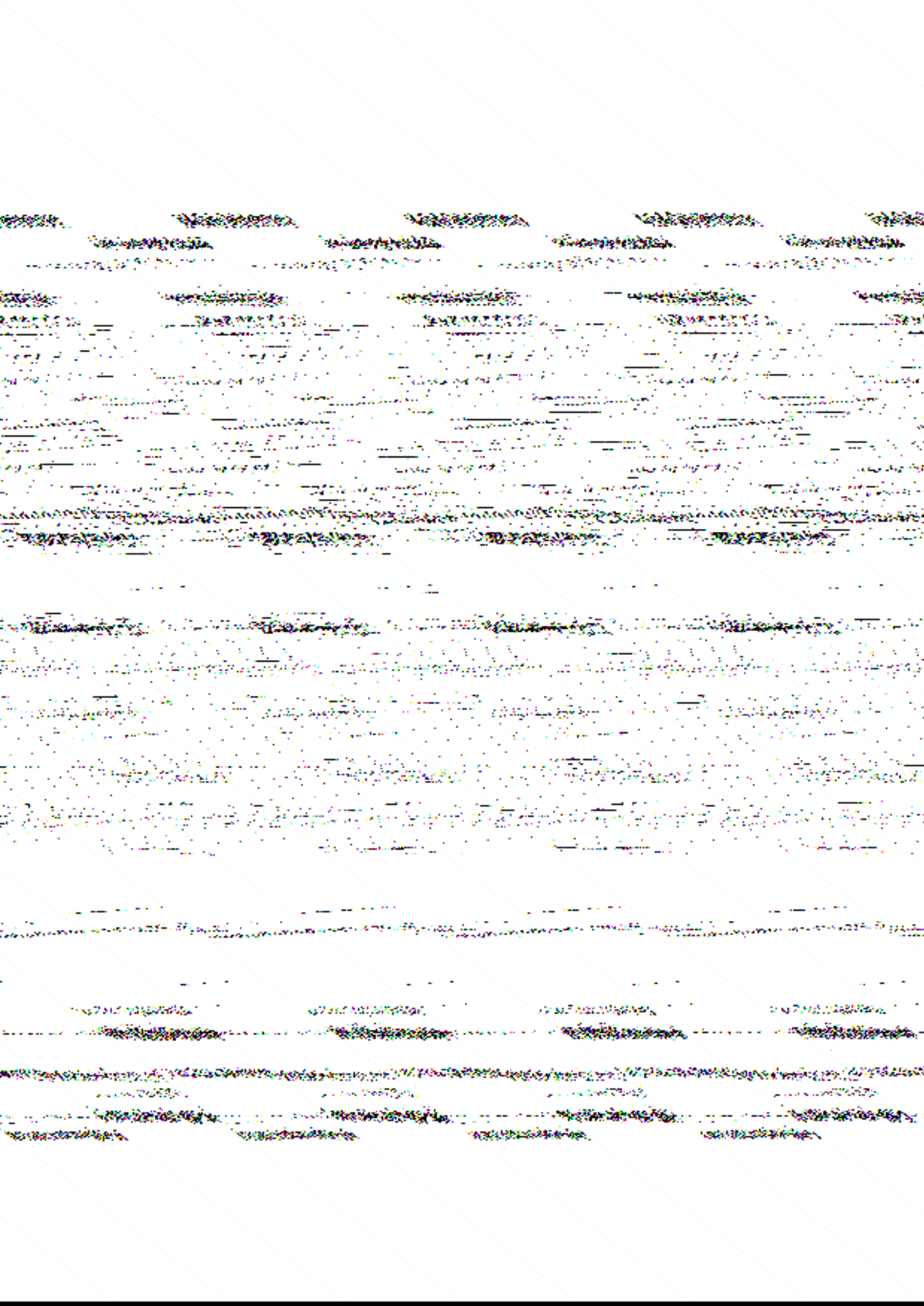
21. Editorial Board Member

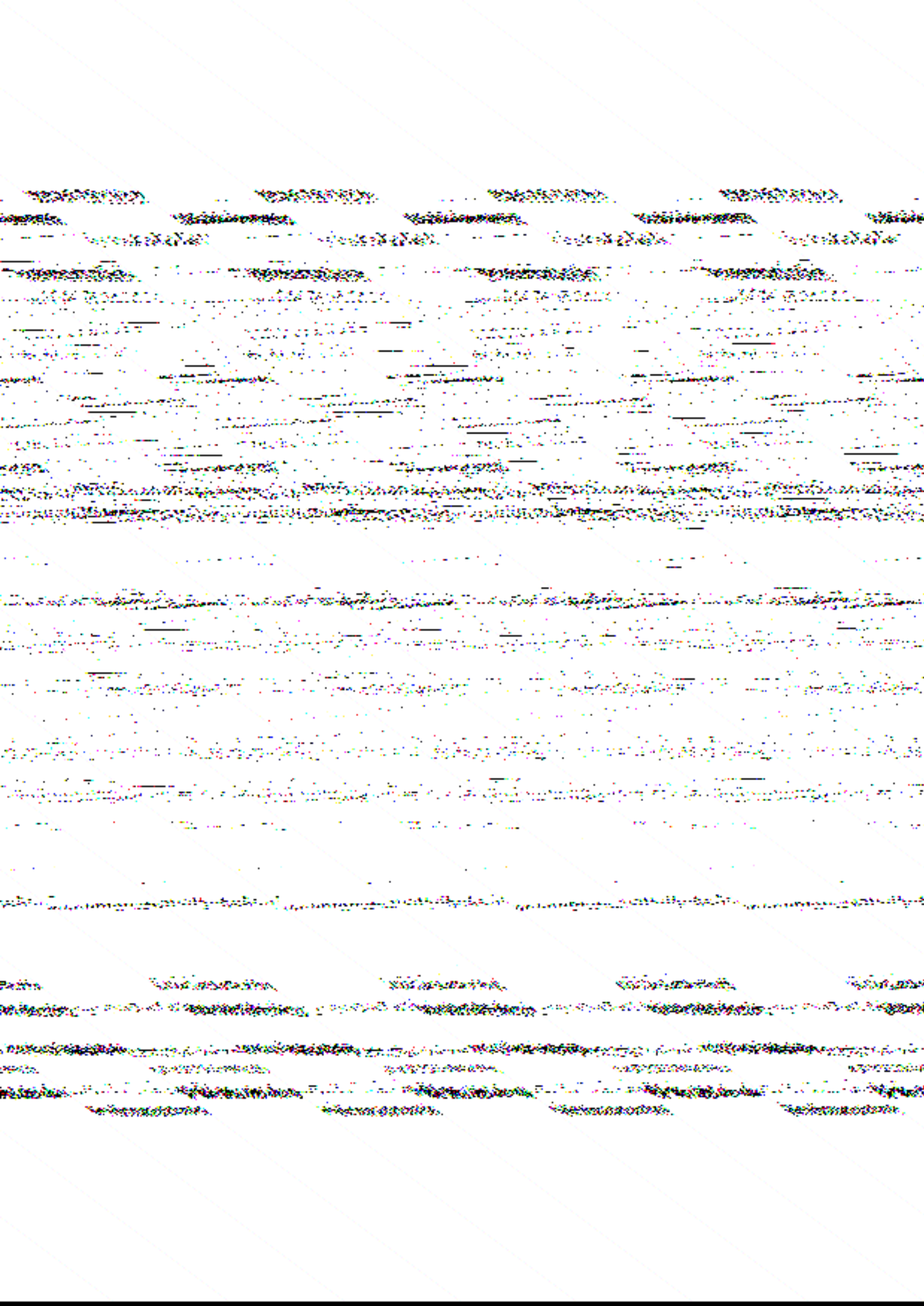
22. Editorial Board Member

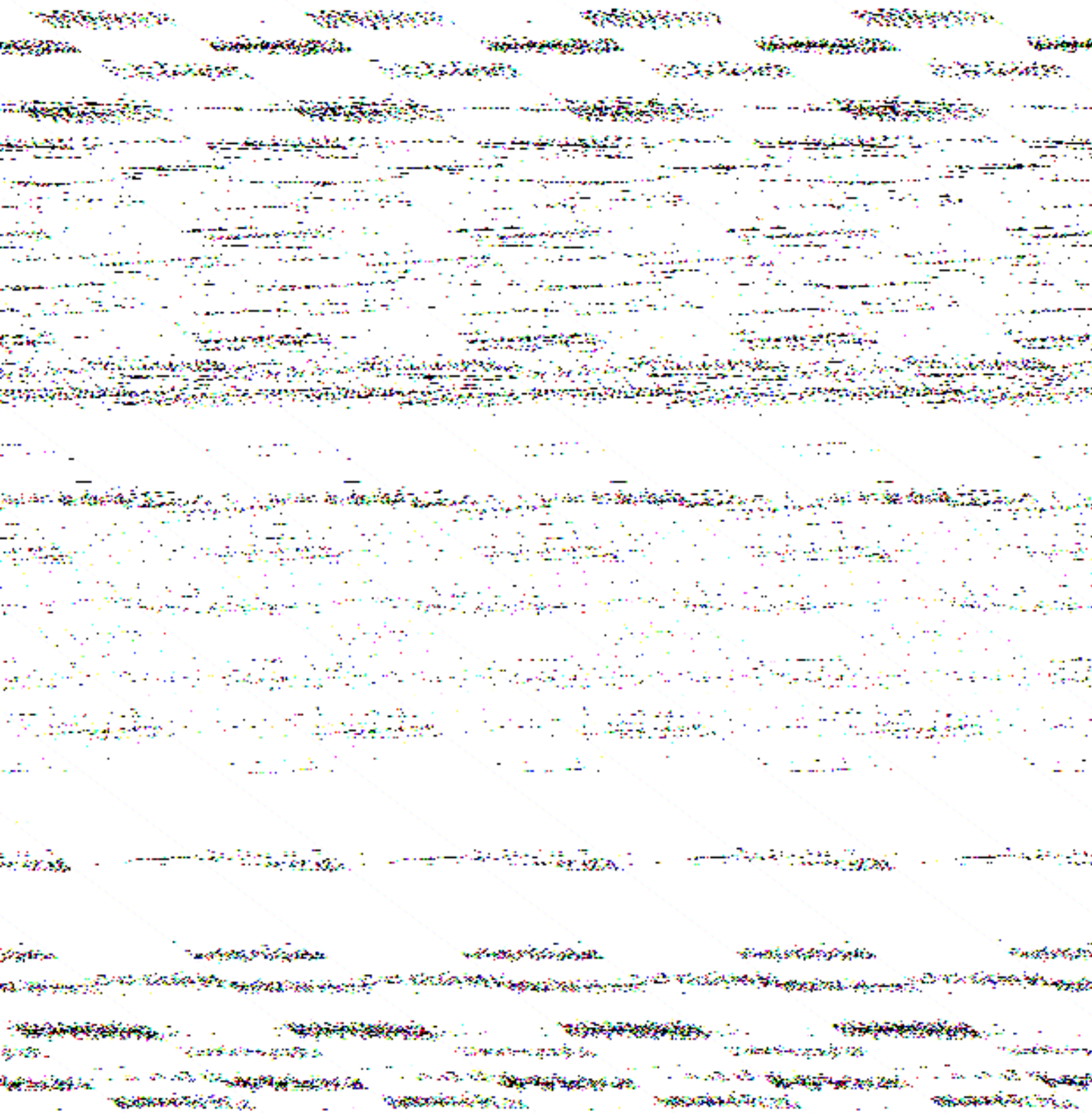
23. Editorial Board Member

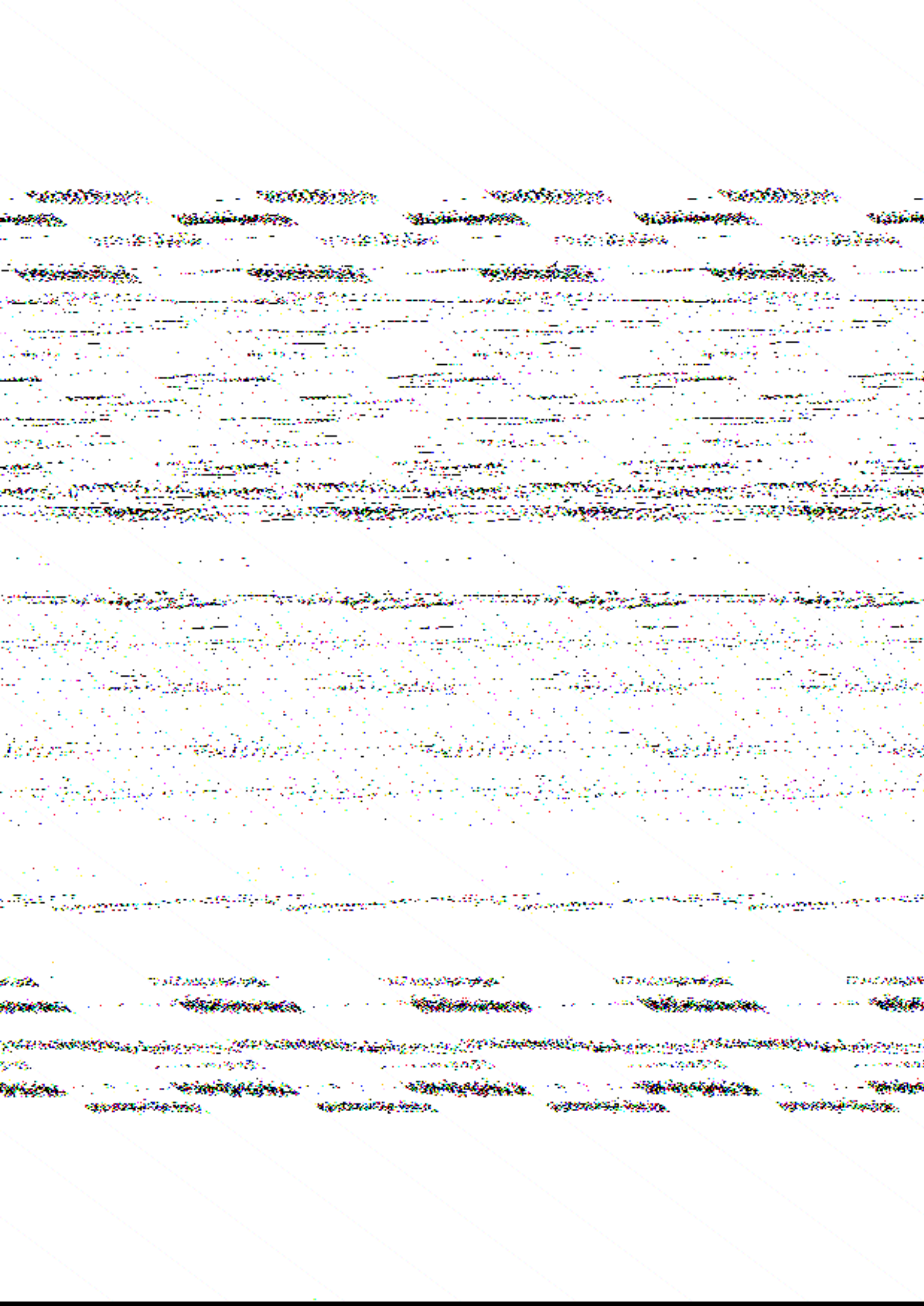
24. Editorial Board Member

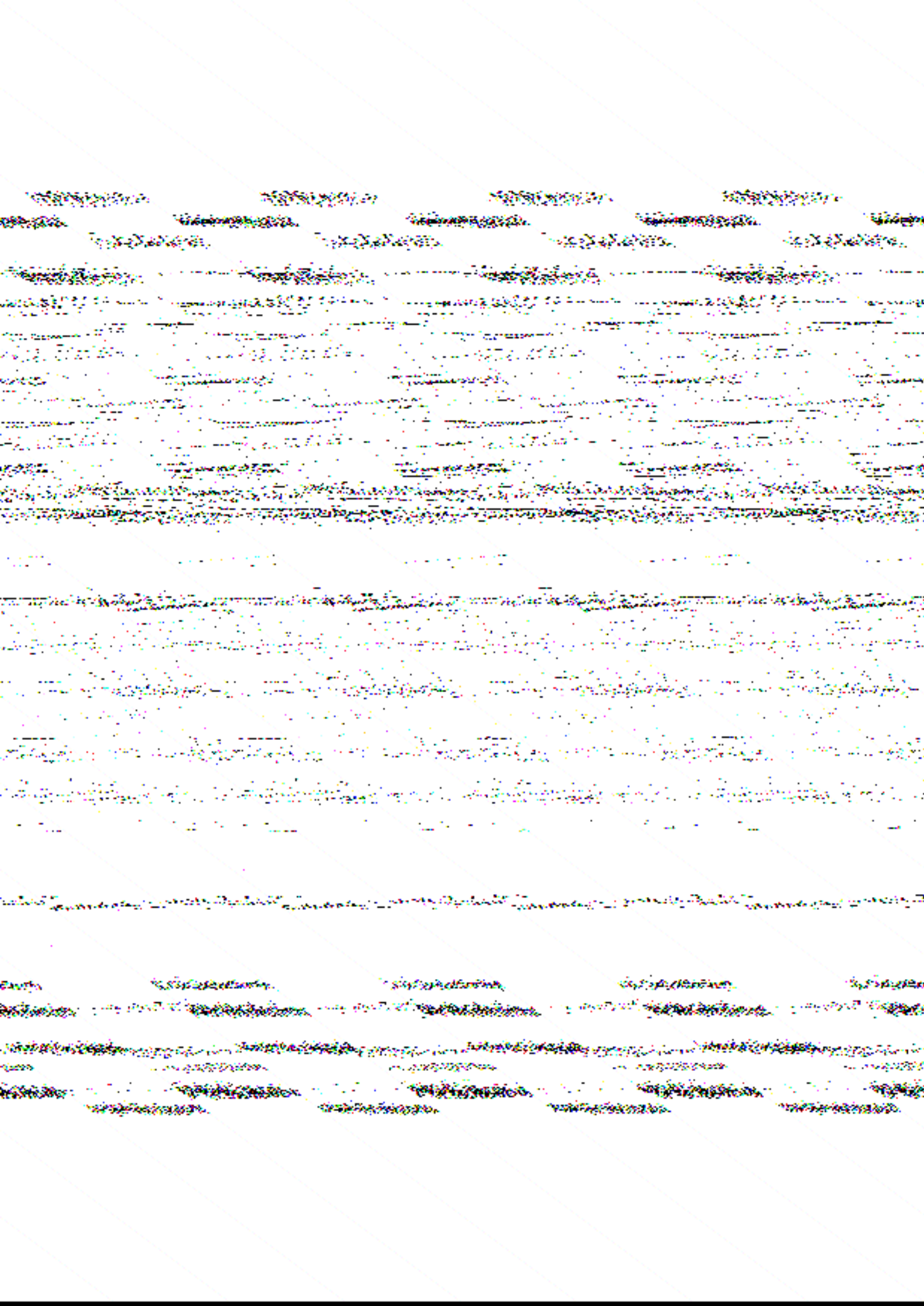
25. Editorial Board Member

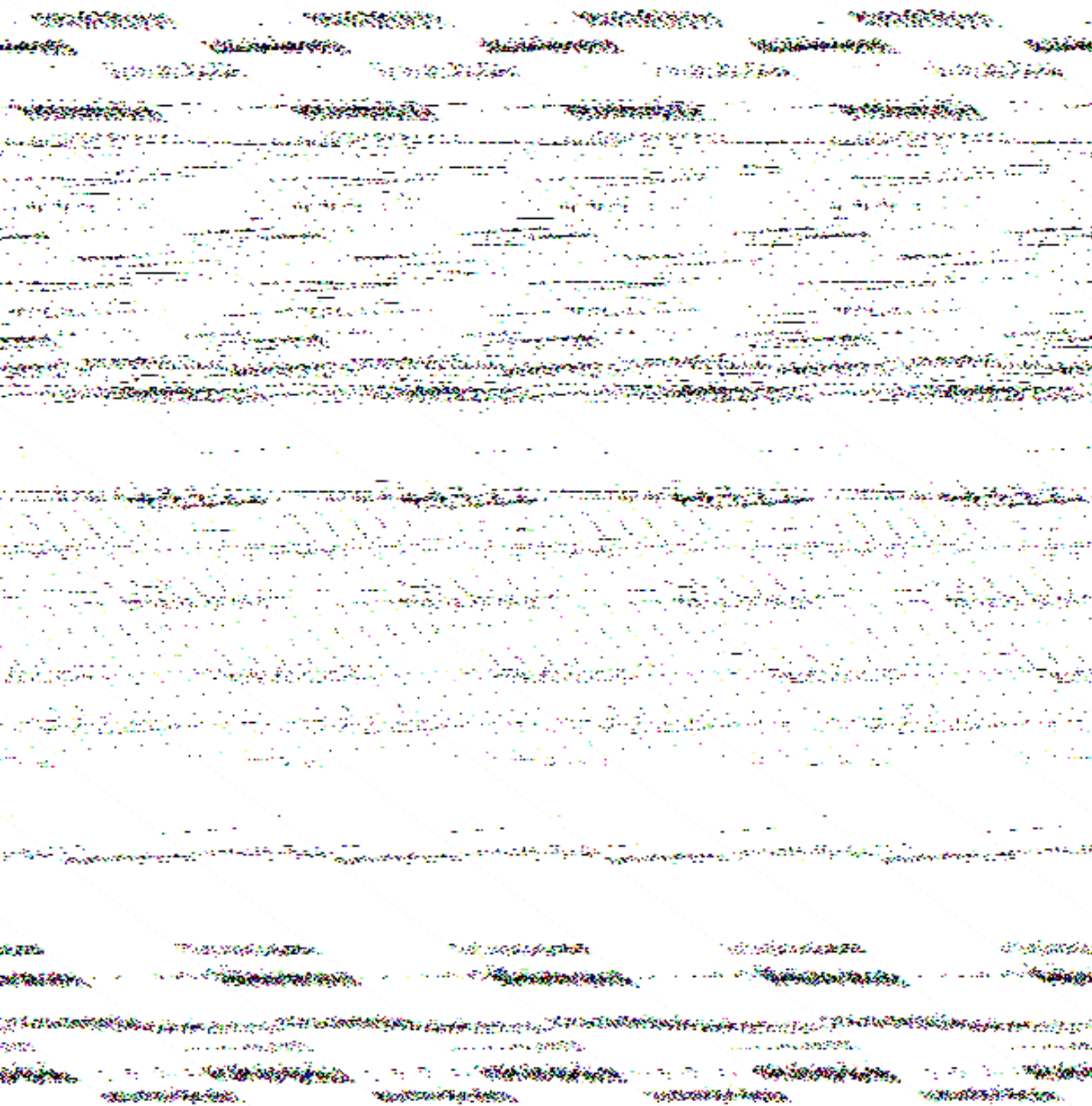


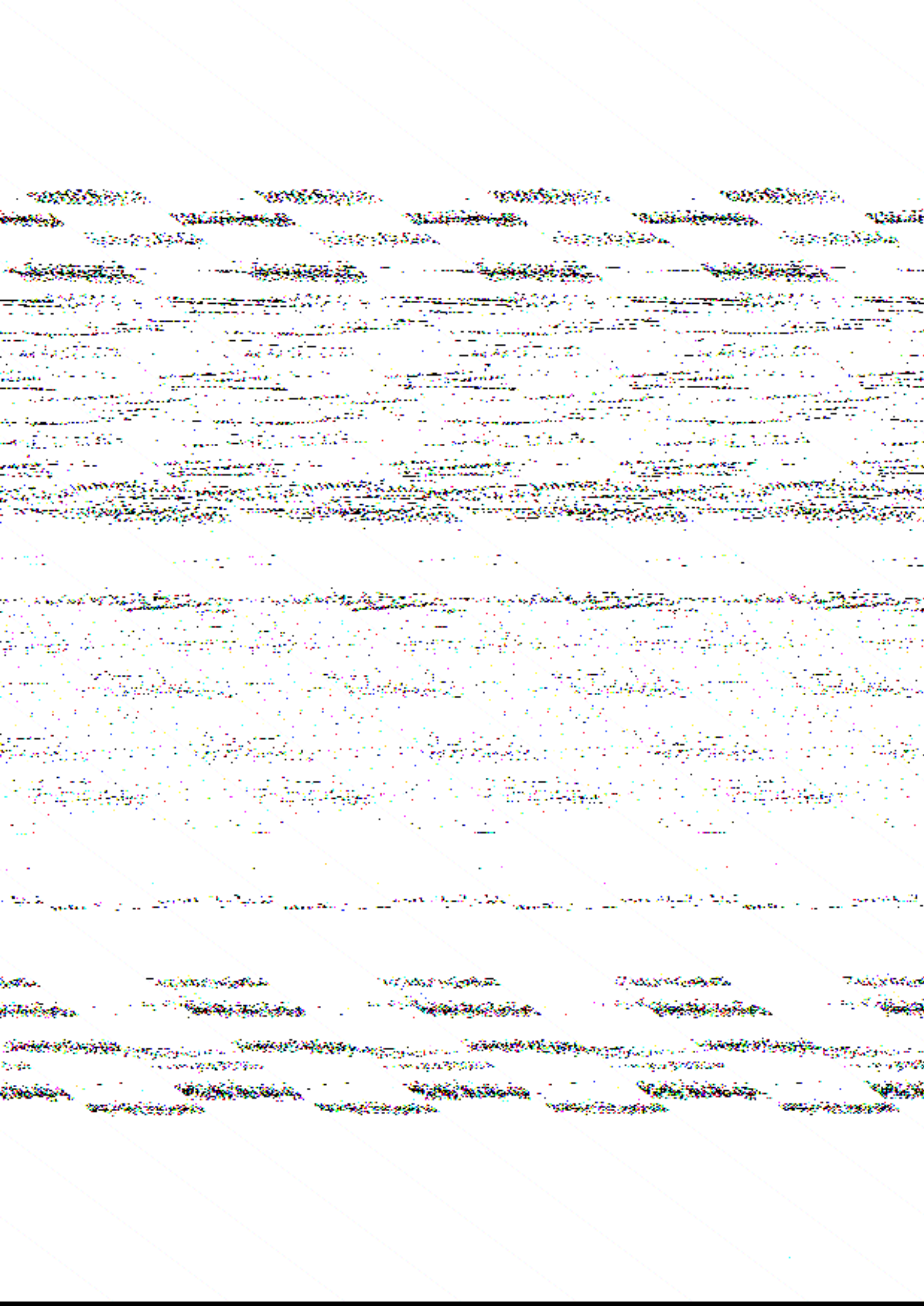












1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of financial data. This section also outlines the various methods and tools used to collect and analyze data, highlighting the need for consistency and precision in data entry and reporting.

2. The second part of the document focuses on the role of technology in modern accounting and finance. It explores how software solutions have revolutionized the way businesses manage their financial operations, from automating routine tasks to providing real-time insights into financial performance. This section also addresses the challenges associated with data security and privacy in a digital environment, offering strategies to mitigate these risks.

3. The third part of the document discusses the impact of regulatory changes on financial reporting. It examines how new standards and requirements have influenced the way companies disclose financial information to investors and other stakeholders. This section also highlights the importance of staying up-to-date on regulatory developments to ensure compliance and avoid potential penalties.

4. The fourth part of the document explores the role of financial analysis in decision-making. It discusses how financial ratios and metrics can be used to evaluate a company's performance and identify areas for improvement. This section also emphasizes the importance of providing clear and concise financial reports to management and investors, enabling them to make informed decisions based on accurate and timely data.

5. The fifth part of the document discusses the importance of transparency and accountability in financial reporting. It emphasizes that companies should provide clear and detailed information about their financial activities, including the methods used to calculate key metrics and the assumptions underlying their financial statements. This section also highlights the role of independent auditors in verifying the accuracy and reliability of financial data, ensuring that investors and other stakeholders can trust the information provided.

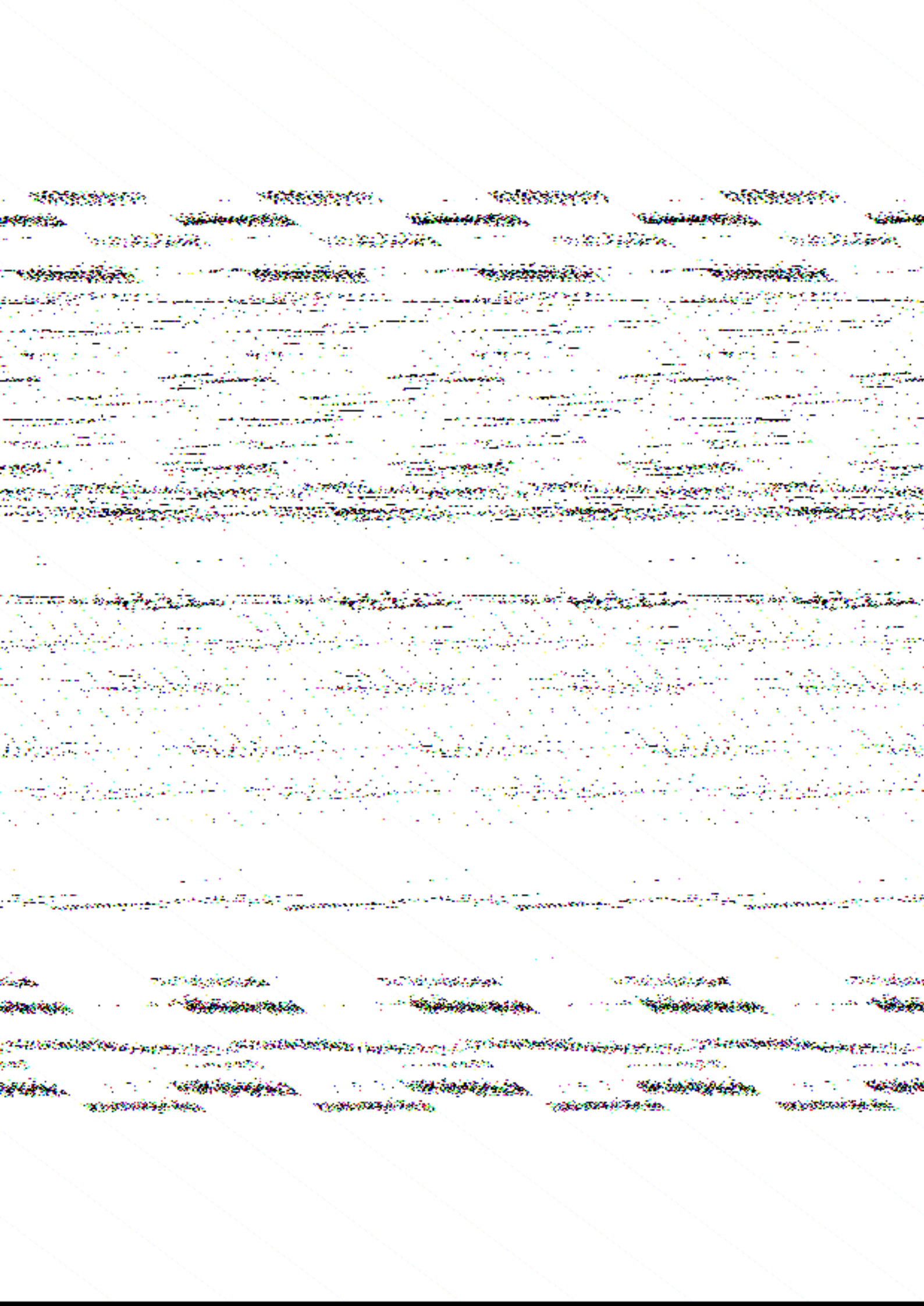
6. The sixth part of the document discusses the role of financial reporting in corporate governance. It emphasizes that accurate and timely financial information is essential for effective oversight and decision-making by the board of directors and other stakeholders. This section also highlights the importance of maintaining a strong relationship with investors and other stakeholders, providing them with regular updates on the company's financial performance and strategic direction.

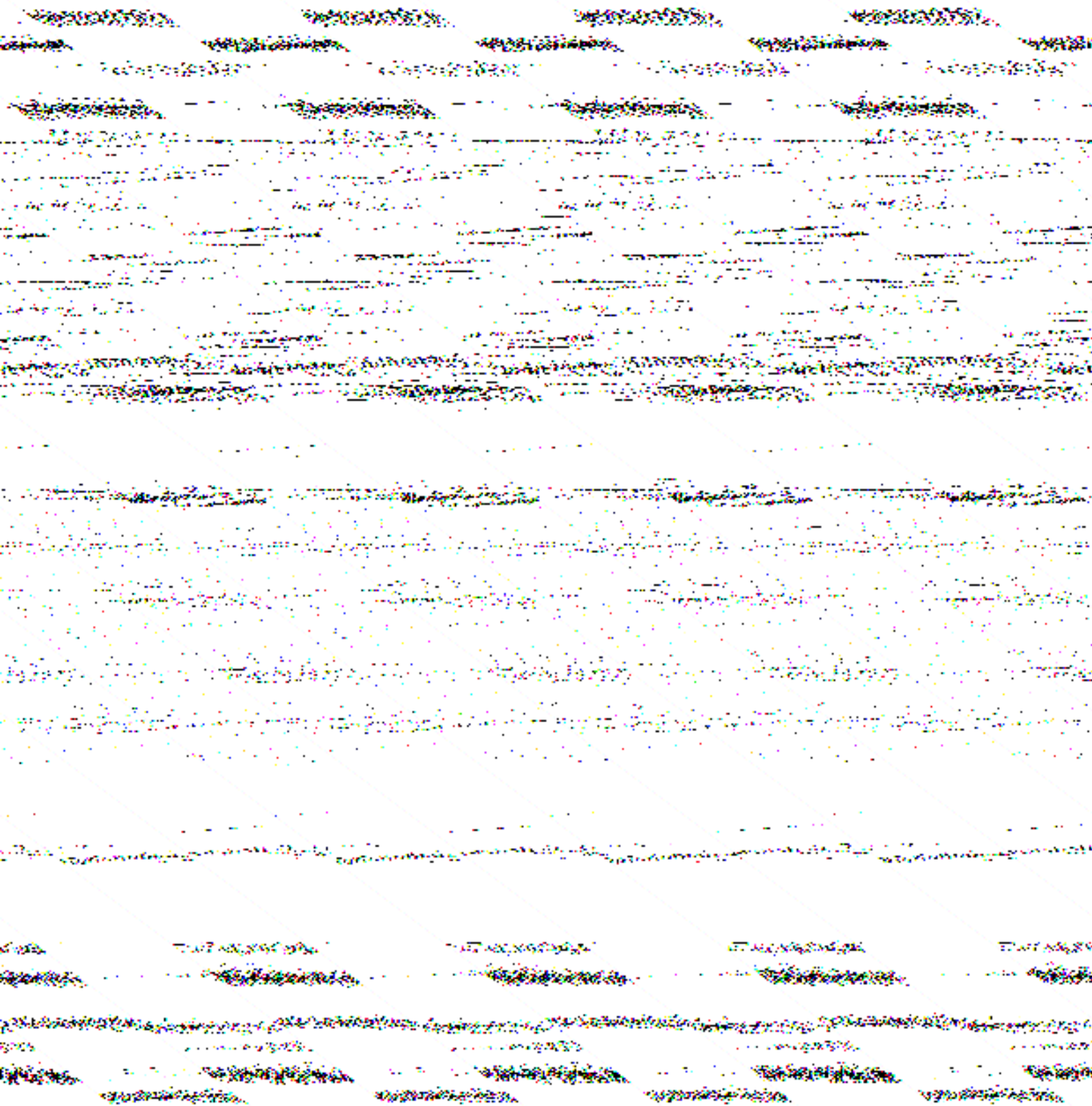
7. The seventh part of the document discusses the role of financial reporting in risk management. It emphasizes that financial data can be used to identify and assess various risks, including credit risk, liquidity risk, and operational risk. This section also highlights the importance of developing robust risk management strategies to mitigate these risks and ensure the long-term sustainability of the organization.

8. The eighth part of the document discusses the role of financial reporting in social responsibility. It emphasizes that companies should not only focus on their financial performance but also on their impact on society and the environment. This section also highlights the importance of disclosing information about social and environmental issues, enabling investors and other stakeholders to make informed decisions based on a company's overall performance.

9. The ninth part of the document discusses the role of financial reporting in the future of business. It explores emerging trends and technologies that are likely to shape the way companies manage their financial operations in the coming years. This section also highlights the importance of staying ahead of the curve by investing in research and development, ensuring that the organization remains competitive and innovative in a rapidly changing market.

10. The tenth part of the document discusses the role of financial reporting in the global economy. It emphasizes that financial data is essential for understanding the performance of individual companies and the overall health of the global financial system. This section also highlights the importance of international cooperation and standardization in financial reporting, ensuring that data is consistent and comparable across different countries and regions.





1. **Introduction** 2. **Methodology** 3. **Results** 4. **Discussion** 5. **Conclusion**

The first section of the document provides a comprehensive overview of the project's objectives and the research methodology employed. This section is followed by a detailed analysis of the data collected, which is presented in a clear and concise manner. The results of the study are then discussed in the context of the existing literature, highlighting the key findings and their implications. Finally, the document concludes with a summary of the main points and a list of references.

The methodology used in this study is a combination of qualitative and quantitative approaches. The qualitative data was collected through interviews and focus groups, while the quantitative data was obtained from a survey of a large sample of participants. The data analysis was conducted using a variety of statistical techniques, including regression analysis and factor analysis. The results of the study indicate that there is a significant relationship between the variables being studied, and that the findings have important implications for the field of research.

The findings of this study suggest that there is a need for further research in this area, and that the results have important implications for practice. The study also highlights the importance of using a combination of qualitative and quantitative methods to gain a more complete understanding of the phenomenon being studied. Finally, the document concludes with a list of references and a list of appendices.

1. Introduction 2. Background 3. Methodology 4. Results 5. Conclusion

The first section of the report provides a brief overview of the project's objectives and the scope of the study. It also outlines the structure of the report and the key findings that will be discussed in the subsequent sections.

The second section provides a detailed overview of the background information related to the project. This includes a review of the relevant literature and a discussion of the current state of the field.

The third section describes the methodology used in the study. This includes a detailed description of the research design, the data collection methods, and the analysis techniques used to interpret the results.

The fourth section presents the results of the study. This includes a detailed description of the data collected and a discussion of the key findings. The results are presented in a clear and concise manner, using tables and figures where appropriate.

The fifth and final section provides a conclusion to the study. This includes a summary of the key findings and a discussion of the implications of the results. The conclusion also identifies areas for further research and provides recommendations for future studies.

The report concludes with a list of references and a list of appendices. The references provide a list of the sources used in the study, and the appendices provide additional information related to the study.

The report is written in a clear and concise manner, using a professional and academic style. The language is easy to understand and the structure is well-organized. The report is a valuable resource for anyone interested in the topic.

The report is a well-written and informative document that provides a comprehensive overview of the project. It is a valuable resource for anyone interested in the topic and provides a clear and concise summary of the key findings.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Year	2019	2020	2021	2022	2023
Q1	1.2	1.5	1.8	2.1	2.4
Q2	1.5	1.8	2.1	2.4	2.7
Q3	1.8	2.1	2.4	2.7	3.0
Q4	2.1	2.4	2.7	3.0	3.3
Annual	1.6	1.9	2.2	2.5	2.8
Change		18%	16%	14%	12%
Forecast				3.1	3.4
Notes					



1. Introduction

2. Background

3. Methodology

4. Results

5. Conclusion

6. References

7. Appendix

8. Index

9. Glossary

10. Notes

11. Footnotes

12. Endnotes

13. References

14. Appendix

15. Index

16. Glossary

17. Notes

18. Footnotes

19. Endnotes

20. References

21. Appendix

22. Index

23. Glossary

24. Notes

25. Footnotes

26. Endnotes

27. References

28. Appendix

29. Index

30. Glossary

31. Notes

32. Footnotes

33. Endnotes

34. References

35. Appendix

36. Index

37. Glossary

38. Notes

39. Footnotes

40. Endnotes

41. References

42. Appendix

43. Index

44. Glossary

45. Notes

46. Footnotes

47. Endnotes

48. References

49. Appendix

50. Index

51. Glossary

52. Notes

53. Footnotes

54. Endnotes

55. References

56. Appendix

57. Index

58. Glossary

59. Notes

60. Footnotes

61. Endnotes

62. References

63. Appendix

64. Index

65. Glossary

66. Notes

67. Footnotes

68. Endnotes

69. References

70. Appendix

71. Index

72. Glossary

73. Notes

74. Footnotes

75. Endnotes

76. References

77. Appendix

78. Index

79. Glossary

80. Notes

81. Footnotes

82. Endnotes

83. References

84. Appendix

85. Index

86. Glossary

87. Notes

88. Footnotes

89. Endnotes

90. References

91. Appendix

92. Index

93. Glossary

94. Notes

95. Footnotes

96. Endnotes

97. References

98. Appendix

99. Index

100. Glossary

101. Notes

102. Footnotes

103. Endnotes

104. References

105. Appendix

106. Index

107. Glossary

108. Notes

109. Footnotes

110. Endnotes

111. References

112. Appendix

113. Index

114. Glossary

115. Notes

116. Footnotes

117. Endnotes

118. References

119. Appendix

120. Index

121. Glossary

122. Notes

123. Footnotes

124. Endnotes

125. References

126. Appendix

127. Index

128. Glossary

129. Notes

130. Footnotes

131. Endnotes

132. References

133. Appendix

134. Index

135. Glossary

136. Notes

137. Footnotes

138. Endnotes

139. References

140. Appendix

141. Index

142. Glossary

143. Notes

144. Footnotes

145. Endnotes

146. References

147. Appendix

148. Index

149. Glossary

150. Notes

151. Footnotes

152. Endnotes

153. References

154. Appendix

155. Index

156. Glossary

157. Notes

158. Footnotes

159. Endnotes

160. References

161. Appendix

162. Index

163. Glossary

164. Notes

165. Footnotes

166. Endnotes

167. References

168. Appendix

169. Index

170. Glossary

171. Notes

172. Footnotes

173. Endnotes

174. References

175. Appendix

176. Index

177. Glossary

178. Notes

179. Footnotes

180. Endnotes

181. References

182. Appendix

183. Index

184. Glossary

185. Notes

186. Footnotes

187. Endnotes

188. References

189. Appendix

190. Index

191. Glossary

192. Notes

193. Footnotes

194. Endnotes

195. References

196. Appendix

197. Index

198. Glossary

199. Notes

200. Footnotes

201. Endnotes

202. References

203. Appendix

204. Index

205. Glossary

206. Notes

207. Footnotes

208. Endnotes

209. References

210. Appendix

211. Index

212. Glossary

213. Notes

214. Footnotes

215. Endnotes

216. References

217. Appendix

218. Index

219. Glossary

220. Notes

221. Footnotes

222. Endnotes

223. References

224. Appendix

225. Index

226. Glossary

227. Notes

228. Footnotes

229. Endnotes

230. References

231. Appendix

232. Index

233. Glossary

234. Notes

235. Footnotes

236. Endnotes

237. References

238. Appendix

239. Index

240. Glossary

241. Notes

242. Footnotes

243. Endnotes

244. References

245. Appendix

246. Index

247. Glossary

248. Notes

249. Footnotes

250. Endnotes

251. References

252. Appendix

253. Index

254. Glossary

255. Notes

256. Footnotes

257. Endnotes

258. References

259. Appendix

260. Index

261. Glossary

262. Notes

263. Footnotes

264. Endnotes

265. References

266. Appendix

267. Index

268. Glossary

269. Notes

270. Footnotes

271. Endnotes

272. References

273. Appendix

274. Index

275. Glossary

276. Notes

277. Footnotes

278. Endnotes

279. References

280. Appendix

281. Index

282. Glossary

283. Notes

284. Footnotes

285. Endnotes

286. References

287. Appendix

288. Index

289. Glossary

290. Notes

291. Footnotes

292. Endnotes

293. References

294. Appendix

295. Index

296. Glossary

297. Notes

298. Footnotes

299. Endnotes

300. References

301. Appendix

302. Index

303. Glossary

304. Notes

305. Footnotes

306. Endnotes

307. References

308. Appendix

309. Index

310. Glossary

311. Notes

312. Footnotes

313. Endnotes

314. References

315. Appendix

316. Index

317. Glossary

318. Notes

319. Footnotes

320. Endnotes

321. References

322. Appendix

323. Index

324. Glossary

325. Notes

326. Footnotes

327. Endnotes

328. References

329. Appendix

330. Index

331. Glossary

332. Notes

333. Footnotes

334. Endnotes

335. References

336. Appendix

337. Index

338. Glossary

339. Notes

340. Footnotes

341. Endnotes

342. References

343. Appendix

344. Index

345. Glossary

346. Notes

347. Footnotes

348. Endnotes

349. References

350. Appendix

351. Index

352. Glossary

353. Notes

354. Footnotes

355. Endnotes

356. References

357. Appendix

358. Index

359. Glossary

360. Notes

361. Footnotes

362. Endnotes

363. References

364. Appendix

365. Index

366. Glossary

367. Notes

368. Footnotes

369. Endnotes

370. References

371. Appendix

372. Index

373. Glossary

374. Notes

375. Footnotes

376. Endnotes

377. References

378. Appendix

379. Index

380. Glossary

381. Notes

382. Footnotes

383. Endnotes

384. References

385. Appendix

386. Index

387. Glossary

388. Notes

389. Footnotes

390. Endnotes

391. References

392. Appendix

393. Index

394. Glossary

395. Notes

396. Footnotes

397. Endnotes

398. References

399. Appendix

400. Index

401. Glossary

402. Notes

403. Footnotes

404. Endnotes

405. References

406. Appendix

407. Index

408. Glossary

409. Notes

410. Footnotes

411. Endnotes

412. References

413. Appendix

414. Index

415. Glossary

416. Notes

417. Footnotes

418. Endnotes

419. References

420. Appendix

421. Index

422. Glossary

423. Notes

424. Footnotes

425. Endnotes

426. References

427. Appendix

428. Index

429. Glossary

430. Notes

431. Footnotes

432. Endnotes

433. References

434. Appendix

435. Index

436. Glossary

437. Notes

438. Footnotes

439. Endnotes

440. References

441. Appendix

442. Index

443. Glossary

444. Notes

445. Footnotes

446. Endnotes

447. References

448. Appendix

449. Index

450. Glossary

451. Notes

452. Footnotes

453. Endnotes

454. References

455. Appendix

456. Index

457. Glossary

458. Notes

459. Footnotes

460. Endnotes

461. References

462. Appendix

463. Index

464. Glossary

465. Notes

466. Footnotes

467. Endnotes

468. References

469. Appendix

470. Index

471. Glossary

472. Notes

473. Footnotes

474. Endnotes

475. References

476. Appendix

477. Index

478. Glossary

479. Notes

480. Footnotes

481. Endnotes

482. References

483. Appendix

484. Index

485. Glossary

486. Notes

487. Footnotes

488. Endnotes

489. References

490. Appendix

491. Index

492. Glossary

493. Notes

494. Footnotes

495. Endnotes

496. References

497. Appendix

498. Index

499. Glossary

500. Notes

501. Footnotes

502. Endnotes

503. References

504. Appendix

505. Index

506. Glossary

507. Notes

508. Footnotes

509. Endnotes

510. References

511. Appendix

512. Index

513. Glossary

514. Notes

515. Footnotes

516. Endnotes

517. References

518. Appendix

519. Index

520. Glossary

521. Notes

522. Footnotes

523. Endnotes

524. References

525. Appendix

526. Index

527. Glossary

528. Notes

529. Footnotes

530. Endnotes

531. References

532. Appendix

533. Index

534. Glossary

535. Notes

536. Footnotes

537. Endnotes

538. References

539. Appendix

540. Index

541. Glossary

542. Notes

543. Footnotes

544. Endnotes

545. References

546. Appendix

547. Index

548. Glossary

549. Notes

550. Footnotes

551. Endnotes

552. References

553. Appendix

554. Index

555. Glossary

556. Notes

557. Footnotes

558. Endnotes

559. References

560. Appendix

561. Index

562. Glossary

563. Notes

564. Footnotes

565. Endnotes

566. References

567. Appendix

568. Index

569. Glossary

570. Notes

571. Footnotes

572. Endnotes

573. References

574. Appendix

575. Index

576. Glossary

577. Notes

578. Footnotes

579. Endnotes

580. References

581. Appendix

582. Index

583. Glossary

584. Notes

585. Footnotes

586. Endnotes

587. References

588. Appendix

589. Index

590. Glossary

591. Notes

592. Footnotes

593. Endnotes

594. References

595. Appendix

596. Index

597. Glossary

598. Notes

599. Footnotes

600. Endnotes

601. References

602. Appendix

603. Index

604. Glossary

605. Notes

606. Footnotes

607. Endnotes

608. References

609. Appendix

610. Index

611. Glossary

612. Notes

613. Footnotes

614. Endnotes

615. References

616. Appendix

617. Index

618. Glossary

619. Notes

620. Footnotes

621. Endnotes

622. References

623. Appendix

624. Index

625. Glossary

626. Notes

627. Footnotes

628. Endnotes

629. References

630. Appendix

631. Index

632. Glossary

633. Notes

634. Footnotes

635. Endnotes

636. References

637. Appendix

638. Index

639. Glossary

640. Notes

641. Footnotes

642. Endnotes

643. References

644. Appendix

645. Index

646. Glossary

647. Notes

648. Footnotes

649. Endnotes

650. References

651. Appendix

652. Index

653. Glossary

654. Notes

655. Footnotes

656. Endnotes

657. References

658. Appendix

659. Index

660. Glossary

661. Notes

662. Footnotes

663. Endnotes

664. References

665. Appendix

666. Index

667. Glossary

668. Notes

669. Footnotes

670. Endnotes

671. References

672. Appendix

673. Index

674. Glossary

675. Notes

676. Footnotes

677. Endnotes

678. References

679. Appendix

680. Index

681. Glossary

682. Notes

683. Footnotes

684. Endnotes

685. References

686. Appendix

687. Index

688. Glossary

689. Notes

690. Footnotes

691. Endnotes

692. References

693. Appendix

694. Index

695. Glossary

696. Notes

697. Footnotes

698. Endnotes

699. References

700. Appendix

701. Index

702. Glossary

703. Notes

704. Footnotes

705. Endnotes

706. References

707. Appendix

708. Index

709. Glossary

710. Notes

711. Footnotes

712. Endnotes

713. References

714. Appendix

715. Index

716. Glossary

717. Notes

718. Footnotes

719. Endnotes

720. References

721. Appendix

722. Index

723. Glossary

724. Notes

725. Footnotes

726. Endnotes

727. References

728. Appendix

729. Index

730. Glossary

731. Notes

732. Footnotes

733. Endnotes

734. References

735. Appendix

736. Index

737. Glossary

738. Notes

739. Footnotes

740. Endnotes

741. References

742. Appendix

743. Index

744. Glossary

745. Notes

746. Footnotes

747. Endnotes

748. References

749. Appendix

750. Index

751. Glossary

752. Notes

753. Footnotes

754. Endnotes

755. References

756. Appendix

757. Index

758. Glossary

759. Notes

760. Footnotes

761. Endnotes

762. References

763. Appendix

764. Index

765. Glossary

766. Notes

767. Footnotes

768. Endnotes

769. References

770. Appendix

771. Index

772. Glossary

773. Notes

774. Footnotes

775. Endnotes

776. References

777. Appendix

778. Index

779. Glossary

780. Notes

781. Footnotes

782. Endnotes

783. References

784. Appendix

785. Index

786. Glossary

787. Notes

788. Footnotes

789. Endnotes

790. References

791. Appendix

792. Index

793. Glossary

794. Notes

795. Footnotes

796. Endnotes

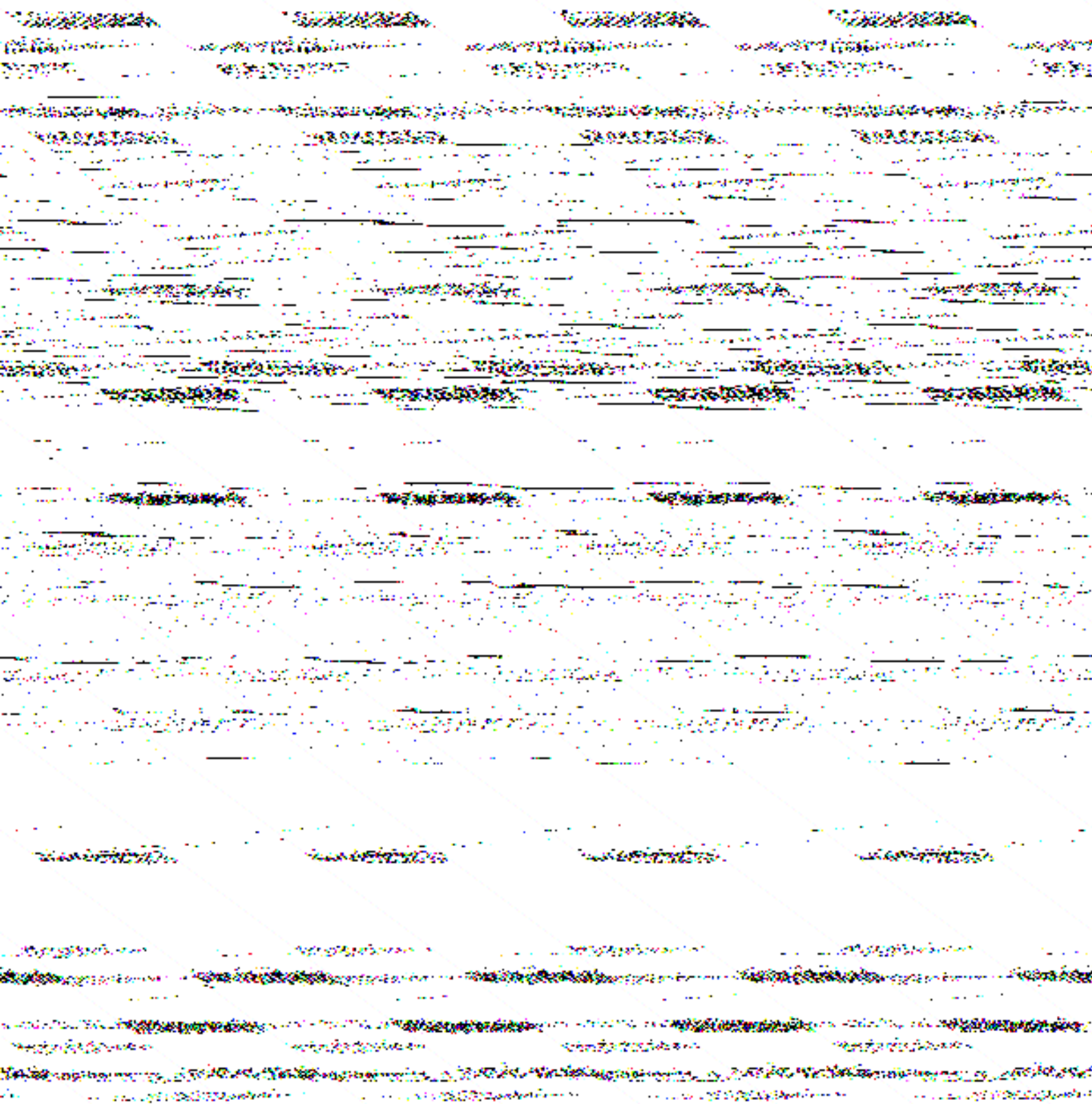
797. References

798. Appendix

799. Index

Handwritten text on lined paper, appearing to be a list or index of names and dates. The text is mostly illegible due to blurring and low resolution. Some faint words like "MAY 1914" and "MAY 1915" are visible.

Handwritten text on lined paper, appearing to be a list or index of names and dates. The text is mostly illegible due to blurring and low resolution. Some faint words like "MAY 1914" and "MAY 1915" are visible.





DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
10/1/2023	DEPOSIT	1000.00		CHASE
10/5/2023	DEPOSIT	500.00		CHASE
10/10/2023	DEPOSIT	750.00		CHASE
10/15/2023	DEPOSIT	200.00		CHASE
10/20/2023	DEPOSIT	300.00		CHASE
10/25/2023	DEPOSIT	150.00		CHASE
10/30/2023	DEPOSIT	400.00		CHASE
11/5/2023	DEPOSIT	600.00		CHASE
11/10/2023	DEPOSIT	250.00		CHASE
11/15/2023	DEPOSIT	350.00		CHASE
11/20/2023	DEPOSIT	100.00		CHASE
11/25/2023	DEPOSIT	500.00		CHASE
11/30/2023	DEPOSIT	700.00		CHASE
12/5/2023	DEPOSIT	300.00		CHASE
12/10/2023	DEPOSIT	450.00		CHASE
12/15/2023	DEPOSIT	200.00		CHASE
12/20/2023	DEPOSIT	600.00		CHASE
12/25/2023	DEPOSIT	150.00		CHASE
12/30/2023	DEPOSIT	550.00		CHASE
TOTAL		10000.00		

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
10/1/2023	DEPOSIT	1000.00		CHASE
10/5/2023	DEPOSIT	500.00		CHASE
10/10/2023	DEPOSIT	750.00		CHASE
10/15/2023	DEPOSIT	200.00		CHASE
10/20/2023	DEPOSIT	300.00		CHASE
10/25/2023	DEPOSIT	150.00		CHASE
10/30/2023	DEPOSIT	400.00		CHASE
11/5/2023	DEPOSIT	600.00		CHASE
11/10/2023	DEPOSIT	250.00		CHASE
11/15/2023	DEPOSIT	350.00		CHASE
11/20/2023	DEPOSIT	100.00		CHASE
11/25/2023	DEPOSIT	500.00		CHASE
11/30/2023	DEPOSIT	700.00		CHASE
12/5/2023	DEPOSIT	300.00		CHASE
12/10/2023	DEPOSIT	450.00		CHASE
12/15/2023	DEPOSIT	200.00		CHASE
12/20/2023	DEPOSIT	600.00		CHASE
12/25/2023	DEPOSIT	150.00		CHASE
12/30/2023	DEPOSIT	550.00		CHASE
TOTAL		10000.00		

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
1/15/2024	DEPOSIT	1000.00		CHASE
1/20/2024	PAYROLL	500.00	1001	CHASE
1/25/2024	RENT	200.00	1002	CHASE
1/30/2024	UTILITIES	150.00	1003	CHASE
2/5/2024	SALES	300.00	1004	CHASE
2/10/2024	EXPENSES	100.00	1005	CHASE
2/15/2024	DEPOSIT	1000.00		CHASE
2/20/2024	PAYROLL	500.00	1006	CHASE
2/25/2024	RENT	200.00	1007	CHASE
2/28/2024	UTILITIES	150.00	1008	CHASE
3/5/2024	SALES	300.00	1009	CHASE
3/10/2024	EXPENSES	100.00	1010	CHASE
3/15/2024	DEPOSIT	1000.00		CHASE
3/20/2024	PAYROLL	500.00	1011	CHASE
3/25/2024	RENT	200.00	1012	CHASE
3/30/2024	UTILITIES	150.00	1013	CHASE
4/5/2024	SALES	300.00	1014	CHASE
4/10/2024	EXPENSES	100.00	1015	CHASE
4/15/2024	DEPOSIT	1000.00		CHASE
4/20/2024	PAYROLL	500.00	1016	CHASE
4/25/2024	RENT	200.00	1017	CHASE
4/30/2024	UTILITIES	150.00	1018	CHASE
5/5/2024	SALES	300.00	1019	CHASE
5/10/2024	EXPENSES	100.00	1020	CHASE
5/15/2024	DEPOSIT	1000.00		CHASE
5/20/2024	PAYROLL	500.00	1021	CHASE
5/25/2024	RENT	200.00	1022	CHASE
5/30/2024	UTILITIES	150.00	1023	CHASE
6/5/2024	SALES	300.00	1024	CHASE
6/10/2024	EXPENSES	100.00	1025	CHASE
6/15/2024	DEPOSIT	1000.00		CHASE
6/20/2024	PAYROLL	500.00	1026	CHASE
6/25/2024	RENT	200.00	1027	CHASE
6/30/2024	UTILITIES	150.00	1028	CHASE
7/5/2024	SALES	300.00	1029	CHASE
7/10/2024	EXPENSES	100.00	1030	CHASE
7/15/2024	DEPOSIT	1000.00		CHASE
7/20/2024	PAYROLL	500.00	1031	CHASE
7/25/2024	RENT	200.00	1032	CHASE
7/30/2024	UTILITIES	150.00	1033	CHASE
8/5/2024	SALES	300.00	1034	CHASE
8/10/2024	EXPENSES	100.00	1035	CHASE
8/15/2024	DEPOSIT	1000.00		CHASE
8/20/2024	PAYROLL	500.00	1036	CHASE
8/25/2024	RENT	200.00	1037	CHASE
8/30/2024	UTILITIES	150.00	1038	CHASE
9/5/2024	SALES	300.00	1039	CHASE
9/10/2024	EXPENSES	100.00	1040	CHASE
9/15/2024	DEPOSIT	1000.00		CHASE
9/20/2024	PAYROLL	500.00	1041	CHASE
9/25/2024	RENT	200.00	1042	CHASE
9/30/2024	UTILITIES	150.00	1043	CHASE
10/5/2024	SALES	300.00	1044	CHASE
10/10/2024	EXPENSES	100.00	1045	CHASE
10/15/2024	DEPOSIT	1000.00		CHASE
10/20/2024	PAYROLL	500.00	1046	CHASE
10/25/2024	RENT	200.00	1047	CHASE
10/30/2024	UTILITIES	150.00	1048	CHASE
11/5/2024	SALES	300.00	1049	CHASE
11/10/2024	EXPENSES	100.00	1050	CHASE
11/15/2024	DEPOSIT	1000.00		CHASE
11/20/2024	PAYROLL	500.00	1051	CHASE
11/25/2024	RENT	200.00	1052	CHASE
11/30/2024	UTILITIES	150.00	1053	CHASE
12/5/2024	SALES	300.00	1054	CHASE
12/10/2024	EXPENSES	100.00	1055	CHASE
12/15/2024	DEPOSIT	1000.00		CHASE
12/20/2024	PAYROLL	500.00	1056	CHASE
12/25/2024	RENT	200.00	1057	CHASE
12/30/2024	UTILITIES	150.00	1058	CHASE

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
1/15/2025	DEPOSIT	1000.00		CHASE
1/20/2025	PAYROLL	500.00	1059	CHASE
1/25/2025	RENT	200.00	1060	CHASE
1/30/2025	UTILITIES	150.00	1061	CHASE
2/5/2025	SALES	300.00	1062	CHASE
2/10/2025	EXPENSES	100.00	1063	CHASE
2/15/2025	DEPOSIT	1000.00		CHASE
2/20/2025	PAYROLL	500.00	1064	CHASE
2/25/2025	RENT	200.00	1065	CHASE
2/28/2025	UTILITIES	150.00	1066	CHASE
3/5/2025	SALES	300.00	1067	CHASE
3/10/2025	EXPENSES	100.00	1068	CHASE
3/15/2025	DEPOSIT	1000.00		CHASE
3/20/2025	PAYROLL	500.00	1069	CHASE
3/25/2025	RENT	200.00	1070	CHASE
3/30/2025	UTILITIES	150.00	1071	CHASE
4/5/2025	SALES	300.00	1072	CHASE
4/10/2025	EXPENSES	100.00	1073	CHASE
4/15/2025	DEPOSIT	1000.00		CHASE
4/20/2025	PAYROLL	500.00	1074	CHASE
4/25/2025	RENT	200.00	1075	CHASE
4/30/2025	UTILITIES	150.00	1076	CHASE
5/5/2025	SALES	300.00	1077	CHASE
5/10/2025	EXPENSES	100.00	1078	CHASE
5/15/2025	DEPOSIT	1000.00		CHASE
5/20/2025	PAYROLL	500.00	1079	CHASE
5/25/2025	RENT	200.00	1080	CHASE
5/30/2025	UTILITIES	150.00	1081	CHASE
6/5/2025	SALES	300.00	1082	CHASE
6/10/2025	EXPENSES	100.00	1083	CHASE
6/15/2025	DEPOSIT	1000.00		CHASE
6/20/2025	PAYROLL	500.00	1084	CHASE
6/25/2025	RENT	200.00	1085	CHASE
6/30/2025	UTILITIES	150.00	1086	CHASE
7/5/2025	SALES	300.00	1087	CHASE
7/10/2025	EXPENSES	100.00	1088	CHASE
7/15/2025	DEPOSIT	1000.00		CHASE
7/20/2025	PAYROLL	500.00	1089	CHASE
7/25/2025	RENT	200.00	1090	CHASE
7/30/2025	UTILITIES	150.00	1091	CHASE
8/5/2025	SALES	300.00	1092	CHASE
8/10/2025	EXPENSES	100.00	1093	CHASE
8/15/2025	DEPOSIT	1000.00		CHASE
8/20/2025	PAYROLL	500.00	1094	CHASE
8/25/2025	RENT	200.00	1095	CHASE
8/30/2025	UTILITIES	150.00	1096	CHASE
9/5/2025	SALES	300.00	1097	CHASE
9/10/2025	EXPENSES	100.00	1098	CHASE
9/15/2025	DEPOSIT	1000.00		CHASE
9/20/2025	PAYROLL	500.00	1099	CHASE
9/25/2025	RENT	200.00	1100	CHASE
9/30/2025	UTILITIES	150.00	1101	CHASE
10/5/2025	SALES	300.00	1102	CHASE
10/10/2025	EXPENSES	100.00	1103	CHASE
10/15/2025	DEPOSIT	1000.00		CHASE
10/20/2025	PAYROLL	500.00	1104	CHASE
10/25/2025	RENT	200.00	1105	CHASE
10/30/2025	UTILITIES	150.00	1106	CHASE
11/5/2025	SALES	300.00	1107	CHASE
11/10/2025	EXPENSES	100.00	1108	CHASE
11/15/2025	DEPOSIT	1000.00		CHASE
11/20/2025	PAYROLL	500.00	1109	CHASE
11/25/2025	RENT	200.00	1110	CHASE
11/30/2025	UTILITIES	150.00	1111	CHASE
12/5/2025	SALES	300.00	1112	CHASE
12/10/2025	EXPENSES	100.00	1113	CHASE
12/15/2025	DEPOSIT	1000.00		CHASE
12/20/2025	PAYROLL	500.00	1114	CHASE
12/25/2025	RENT	200.00	1115	CHASE
12/30/2025	UTILITIES	150.00	1116	CHASE

Handwritten text in a cursive script, possibly a list or a series of notes. The text is mostly illegible due to the image quality and blurring.

Handwritten text in a cursive script, possibly a list or a series of notes. The text is mostly illegible due to the image quality and blurring.

Handwritten text in a cursive script, possibly a list or a series of notes. The text is mostly illegible due to the image quality and blurring.

Year	Year	Year	Year	Year
1980	1981	1982	1983	1984
1985	1986	1987	1988	1989
1990	1991	1992	1993	1994
1995	1996	1997	1998	1999
2000	2001	2002	2003	2004
2005	2006	2007	2008	2009
2010	2011	2012	2013	2014
2015	2016	2017	2018	2019
2020	2021	2022	2023	2024

Year	Year	Year	Year	Year
2025	2026	2027	2028	2029
2030	2031	2032	2033	2034
2035	2036	2037	2038	2039
2040	2041	2042	2043	2044
2045	2046	2047	2048	2049
2050	2051	2052	2053	2054
2055	2056	2057	2058	2059
2060	2061	2062	2063	2064
2065	2066	2067	2068	2069
2070	2071	2072	2073	2074
2075	2076	2077	2078	2079
2080	2081	2082	2083	2084
2085	2086	2087	2088	2089
2090	2091	2092	2093	2094
2095	2096	2097	2098	2099

Year	Year	Year	Year	Year
2100	2101	2102	2103	2104
2105	2106	2107	2108	2109
2110	2111	2112	2113	2114
2115	2116	2117	2118	2119
2120	2121	2122	2123	2124
2125	2126	2127	2128	2129
2130	2131	2132	2133	2134
2135	2136	2137	2138	2139
2140	2141	2142	2143	2144
2145	2146	2147	2148	2149
2150	2151	2152	2153	2154
2155	2156	2157	2158	2159
2160	2161	2162	2163	2164
2165	2166	2167	2168	2169
2170	2171	2172	2173	2174
2175	2176	2177	2178	2179
2180	2181	2182	2183	2184
2185	2186	2187	2188	2189
2190	2191	2192	2193	2194
2195	2196	2197	2198	2199

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
10/15/2023	DEPOSIT	1000.00		CHASE
10/16/2023	DEPOSIT	500.00		CHASE
10/17/2023	DEPOSIT	750.00		CHASE
10/18/2023	DEPOSIT	200.00		CHASE
10/19/2023	DEPOSIT	300.00		CHASE
10/20/2023	DEPOSIT	400.00		CHASE
10/21/2023	DEPOSIT	600.00		CHASE
10/22/2023	DEPOSIT	800.00		CHASE
10/23/2023	DEPOSIT	900.00		CHASE
10/24/2023	DEPOSIT	1000.00		CHASE
10/25/2023	DEPOSIT	1100.00		CHASE
10/26/2023	DEPOSIT	1200.00		CHASE
10/27/2023	DEPOSIT	1300.00		CHASE
10/28/2023	DEPOSIT	1400.00		CHASE
10/29/2023	DEPOSIT	1500.00		CHASE
10/30/2023	DEPOSIT	1600.00		CHASE
10/31/2023	DEPOSIT	1700.00		CHASE

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
11/01/2023	DEPOSIT	1800.00		CHASE
11/02/2023	DEPOSIT	1900.00		CHASE
11/03/2023	DEPOSIT	2000.00		CHASE
11/04/2023	DEPOSIT	2100.00		CHASE
11/05/2023	DEPOSIT	2200.00		CHASE
11/06/2023	DEPOSIT	2300.00		CHASE
11/07/2023	DEPOSIT	2400.00		CHASE
11/08/2023	DEPOSIT	2500.00		CHASE
11/09/2023	DEPOSIT	2600.00		CHASE
11/10/2023	DEPOSIT	2700.00		CHASE
11/11/2023	DEPOSIT	2800.00		CHASE
11/12/2023	DEPOSIT	2900.00		CHASE
11/13/2023	DEPOSIT	3000.00		CHASE
11/14/2023	DEPOSIT	3100.00		CHASE
11/15/2023	DEPOSIT	3200.00		CHASE
11/16/2023	DEPOSIT	3300.00		CHASE
11/17/2023	DEPOSIT	3400.00		CHASE
11/18/2023	DEPOSIT	3500.00		CHASE
11/19/2023	DEPOSIT	3600.00		CHASE
11/20/2023	DEPOSIT	3700.00		CHASE
11/21/2023	DEPOSIT	3800.00		CHASE
11/22/2023	DEPOSIT	3900.00		CHASE
11/23/2023	DEPOSIT	4000.00		CHASE
11/24/2023	DEPOSIT	4100.00		CHASE
11/25/2023	DEPOSIT	4200.00		CHASE
11/26/2023	DEPOSIT	4300.00		CHASE
11/27/2023	DEPOSIT	4400.00		CHASE
11/28/2023	DEPOSIT	4500.00		CHASE
11/29/2023	DEPOSIT	4600.00		CHASE
11/30/2023	DEPOSIT	4700.00		CHASE

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
12/01/2023	DEPOSIT	4800.00		CHASE
12/02/2023	DEPOSIT	4900.00		CHASE
12/03/2023	DEPOSIT	5000.00		CHASE
12/04/2023	DEPOSIT	5100.00		CHASE
12/05/2023	DEPOSIT	5200.00		CHASE
12/06/2023	DEPOSIT	5300.00		CHASE
12/07/2023	DEPOSIT	5400.00		CHASE
12/08/2023	DEPOSIT	5500.00		CHASE
12/09/2023	DEPOSIT	5600.00		CHASE
12/10/2023	DEPOSIT	5700.00		CHASE
12/11/2023	DEPOSIT	5800.00		CHASE
12/12/2023	DEPOSIT	5900.00		CHASE
12/13/2023	DEPOSIT	6000.00		CHASE
12/14/2023	DEPOSIT	6100.00		CHASE
12/15/2023	DEPOSIT	6200.00		CHASE
12/16/2023	DEPOSIT	6300.00		CHASE
12/17/2023	DEPOSIT	6400.00		CHASE
12/18/2023	DEPOSIT	6500.00		CHASE
12/19/2023	DEPOSIT	6600.00		CHASE
12/20/2023	DEPOSIT	6700.00		CHASE
12/21/2023	DEPOSIT	6800.00		CHASE
12/22/2023	DEPOSIT	6900.00		CHASE
12/23/2023	DEPOSIT	7000.00		CHASE
12/24/2023	DEPOSIT	7100.00		CHASE
12/25/2023	DEPOSIT	7200.00		CHASE
12/26/2023	DEPOSIT	7300.00		CHASE
12/27/2023	DEPOSIT	7400.00		CHASE
12/28/2023	DEPOSIT	7500.00		CHASE
12/29/2023	DEPOSIT	7600.00		CHASE
12/30/2023	DEPOSIT	7700.00		CHASE
12/31/2023	DEPOSIT	7800.00		CHASE

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
1/1/2024	Initial Deposit	1000.00		Bank of America
1/15/2024	Salary Payment	1500.00	1001	Bank of America
1/31/2024	Interest on Loan	50.00	1002	Bank of America
2/1/2024	Transfer to Savings	200.00		Bank of America
2/15/2024	Salary Payment	1500.00	1003	Bank of America
2/28/2024	Interest on Loan	50.00	1004	Bank of America
3/1/2024	Transfer to Savings	200.00		Bank of America
3/15/2024	Salary Payment	1500.00	1005	Bank of America
3/31/2024	Interest on Loan	50.00	1006	Bank of America
4/1/2024	Transfer to Savings	200.00		Bank of America
4/15/2024	Salary Payment	1500.00	1007	Bank of America
4/30/2024	Interest on Loan	50.00	1008	Bank of America
5/1/2024	Transfer to Savings	200.00		Bank of America
5/15/2024	Salary Payment	1500.00	1009	Bank of America
5/31/2024	Interest on Loan	50.00	1010	Bank of America
6/1/2024	Transfer to Savings	200.00		Bank of America
6/15/2024	Salary Payment	1500.00	1011	Bank of America
6/30/2024	Interest on Loan	50.00	1012	Bank of America
7/1/2024	Transfer to Savings	200.00		Bank of America
7/15/2024	Salary Payment	1500.00	1013	Bank of America
7/31/2024	Interest on Loan	50.00	1014	Bank of America
8/1/2024	Transfer to Savings	200.00		Bank of America
8/15/2024	Salary Payment	1500.00	1015	Bank of America
8/31/2024	Interest on Loan	50.00	1016	Bank of America
9/1/2024	Transfer to Savings	200.00		Bank of America
9/15/2024	Salary Payment	1500.00	1017	Bank of America
9/30/2024	Interest on Loan	50.00	1018	Bank of America
10/1/2024	Transfer to Savings	200.00		Bank of America
10/15/2024	Salary Payment	1500.00	1019	Bank of America
10/31/2024	Interest on Loan	50.00	1020	Bank of America
11/1/2024	Transfer to Savings	200.00		Bank of America
11/15/2024	Salary Payment	1500.00	1021	Bank of America
11/30/2024	Interest on Loan	50.00	1022	Bank of America
12/1/2024	Transfer to Savings	200.00		Bank of America
12/15/2024	Salary Payment	1500.00	1023	Bank of America
12/31/2024	Interest on Loan	50.00	1024	Bank of America

1. Introduction

2. Background

3. Methodology

4. Results

5. Discussion

6. Conclusion

7. References

8. Appendix

9. Index

10. Summary

11. Abstract

12. Keywords

13. Subject

14. Topic

15. Field

16. Area

17. Discipline

18. Branch

19. Department

20. Faculty

21. School

22. College

23. University

24. Institution

25. Organization

26. Company

27. Government

28. Non-profit

29. Academic

30. Research

31. Development

32. Education

33. Health

34. Environment

35. Society

36. Community

37. Industry

38. Business

39. Finance

40. Law

41. Medicine

42. Engineering

43. Technology

44. Science

45. Art

46. History

47. Philosophy

48. Psychology

49. Sociology

50. Anthropology

51. Geography

52. Political Science

53. International Relations

54. Public Administration

55. Public Health

56. Environmental Science

57. Development Studies

58. Education Studies

59. Health Studies

60. Environment Studies

61. Social Studies

62. Humanities

63. Sciences

64. Interdisciplinary

65. Transdisciplinary

66. Multi-disciplinary

67. Cross-disciplinary

68. Collaborative

69. Integrated

70. Convergent

71. Emergent

72. Transformative

73. Disruptive

74. Radical

75. Revolutionary

76. Evolutionary

77. Incremental

78. Incremental Change

79. Incremental Innovation

80. Incremental Development

81. Incremental Progress

82. Incremental Growth

83. Incremental Expansion

84. Incremental Improvement

85. Incremental Enhancement

86. Incremental Refinement

87. Incremental Optimization

88. Incremental Efficiency

89. Incremental Effectiveness

90. Incremental Impact

91. Incremental Influence

92. Incremental Reach

93. Incremental Resonance

94. Incremental Relevance

95. Incremental Significance

96. Incremental Importance

97. Incremental Value

98. Incremental Contribution

99. Incremental Legacy

100. Incremental Endurance

101. Incremental Sustainability

102. Incremental Resilience

103. Incremental Adaptability

104. Incremental Flexibility

105. Incremental Agility

106. Incremental Scalability

107. Incremental Portability

108. Incremental Interoperability

109. Incremental Compatibility

110. Incremental Reliability

111. Incremental Availability

112. Incremental Security

113. Incremental Privacy

114. Incremental Transparency

115. Incremental Accountability

116. Incremental Responsibility

117. Incremental Integrity

118. Incremental Honesty

119. Incremental Fairness

120. Incremental Justice

121. Incremental Equity

122. Incremental Inclusion

123. Incremental Diversity

124. Incremental Innovation

125. Incremental Creativity

126. Incremental Imagination

127. Incremental Inspiration

128. Incremental Motivation

129. Incremental Commitment

130. Incremental Dedication

131. Incremental Passion

132. Incremental Enthusiasm

133. Incremental Energy

134. Incremental Focus

135. Incremental Concentration

136. Incremental Attention

137. Incremental Awareness

138. Incremental Understanding

139. Incremental Knowledge

140. Incremental Wisdom

141. Incremental Insight

142. Incremental Clarity

143. Incremental Certainty

144. Incremental Confidence

145. Incremental Trust

146. Incremental Respect

147. Incremental Appreciation

148. Incremental Gratitude

149. Incremental Compassion

150. Incremental Empathy

151. Incremental Sympathy

152. Incremental Solidarity

153. Incremental Unity

154. Incremental Harmony

155. Incremental Balance

156. Incremental Stability

157. Incremental Peace

158. Incremental Tranquility

159. Incremental Serenity

160. Incremental Calmness

161. Incremental Composure

162. Incremental Poise

163. Incremental Grace

164. Incremental Elegance

165. Incremental Sophistication

166. Incremental Refinement

167. Incremental Polishedness

168. Incremental Perfection

169. Incremental Excellence

170. Incremental Mastery

171. Incremental Expertise

172. Incremental Proficiency

173. Incremental Skillfulness

174. Incremental Competence

175. Incremental Capability

176. Incremental Capacity

177. Incremental Potential

178. Incremental Possibility

179. Incremental Promise

180. Incremental Hope

181. Incremental Optimism

182. Incremental Positivity

183. Incremental Brightness

184. Incremental Radiance

185. Incremental Brilliance

186. Incremental Splendor

187. Incremental Majesty

188. Incremental Grandeur

189. Incremental Magnificence

190. Incremental Sublimity

191. Incremental Nobility

192. Incremental Dignity

193. Incremental Honor

194. Incremental Prestige

195. Incremental Reputation

196. Incremental Fame

197. Incremental Notoriety

198. Incremental Infamy

199. Incremental Infamy

200. Incremental Infamy

1. Introduction

2. Background

3. Methodology

4. Results

5. Discussion

6. Conclusion

7. References

8. Appendix

9. Index

10. Glossary

11. Notes

12. Footnotes

13. Endnotes

14. References

15. Appendix

16. Index

17. Glossary

18. Notes

19. Footnotes

20. Endnotes

21. References

22. Appendix

23. Index

24. Glossary

25. Notes

26. Footnotes

27. Endnotes

28. References

29. Appendix

30. Index

31. Glossary

32. Notes

33. Footnotes

34. Endnotes

35. References

36. Appendix

37. Index

38. Glossary

39. Notes

40. Footnotes

41. Endnotes

42. References

43. Appendix

44. Index

45. Glossary

46. Notes

47. Footnotes

48. Endnotes

49. References

50. Appendix

51. Index

52. Glossary

53. Notes

54. Footnotes

55. Endnotes

56. References

57. Appendix

58. Index

59. Glossary

60. Notes

61. Footnotes

62. Endnotes

63. References

64. Appendix

65. Index

66. Glossary

67. Notes

68. Footnotes

69. Endnotes

70. References

71. Appendix

72. Index

73. Glossary

74. Notes

75. Footnotes

76. Endnotes

77. References

78. Appendix

79. Index

80. Glossary

81. Notes

82. Footnotes

83. Endnotes

84. References

85. Appendix

86. Index

87. Glossary

88. Notes

89. Footnotes

90. Endnotes

91. References

92. Appendix

93. Index

94. Glossary

95. Notes

96. Footnotes

97. Endnotes

98. References

99. Appendix

100. Index

101. Glossary

102. Notes

103. Footnotes

104. Endnotes

105. References

106. Appendix

107. Index

108. Glossary

109. Notes

110. Footnotes

111. Endnotes

112. References

113. Appendix

114. Index

115. Glossary

116. Notes

117. Footnotes

118. Endnotes

119. References

120. Appendix

121. Index

122. Glossary

123. Notes

124. Footnotes

125. Endnotes

126. References

127. Appendix

128. Index

129. Glossary

130. Notes

131. Footnotes

132. Endnotes

133. References

134. Appendix

135. Index

136. Glossary

137. Notes

138. Footnotes

139. Endnotes

140. References

141. Appendix

142. Index

143. Glossary

144. Notes

145. Footnotes

146. Endnotes

147. References

148. Appendix

149. Index

150. Glossary

151. Notes

152. Footnotes

153. Endnotes

154. References

155. Appendix

156. Index

157. Glossary

158. Notes

159. Footnotes

160. Endnotes

161. References

162. Appendix

163. Index

164. Glossary

165. Notes

166. Footnotes

167. Endnotes

168. References

169. Appendix

170. Index

171. Glossary

172. Notes

173. Footnotes

174. Endnotes

175. References

176. Appendix

177. Index

178. Glossary

179. Notes

180. Footnotes

181. Endnotes

182. References

183. Appendix

184. Index

185. Glossary

186. Notes

187. Footnotes

188. Endnotes

189. References

190. Appendix

191. Index

192. Glossary

193. Notes

194. Footnotes

195. Endnotes

196. References

197. Appendix

198. Index

199. Glossary

200. Notes

201. Footnotes

202. Endnotes

203. References

204. Appendix

205. Index

206. Glossary

207. Notes

208. Footnotes

209. Endnotes

210. References

211. Appendix

212. Index

213. Glossary

214. Notes

215. Footnotes

216. Endnotes

217. References

218. Appendix

219. Index

220. Glossary

221. Notes

222. Footnotes

223. Endnotes

224. References

225. Appendix

226. Index

227. Glossary

228. Notes

229. Footnotes

230. Endnotes

231. References

232. Appendix

233. Index

234. Glossary

235. Notes

236. Footnotes

237. Endnotes

238. References

239. Appendix

240. Index

241. Glossary

242. Notes

243. Footnotes

244. Endnotes

245. References

246. Appendix

247. Index

248. Glossary

249. Notes

250. Footnotes

251. Endnotes

252. References

253. Appendix

254. Index

255. Glossary

256. Notes

257. Footnotes

258. Endnotes

259. References

260. Appendix

261. Index

262. Glossary

263. Notes

264. Footnotes

265. Endnotes

266. References

267. Appendix

268. Index

269. Glossary

270. Notes

271. Footnotes

272. Endnotes

273. References

274. Appendix

275. Index

276. Glossary

277. Notes

278. Footnotes

279. Endnotes

280. References

281. Appendix

282. Index

283. Glossary

284. Notes

285. Footnotes

286. Endnotes

287. References

288. Appendix

289. Index

290. Glossary

291. Notes

292. Footnotes

293. Endnotes

294. References

295. Appendix

296. Index

297. Glossary

298. Notes

299. Footnotes

300. Endnotes

301. References

302. Appendix

303. Index

304. Glossary

305. Notes

306. Footnotes

307. Endnotes

308. References

309. Appendix

310. Index

311. Glossary

312. Notes

313. Footnotes

314. Endnotes

315. References

316. Appendix

317. Index

318. Glossary

319. Notes

320. Footnotes

321. Endnotes

322. References

323. Appendix

324. Index

325. Glossary

326. Notes

327. Footnotes

328. Endnotes

329. References

330. Appendix

331. Index

332. Glossary

333. Notes

334. Footnotes

335. Endnotes

336. References

337. Appendix

338. Index

339. Glossary

340. Notes

341. Footnotes

342. Endnotes

343. References

344. Appendix

345. Index

346. Glossary

347. Notes

348. Footnotes

349. Endnotes

350. References

351. Appendix

352. Index

353. Glossary

354. Notes

355. Footnotes

356. Endnotes

357. References

358. Appendix

359. Index

360. Glossary

361. Notes

362. Footnotes

363. Endnotes

364. References

365. Appendix

366. Index

367. Glossary

368. Notes

369. Footnotes

370. Endnotes

371. References

372. Appendix

373. Index

374. Glossary

375. Notes

376. Footnotes

377. Endnotes

378. References

379. Appendix

380. Index

381. Glossary

382. Notes

383. Footnotes

384. Endnotes

385. References

386. Appendix

387. Index

388. Glossary

389. Notes

390. Footnotes

391. Endnotes

392. References

393. Appendix

394. Index

395. Glossary

396. Notes

397. Footnotes

398. Endnotes

399. References

400. Appendix

401. Index

402. Glossary

403. Notes

404. Footnotes

405. Endnotes

406. References

407. Appendix

408. Index

409. Glossary

410. Notes

411. Footnotes

412. Endnotes

413. References

414. Appendix

415. Index

416. Glossary

417. Notes

418. Footnotes

419. Endnotes

420. References

421. Appendix

422. Index

423. Glossary

424. Notes

425. Footnotes

426. Endnotes

427. References

428. Appendix

429. Index

430. Glossary

431. Notes

432. Footnotes

433. Endnotes

434. References

435. Appendix

436. Index

437. Glossary

438. Notes

439. Footnotes

440. Endnotes

441. References

442. Appendix

443. Index

444. Glossary

445. Notes

446. Footnotes

447. Endnotes

448. References

449. Appendix

450. Index

451. Glossary

452. Notes

453. Footnotes

454. Endnotes

455. References

456. Appendix

457. Index

458. Glossary

459. Notes

460. Footnotes

461. Endnotes

462. References

463. Appendix

464. Index

465. Glossary

466. Notes

467. Footnotes

468. Endnotes

469. References

470. Appendix

471. Index

472. Glossary

473. Notes

474. Footnotes

475. Endnotes

476. References

477. Appendix

478. Index

479. Glossary

480. Notes

481. Footnotes

482. Endnotes

483. References

484. Appendix

485. Index

486. Glossary

487. Notes

488. Footnotes

489. Endnotes

490. References

491. Appendix

492. Index

493. Glossary

494. Notes

495. Footnotes

496. Endnotes

497. References

498. Appendix

499. Index

500. Glossary

501. Notes

502. Footnotes

503. Endnotes

504. References

505. Appendix

506. Index

507. Glossary

508. Notes

509. Footnotes

510. Endnotes

511. References

512. Appendix

513. Index

514. Glossary

515. Notes

516. Footnotes

517. Endnotes

518. References

519. Appendix

520. Index

521. Glossary

522. Notes

523. Footnotes

524. Endnotes

525. References

526. Appendix

527. Index

528. Glossary

529. Notes

530. Footnotes

531. Endnotes

532. References

533. Appendix

534. Index

535. Glossary

536. Notes

537. Footnotes

538. Endnotes

539. References

540. Appendix

541. Index

542. Glossary

543. Notes

544. Footnotes

545. Endnotes

546. References

547. Appendix

548. Index

549. Glossary

550. Notes

551. Footnotes

552. Endnotes

553. References

554. Appendix

555. Index

556. Glossary

557. Notes

558. Footnotes

559. Endnotes

560. References

561. Appendix

562. Index

563. Glossary

564. Notes

565. Footnotes

566. Endnotes

567. References

568. Appendix

569. Index

570. Glossary

571. Notes

572. Footnotes

573. Endnotes

574. References

575. Appendix

576. Index

577. Glossary

578. Notes

579. Footnotes

580. Endnotes

581. References

582. Appendix

583. Index

584. Glossary

585. Notes

586. Footnotes

587. Endnotes

588. References

589. Appendix

590. Index

591. Glossary

592. Notes

593. Footnotes

594. Endnotes

595. References

596. Appendix

597. Index

598. Glossary

599. Notes

600. Footnotes

601. Endnotes

602. References

603. Appendix

604. Index

605. Glossary

606. Notes

607. Footnotes

608. Endnotes

609. References

610. Appendix

611. Index

612. Glossary

613. Notes

614. Footnotes

615. Endnotes

616. References

617. Appendix

618. Index

619. Glossary

620. Notes

621. Footnotes

622. Endnotes

623. References

624. Appendix

625. Index

626. Glossary

627. Notes

628. Footnotes

629. Endnotes

630. References

631. Appendix

632. Index

633. Glossary

634. Notes

635. Footnotes

636. Endnotes

637. References

638. Appendix

639. Index

640. Glossary

641. Notes

642. Footnotes

643. Endnotes

644. References

645. Appendix

646. Index

647. Glossary

648. Notes

649. Footnotes

650. Endnotes

651. References

652. Appendix

653. Index

654. Glossary

655. Notes

656. Footnotes

657. Endnotes

658. References

659. Appendix

660. Index

661. Glossary

662. Notes

663. Footnotes

664. Endnotes

665. References

666. Appendix

667. Index

668. Glossary

669. Notes

670. Footnotes

671. Endnotes

672. References

673. Appendix

674. Index

675. Glossary

676. Notes

677. Footnotes

678. Endnotes

679. References

680. Appendix

681. Index

682. Glossary

683. Notes

684. Footnotes

685. Endnotes

686. References

687. Appendix

688. Index

689. Glossary

690. Notes

691. Footnotes

692. Endnotes

693. References

694. Appendix

695. Index

696. Glossary

697. Notes

698. Footnotes

699. Endnotes

700. References

701. Appendix

702. Index

703. Glossary

704. Notes

705. Footnotes

706. Endnotes

707. References

708. Appendix

709. Index

710. Glossary

711. Notes

712. Footnotes

713. Endnotes

714. References

715. Appendix

716. Index

717. Glossary

718. Notes

719. Footnotes

720. Endnotes

721. References

722. Appendix

723. Index

724. Glossary

725. Notes

726. Footnotes

727. Endnotes

728. References

729. Appendix

730. Index

731. Glossary

732. Notes

733. Footnotes

734. Endnotes

735. References

736. Appendix

737. Index

738. Glossary

739. Notes

740. Footnotes

741. Endnotes

742. References

743. Appendix

744. Index

745. Glossary

746. Notes

747. Footnotes

748. Endnotes

749. References

750. Appendix

751. Index

752. Glossary

753. Notes

754. Footnotes

755. Endnotes

756. References

757. Appendix

758. Index

759. Glossary

760. Notes

761. Footnotes

762. Endnotes

763. References

764. Appendix

765. Index

766. Glossary

767. Notes

768. Footnotes

769. Endnotes

770. References

771. Appendix

772. Index

773. Glossary

774. Notes

775. Footnotes

776. Endnotes

777. References

778. Appendix

779. Index

780. Glossary

781. Notes

782. Footnotes

783. Endnotes

784. References

785. Appendix

786. Index

787. Glossary

788. Notes

789. Footnotes

790. Endnotes

791. References

792. Appendix

793. Index

794. Glossary

795. Notes

796. Footnotes

797. Endnotes

798. References

799. Appendix

800. Index

801. G

1. Introduction

2. Background

3. Methodology

4. Results

5. Discussion

6. Conclusion

7. References

8. Appendix

9. Index

10. Summary

11. Notes

12. Footnotes

13. Endnotes

14. References

15. Appendix

16. Index

17. Summary

18. Notes

19. Footnotes

20. Endnotes

21. References

22. Appendix

23. Index

24. Summary

25. Notes

26. Footnotes

27. Endnotes

28. References

29. Appendix

30. Index

31. Summary

32. Notes

33. Footnotes

34. Endnotes

35. References

36. Appendix

37. Index

38. Summary

39. Notes

40. Footnotes

41. Endnotes

42. References

43. Appendix

44. Index

45. Summary

46. Notes

47. Footnotes

48. Endnotes

49. References

50. Appendix

51. Index

52. Summary

53. Notes

54. Footnotes

55. Endnotes

56. References

57. Appendix

58. Index

59. Summary

60. Notes

61. Footnotes

62. Endnotes

63. References

64. Appendix

65. Index

66. Summary

67. Notes

68. Footnotes

69. Endnotes

70. References

71. Appendix

72. Index

73. Summary

74. Notes

75. Footnotes

76. Endnotes

77. References

78. Appendix

79. Index

80. Summary

81. Notes

82. Footnotes

83. Endnotes

84. References

85. Appendix

86. Index

87. Summary

88. Notes

89. Footnotes

90. Endnotes

91. References

92. Appendix

93. Index

94. Summary

95. Notes

96. Footnotes

97. Endnotes

98. References

99. Appendix

100. Index

101. Summary

102. Notes

103. Footnotes

104. Endnotes

105. References

106. Appendix

107. Index

108. Summary

109. Notes

110. Footnotes

111. Endnotes

112. References

113. Appendix

114. Index

115. Summary

116. Notes

117. Footnotes

118. Endnotes

119. References

120. Appendix

121. Index

122. Summary

123. Notes

124. Footnotes

125. Endnotes

126. References

127. Appendix

128. Index

129. Summary

130. Notes

131. Footnotes

132. Endnotes

133. References

134. Appendix

135. Index

136. Summary

137. Notes

138. Footnotes

139. Endnotes

140. References

141. Appendix

142. Index

143. Summary

144. Notes

145. Footnotes

146. Endnotes

147. References

148. Appendix

149. Index

150. Summary

151. Notes

152. Footnotes

153. Endnotes

154. References

155. Appendix

156. Index

157. Summary

158. Notes

159. Footnotes

160. Endnotes

161. References

162. Appendix

163. Index

164. Summary

165. Notes

166. Footnotes

167. Endnotes

168. References

169. Appendix

170. Index

171. Summary

172. Notes

173. Footnotes

174. Endnotes

175. References

176. Appendix

177. Index

178. Summary

179. Notes

180. Footnotes

181. Endnotes

182. References

183. Appendix

184. Index

185. Summary

186. Notes

187. Footnotes

188. Endnotes

189. References

190. Appendix

191. Index

192. Summary

193. Notes

194. Footnotes

195. Endnotes

196. References

197. Appendix

198. Index

199. Summary

200. Notes

201. Footnotes

202. Endnotes

203. References

204. Appendix

205. Index

206. Summary

207. Notes

208. Footnotes

209. Endnotes

210. References

211. Appendix

212. Index

213. Summary

214. Notes

215. Footnotes

216. Endnotes

217. References

218. Appendix

219. Index

220. Summary

221. Notes

222. Footnotes

223. Endnotes

224. References

225. Appendix

226. Index

227. Summary

228. Notes

229. Footnotes

230. Endnotes

231. References

232. Appendix

233. Index

234. Summary

235. Notes

236. Footnotes

237. Endnotes

238. References

239. Appendix

240. Index

241. Summary

242. Notes

243. Footnotes

244. Endnotes

245. References

246. Appendix

247. Index

248. Summary

249. Notes

250. Footnotes

251. Endnotes

252. References

253. Appendix

254. Index

255. Summary

256. Notes

257. Footnotes

258. Endnotes

259. References

260. Appendix

261. Index

262. Summary

263. Notes

264. Footnotes

265. Endnotes

266. References

267. Appendix

268. Index

269. Summary

270. Notes

271. Footnotes

272. Endnotes

273. References

274. Appendix

275. Index

276. Summary

277. Notes

278. Footnotes

279. Endnotes

280. References

281. Appendix

282. Index

283. Summary

284. Notes

285. Footnotes

286. Endnotes

287. References

288. Appendix

289. Index

290. Summary

291. Notes

292. Footnotes

293. Endnotes

294. References

295. Appendix

296. Index

297. Summary

298. Notes

299. Footnotes

300. Endnotes

301. References

302. Appendix

303. Index

304. Summary

305. Notes

306. Footnotes

307. Endnotes

308. References

309. Appendix

310. Index

311. Summary

312. Notes

313. Footnotes

314. Endnotes

315. References

316. Appendix

317. Index

318. Summary

319. Notes

320. Footnotes

321. Endnotes

322. References

323. Appendix

324. Index

325. Summary

326. Notes

327. Footnotes

328. Endnotes

329. References

330. Appendix

331. Index

332. Summary

333. Notes

334. Footnotes

335. Endnotes

336. References

337. Appendix

338. Index

339. Summary

340. Notes

341. Footnotes

342. Endnotes

343. References

344. Appendix

345. Index

346. Summary

347. Notes

348. Footnotes

349. Endnotes

350. References

351. Appendix

352. Index

353. Summary

354. Notes

355. Footnotes

356. Endnotes

357. References

358. Appendix

359. Index

360. Summary

361. Notes

362. Footnotes

363. Endnotes

364. References

365. Appendix

366. Index

367. Summary

368. Notes

369. Footnotes

370. Endnotes

371. References

372. Appendix

373. Index

374. Summary

375. Notes

376. Footnotes

377. Endnotes

378. References

379. Appendix

380. Index

381. Summary

382. Notes

383. Footnotes

384. Endnotes

385. References

386. Appendix

387. Index

388. Summary

389. Notes

390. Footnotes

391. Endnotes

392. References

393. Appendix

394. Index

395. Summary

396. Notes

397. Footnotes

398. Endnotes

399. References

400. Appendix

401. Index

402. Summary

403. Notes

404. Footnotes

405. Endnotes

406. References

407. Appendix

408. Index

409. Summary

410. Notes

411. Footnotes

412. Endnotes

413. References

414. Appendix

415. Index

416. Summary

417. Notes

418. Footnotes

419. Endnotes

420. References

421. Appendix

422. Index

423. Summary

424. Notes

425. Footnotes

426. Endnotes

427. References

428. Appendix

429. Index

430. Summary

431. Notes

432. Footnotes

433. Endnotes

434. References

435. Appendix

436. Index

437. Summary

438. Notes

439. Footnotes

440. Endnotes

441. References

442. Appendix

443. Index

444. Summary

445. Notes

446. Footnotes

447. Endnotes

448. References

449. Appendix

450. Index

451. Summary

452. Notes

453. Footnotes

454. Endnotes

455. References

456. Appendix

457. Index

458. Summary

459. Notes

460. Footnotes

461. Endnotes

462. References

463. Appendix

464. Index

465. Summary

466. Notes

467. Footnotes

468. Endnotes

469. References

470. Appendix

471. Index

472. Summary

473. Notes

474. Footnotes

475. Endnotes

476. References

477. Appendix

478. Index

479. Summary

480. Notes

481. Footnotes

482. Endnotes

483. References

484. Appendix

485. Index

486. Summary

487. Notes

488. Footnotes

489. Endnotes

490. References

491. Appendix

492. Index

493. Summary

494. Notes

495. Footnotes

496. Endnotes

497. References

498. Appendix

499. Index

500. Summary

501. Notes

502. Footnotes

503. Endnotes

504. References

505. Appendix

506. Index

507. Summary

508. Notes

509. Footnotes

510. Endnotes

511. References

512. Appendix

513. Index

514. Summary

515. Notes

516. Footnotes

517. Endnotes

518. References

519. Appendix

520. Index

521. Summary

522. Notes

523. Footnotes

524. Endnotes

525. References

526. Appendix

527. Index

528. Summary

529. Notes

530. Footnotes

531. Endnotes

532. References

533. Appendix

534. Index

535. Summary

536. Notes

537. Footnotes

538. Endnotes

539. References

540. Appendix

541. Index

542. Summary

543. Notes

544. Footnotes

545. Endnotes

546. References

547. Appendix

548. Index

549. Summary

550. Notes

551. Footnotes

552. Endnotes

553. References

554. Appendix

555. Index

556. Summary

557. Notes

558. Footnotes

559. Endnotes

560. References

561. Appendix

562. Index

563. Summary

564. Notes

565. Footnotes

566. Endnotes

567. References

568. Appendix

569. Index

570. Summary

571. Notes

572. Footnotes

573. Endnotes

574. References

575. Appendix

576. Index

577. Summary

578. Notes

579. Footnotes

580. Endnotes

581. References

582. Appendix

583. Index

584. Summary

585. Notes

586. Footnotes

587. Endnotes

588. References

589. Appendix

590. Index

591. Summary

592. Notes

593. Footnotes

594. Endnotes

595. References

596. Appendix

597. Index

598. Summary

599. Notes

600. Footnotes

601. Endnotes

602. References

603. Appendix

604. Index

605. Summary

606. Notes

607. Footnotes

608. Endnotes

609. References

610. Appendix

611. Index

612. Summary

613. Notes

614. Footnotes

615. Endnotes

616. References

617. Appendix

618. Index

619. Summary

620. Notes

621. Footnotes

622. Endnotes

623. References

624. Appendix

625. Index

626. Summary

627. Notes

628. Footnotes

629. Endnotes

630. References

631. Appendix

632. Index

633. Summary

634. Notes

635. Footnotes

636. Endnotes

637. References

638. Appendix

639. Index

640. Summary

641. Notes

642. Footnotes

643. Endnotes

644. References

645. Appendix

646. Index

647. Summary

648. Notes

649. Footnotes

650. Endnotes

651. References

652. Appendix

653. Index

654. Summary

655. Notes

656. Footnotes

657. Endnotes

658. References

659. Appendix

660. Index

661. Summary

662. Notes

663. Footnotes

664. Endnotes

665. References

666. Appendix

667. Index

668. Summary

669. Notes

670. Footnotes

671. Endnotes

672. References

673. Appendix

674. Index

675. Summary

676. Notes

677. Footnotes

678. Endnotes

679. References

680. Appendix

681. Index

682. Summary

683. Notes

684. Footnotes

685. Endnotes

686. References

687. Appendix

688. Index

689. Summary

690. Notes

691. Footnotes

692. Endnotes

693. References

694. Appendix

695. Index

696. Summary

697. Notes

698. Footnotes

699. Endnotes

700. References

701. Appendix

702. Index

703. Summary

704. Notes

705. Footnotes

706. Endnotes

707. References

708. Appendix

709. Index

710. Summary

711. Notes

712. Footnotes

713. Endnotes

714. References

715. Appendix

716. Index

717. Summary

718. Notes

719. Footnotes

720. Endnotes

721. References

722. Appendix

723. Index

724. Summary

725. Notes

726. Footnotes

727. Endnotes

728. References

729. Appendix

730. Index

731. Summary

732. Notes

733. Footnotes

734. Endnotes

735. References

736. Appendix

737. Index

738. Summary

739. Notes

740. Footnotes

741. Endnotes

742. References

743. Appendix

744. Index

745. Summary

746. Notes

747. Footnotes

748. Endnotes

749. References

750. Appendix

751. Index

752. Summary

753. Notes

754. Footnotes

755. Endnotes

756. References

757. Appendix

758. Index

759. Summary

760. Notes

761. Footnotes

762. Endnotes

763. References

764. Appendix

765. Index

766. Summary

767. Notes

768. Footnotes

769. Endnotes

770. References

771. Appendix

772. Index

773. Summary

774. Notes

775. Footnotes

776. Endnotes

777. References

778. Appendix

779. Index

780. Summary

781. Notes

782. Footnotes

783. Endnotes

784. References

785. Appendix

786. Index

787. Summary

788. Notes

789. Footnotes

790. Endnotes

791. References

792. Appendix

793. Index

794. Summary

795. Notes

796. Footnotes

797. Endnotes

798. References

799. Appendix

800. Index

801. Summary

802. Notes

803. Footnotes

804. Endnotes

805. References

806. Appendix

807. Index

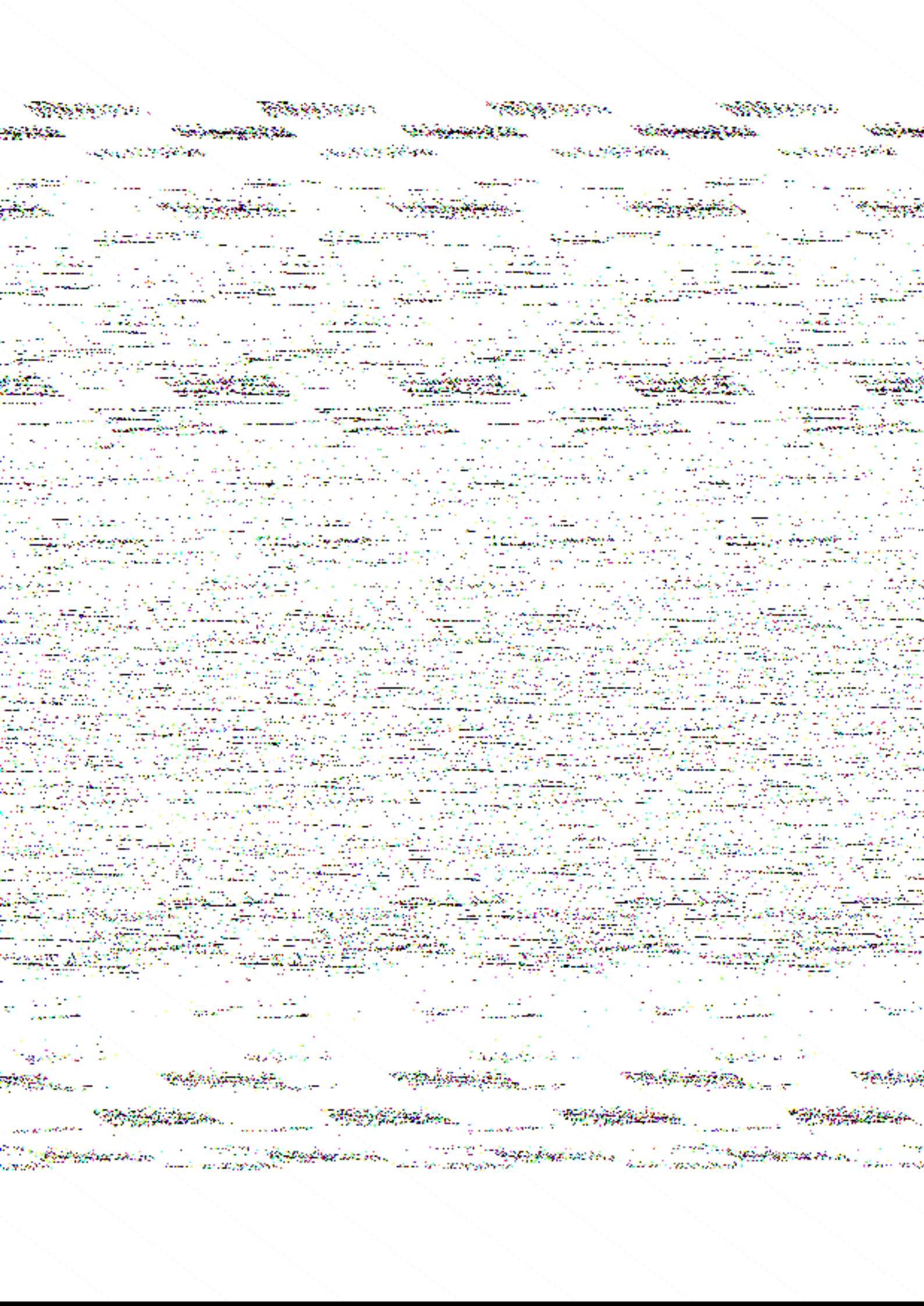
808. Summary

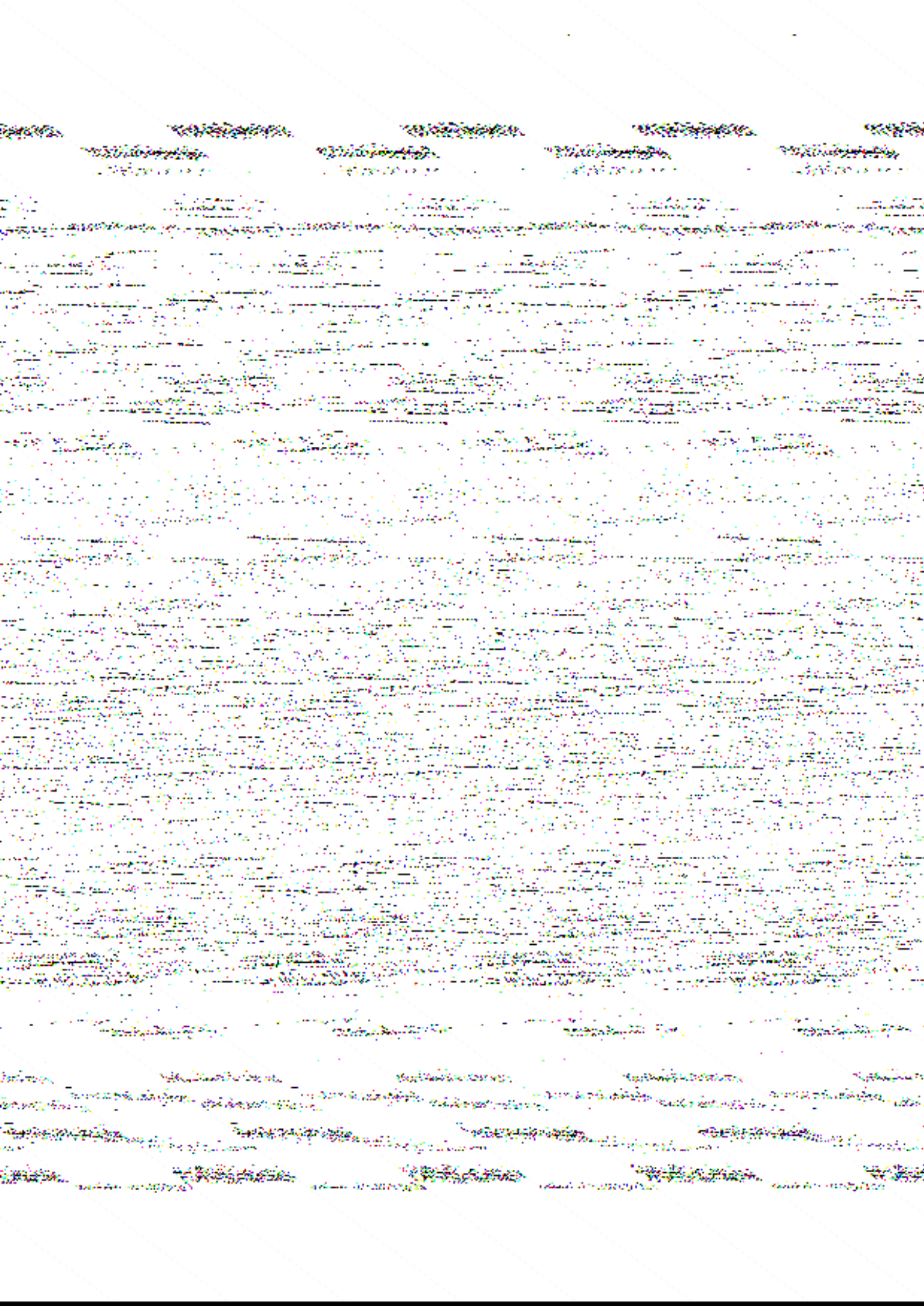
[The text in this section is extremely faint and illegible due to heavy noise and low contrast. It appears to be a list of items or a table with multiple columns.]

[This section contains a few more lines of text, which are also mostly illegible due to the same quality issues as the first section. Some faint words and numbers are visible.]









.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

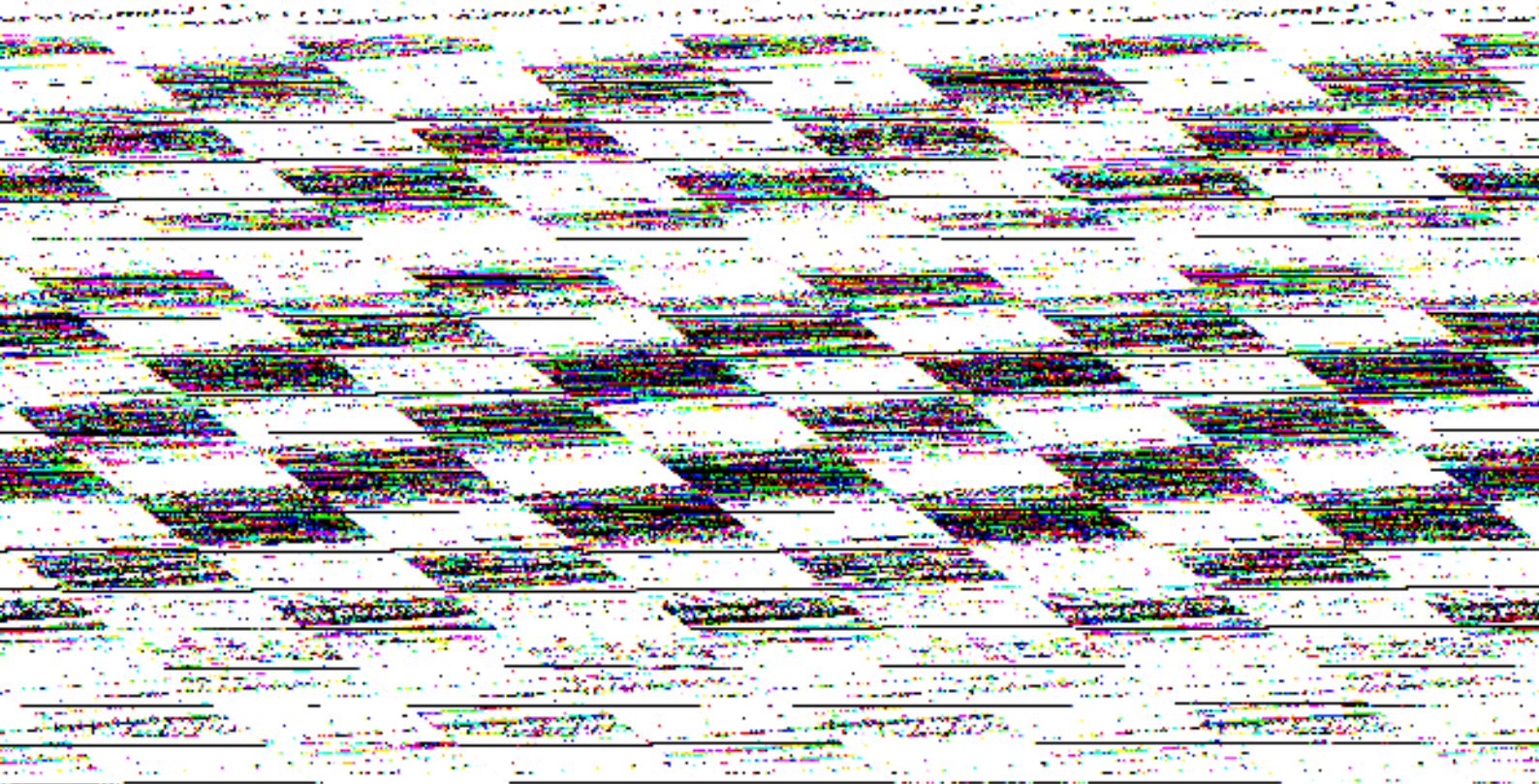
.....

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the tools used for data collection.

3. The third part of the document presents the results of the study, including a comparison of the different methods and techniques used. It discusses the strengths and weaknesses of each method and provides a summary of the findings.

4. The fourth part of the document discusses the implications of the study and provides recommendations for future research. It highlights the need for further investigation into the effectiveness of the different methods and techniques used.



5. The fifth part of the document discusses the limitations of the study and provides a conclusion. It summarizes the key findings and highlights the need for further research in this area.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

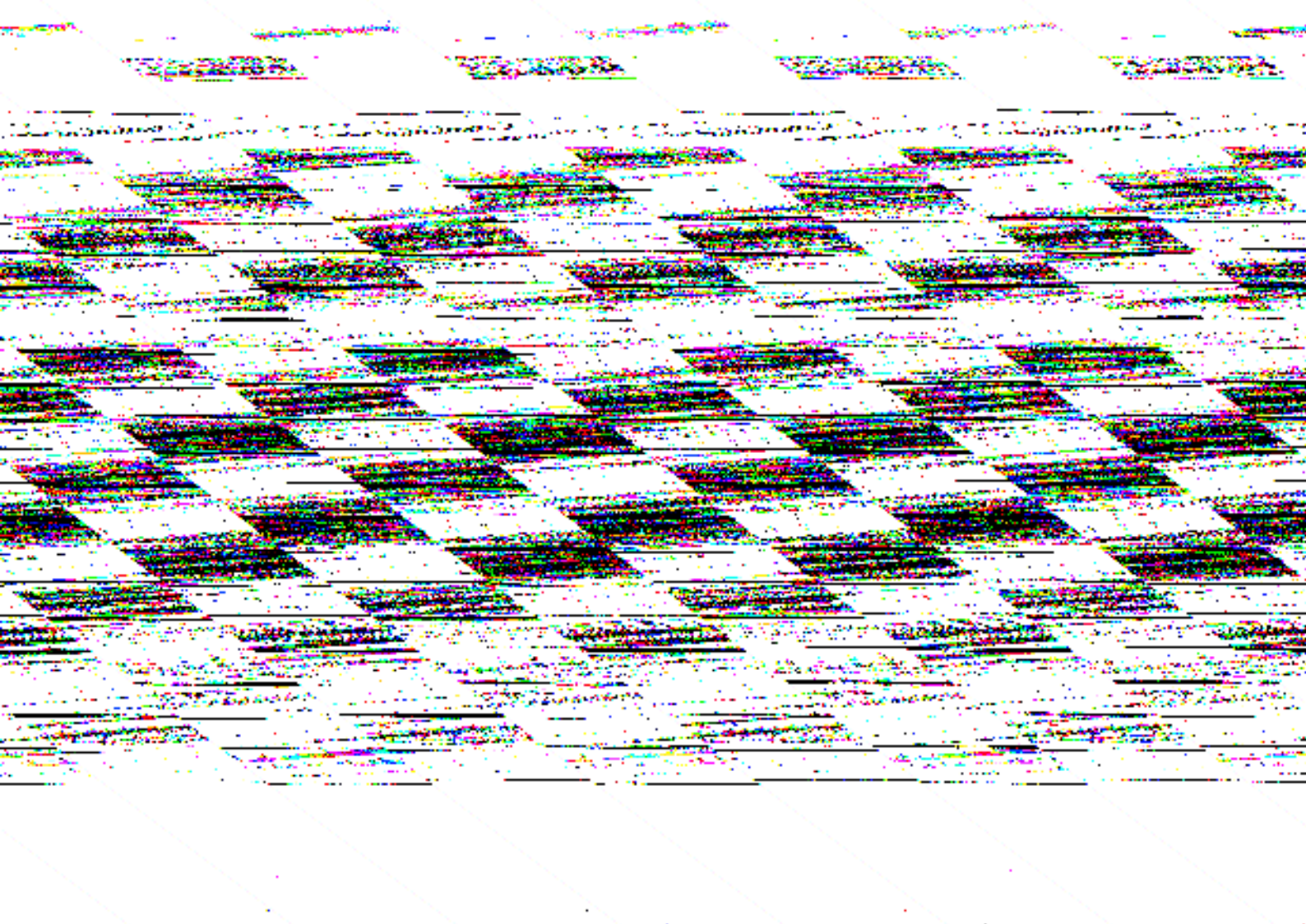
.....

.....

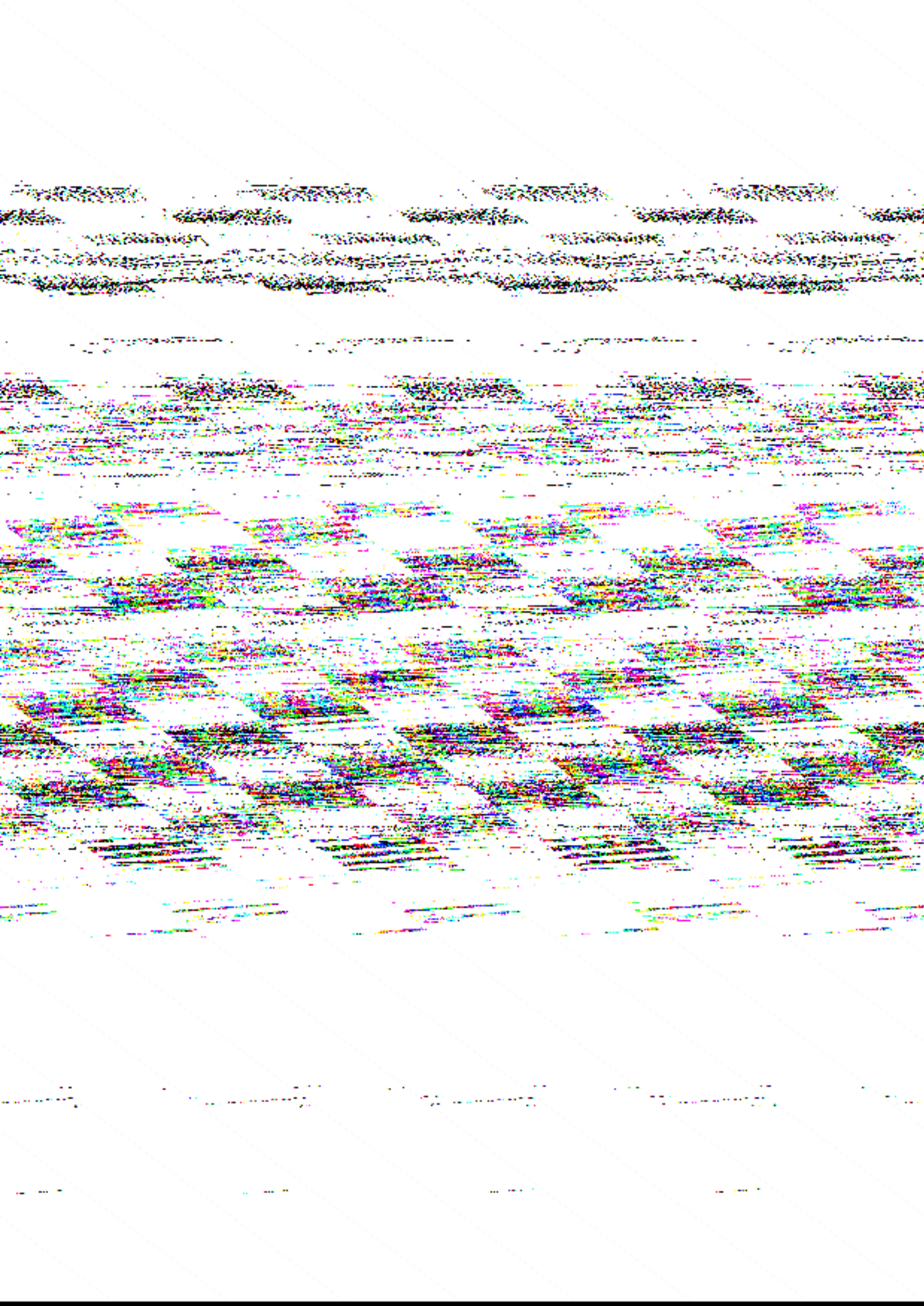
.....

.....

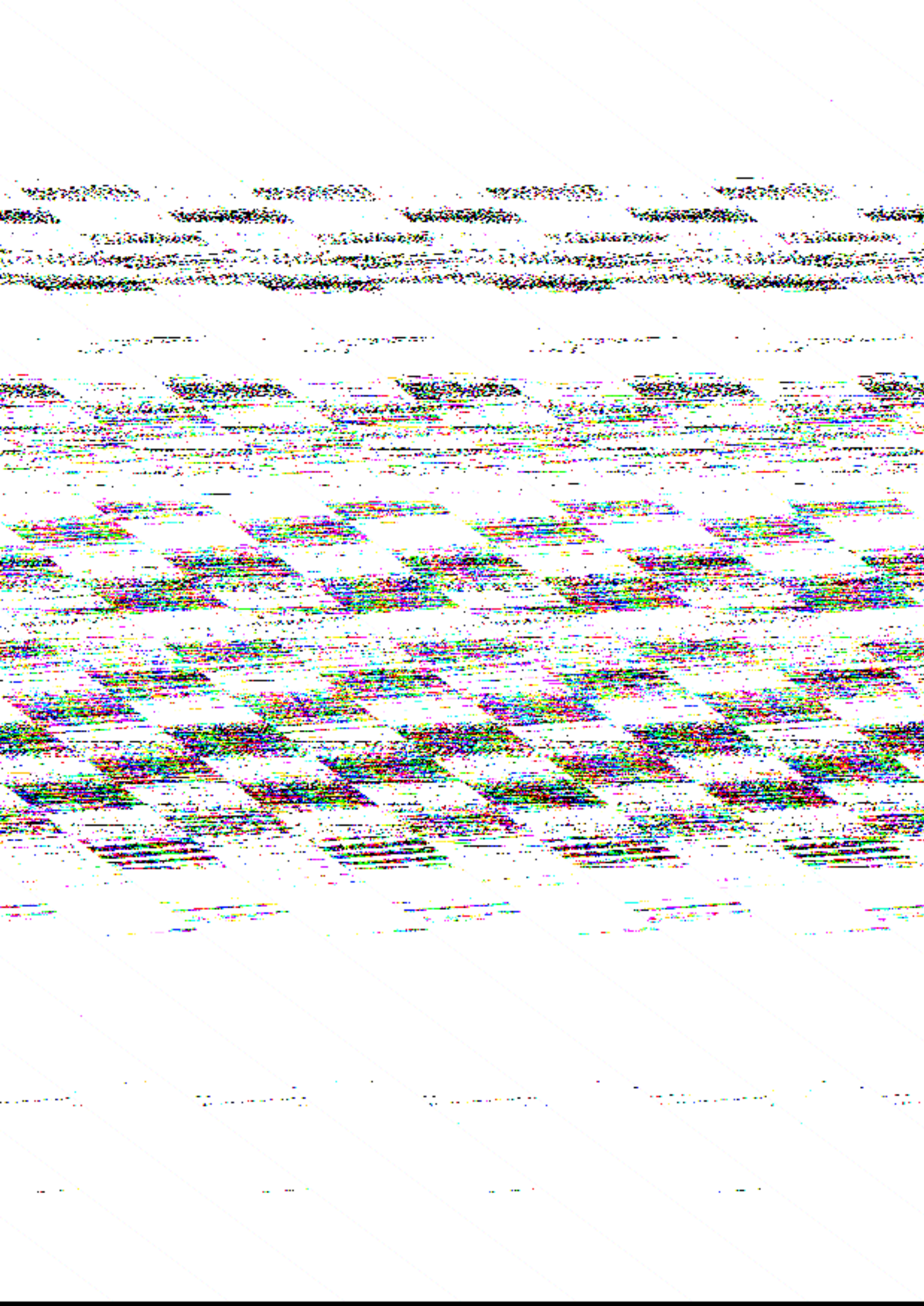
Handwritten text, likely bleed-through from the reverse side of the page. The text is mostly illegible due to the quality of the scan and the angle of the handwriting.

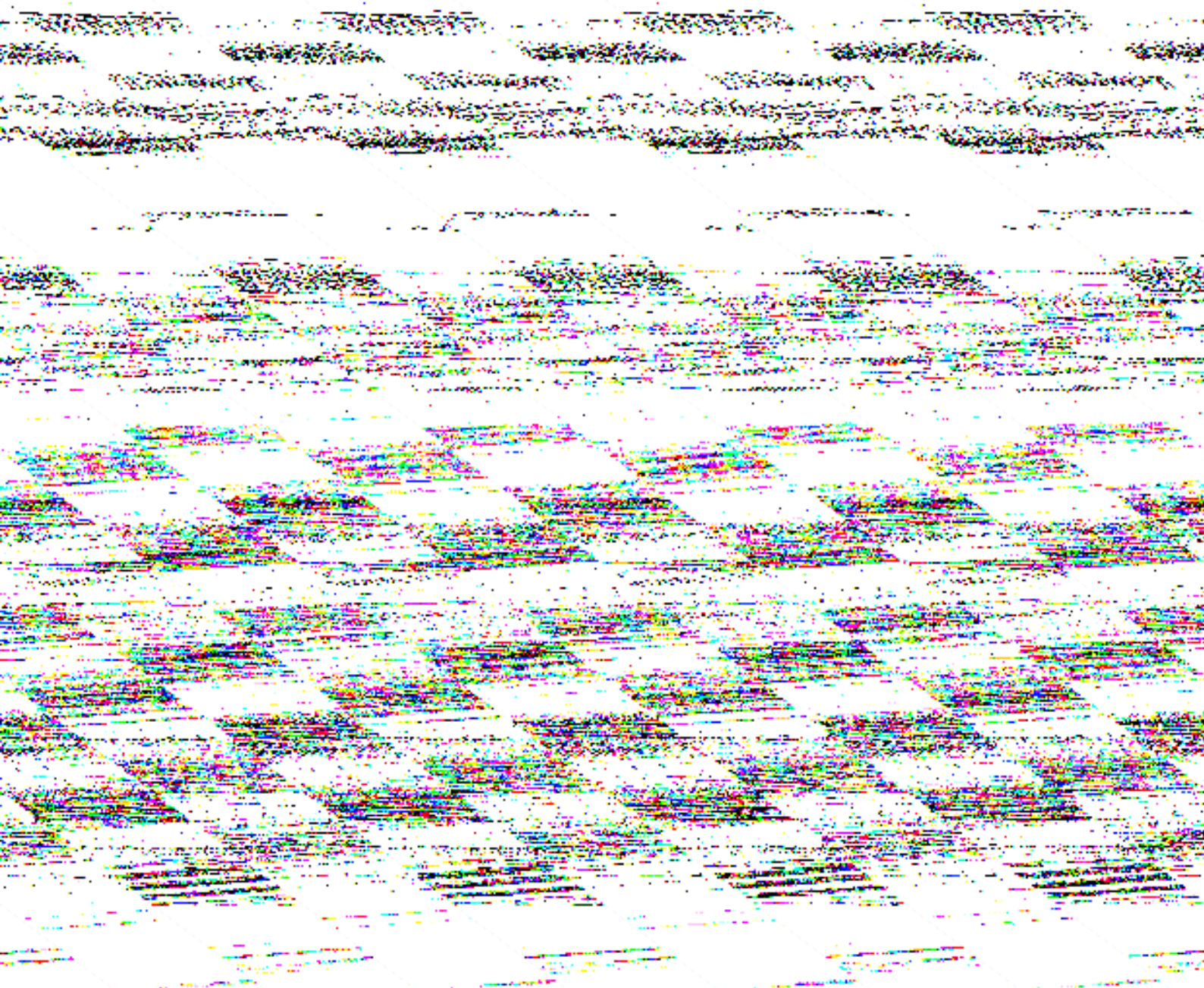


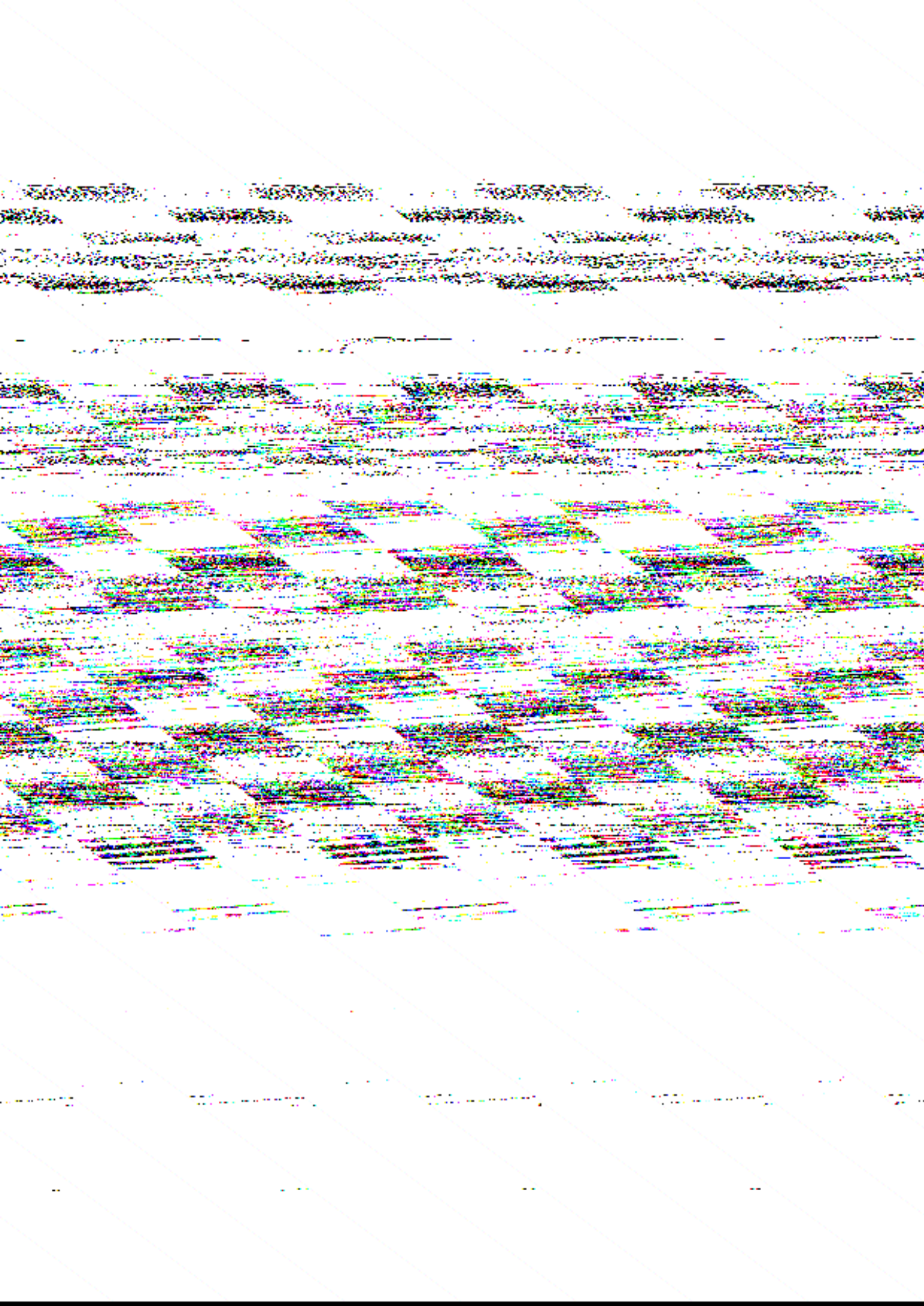
Handwritten text at the bottom of the page, appearing as bleed-through from the reverse side. The text is mostly illegible due to the quality of the scan and the angle of the handwriting.

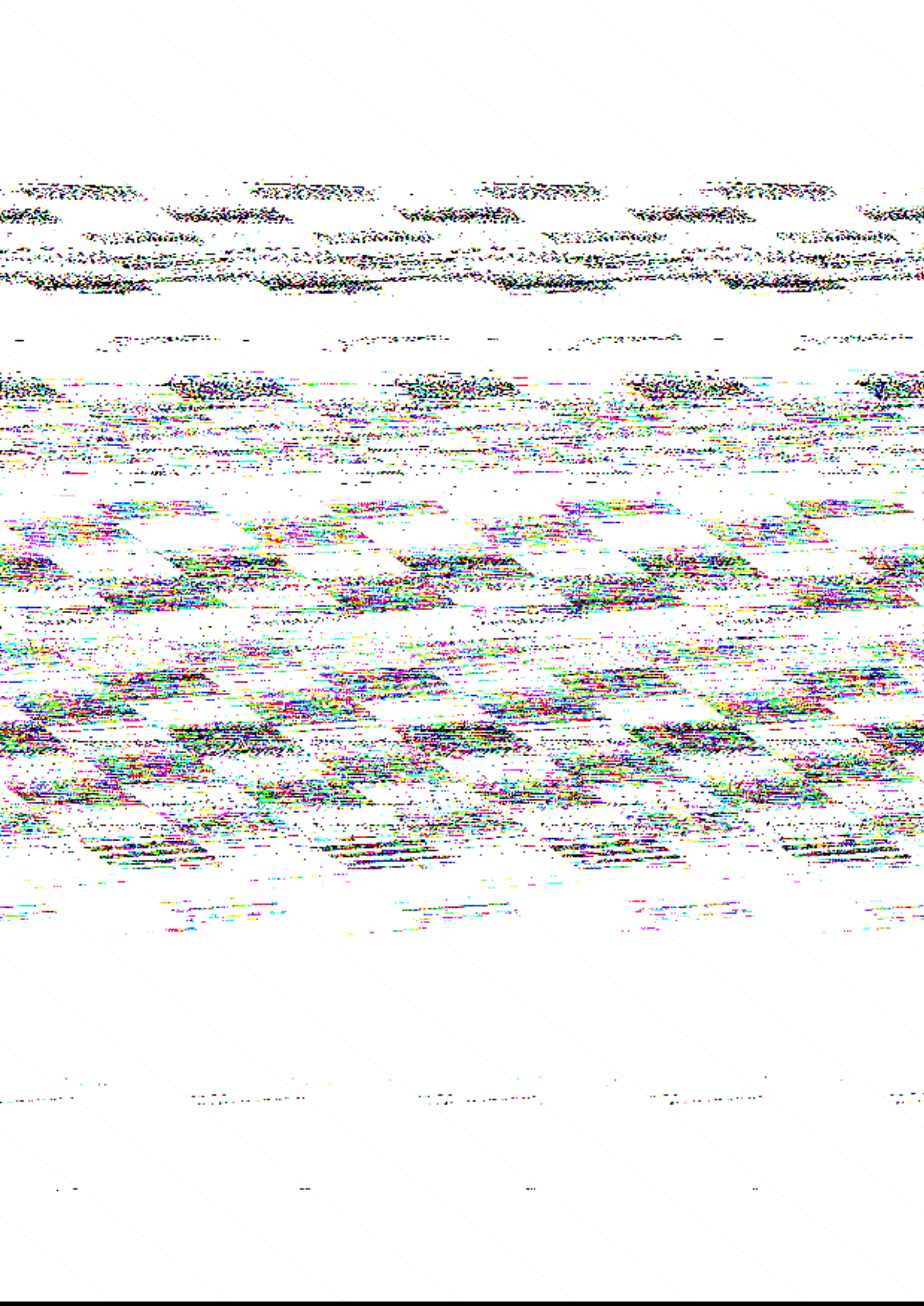


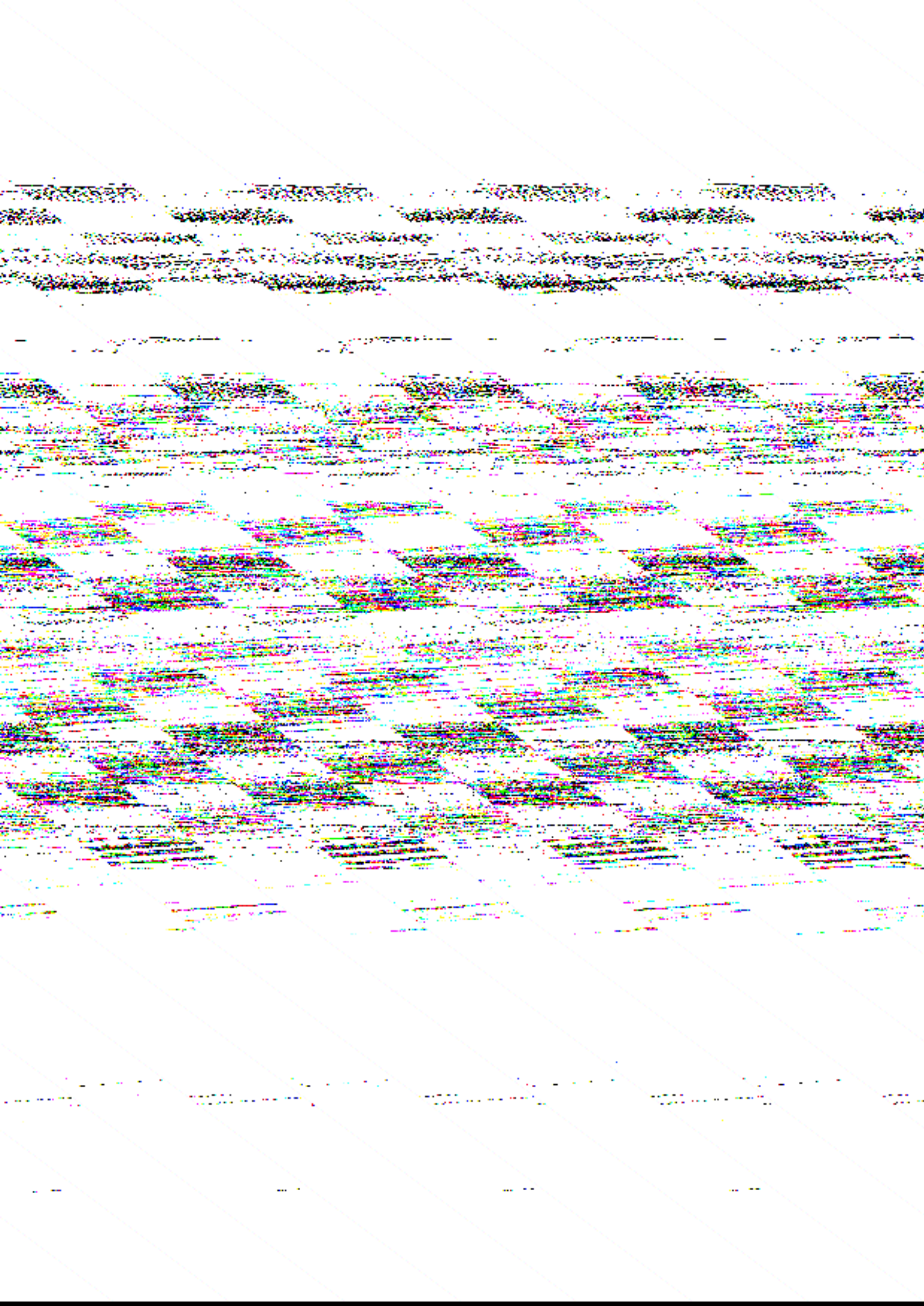


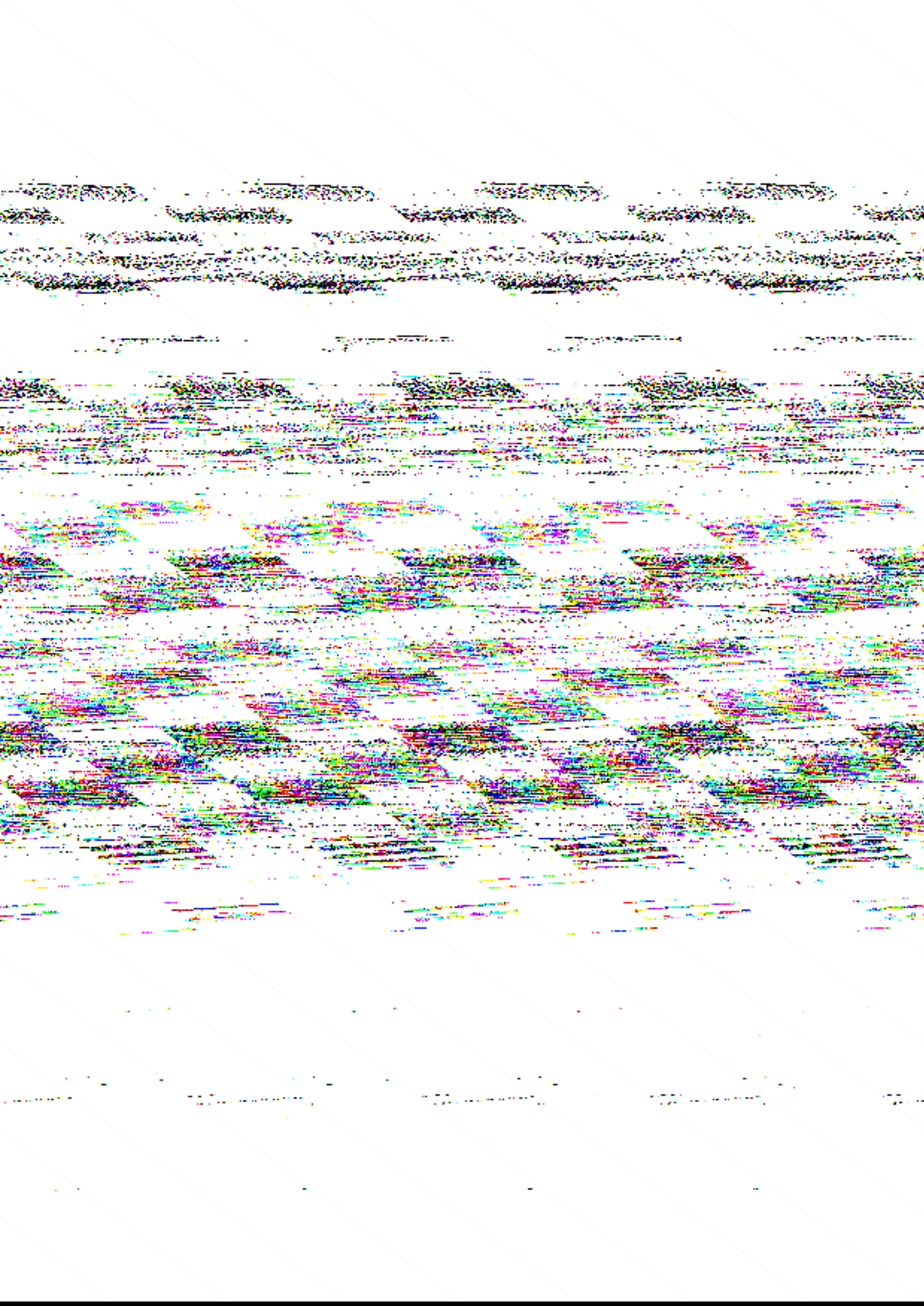


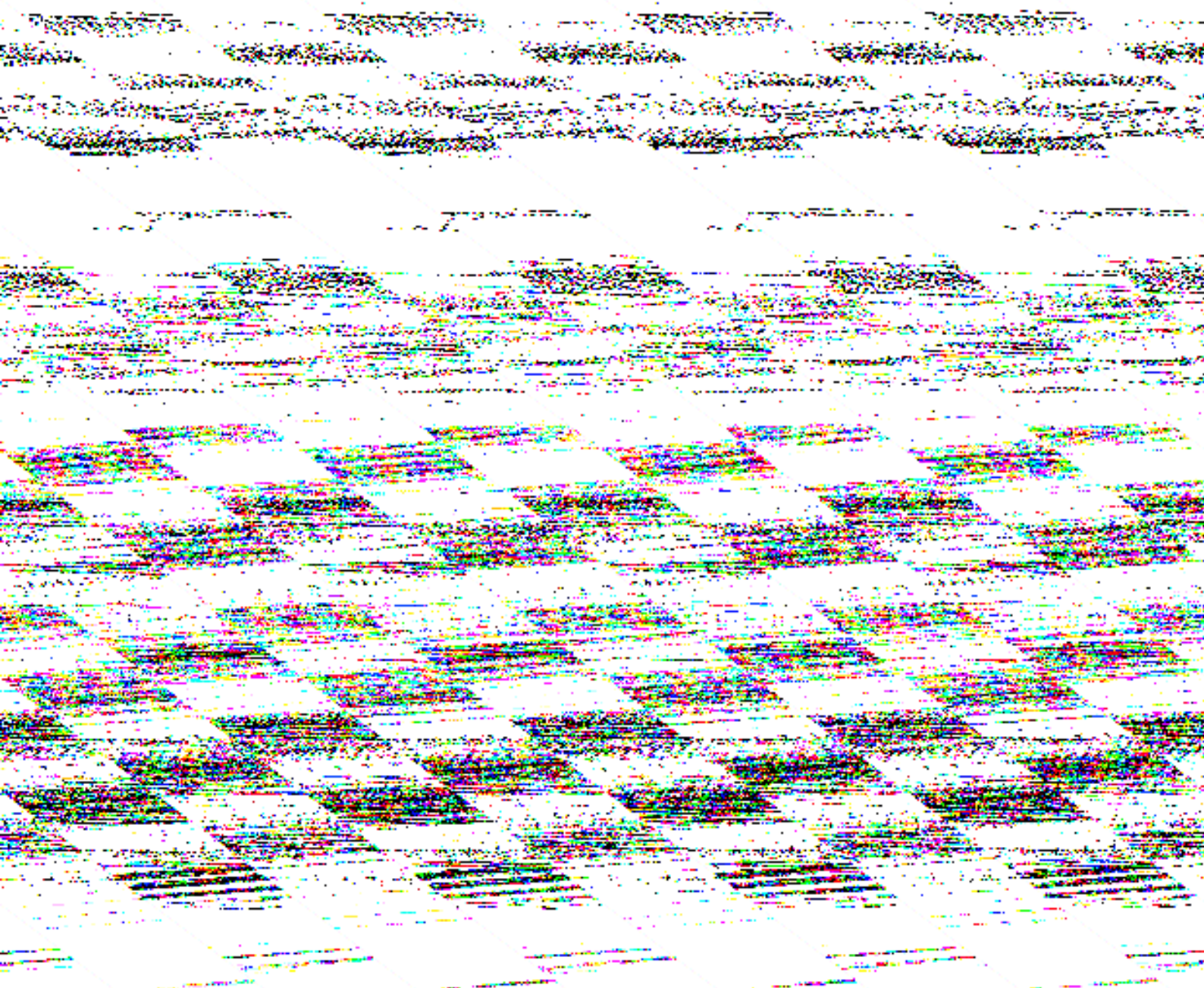


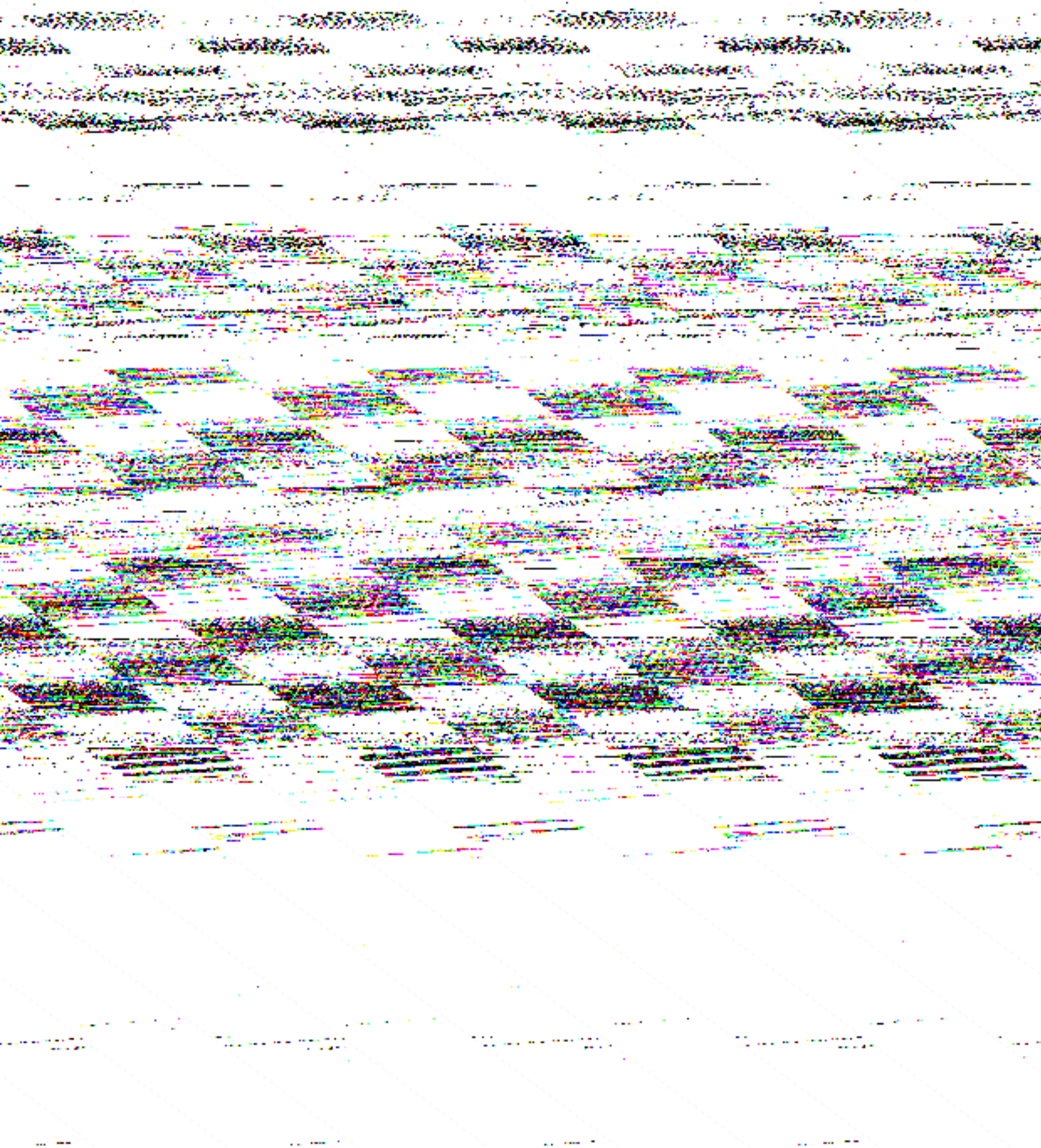












TATA CHEMICALS LTD.
RANAVAV QUARRY OFFICE,
RANAVAV, WESTERN RLY

COPY

Annexure XV

29.5.1994

RQG/PS/487/94

The Director of Mines Safety,
Udaipur Region,
9, Panchwati,
UDAIPUR-313 001 (Raj.).

Dear Sir,


Sub: Notice of temporary closing of Aniali-
Ranabordi limestone Mine of Tata Chemicals Ltd.

We have stopped all the mining activities in our Aniali-Ranabordi Limestone Mine, situated in Vill: Aniali/Ranabordi, Tal: Ranavav, Dist.: Junagadh, w.e.f. 1.6.94 due to enforcement of Contract Labour Abolition in Limestone mines.

A copy of Closing Notice in Form-I of First Schedule as per article 6, 1(a) of MMR-1961 is enclosed for your records.

Thanking you,

Yours Faithfully,
for TATA CHEMICALS LTD.


(Brig. M.K. Shukla (Retd.)
Agent & Manager-Materials

Encl: as above

- c.c. to: 1) Director General of Mines Safety,
Directorate General of Mines Safety, Govt. of India, Dhanbad-826 001.
- 2) Tata Chemicals Ltd., Mithapur.

FORM-I

(See Regulations 3,6,7,8)
Notice of Opening, Closing or Change etc.

From: Agent,
Tata Chemicals Ltd., Mithapur.

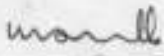
To : (1) The Director General of Mines Safety,
Department of Mines Safety, Govt. of India, Dhanbad.
(2) The Director of Mines Safety,
Udaipur Region, 9, Panchwati, Udaipur (Raj.)

Dear Sir,

I have to furnish the following particulars in respect of closing of
ANIALI-RANABORDI Limestone Mines of Tata Chemicals Ltd.

1. In case of change of name of Mine : Not Applicable
Old name of Mine, Date of change : Not Applicable
-
2. (a) Situation of the Mine : Village : Aniali Ranabordi
Police Stn. : Ranabordi
Sub-Div. (Tal.) : Ranavav
Dist. : Junagadh
State. : Gujarat
- (b) In case of new mine, particulars of situation of mine :-
P.O.)
T.O.) Not
Rly. Stn.) Applica-
Rest House.) ble.
Means of travelling)
-
3. (a) Name and Postal address of (ii) :-
(a) Owner)
(b) Managing Agent, if any) Not Applicable
(c) Agent, if any)
(d) Manager)
- (b) In case of change, date of change : Not Applicable
-
4. (a) Name and qualification of Manager terminated : Not Applicable
- (b) Date of Termination. : Not Applicable
-
5. Actual date on which it is intended to
open/close the mine. : 1.6.1994
-
6. Actual date of opening/closing the mine : 1-6-94

Yours Faithfully,

Signature : 
(Brig. M.K. Shukla (Retd.))
Designation : Agent & Materials Manager
Date. : 25.5.1994

TATA CHEMICALS LTD.
RANAVAV