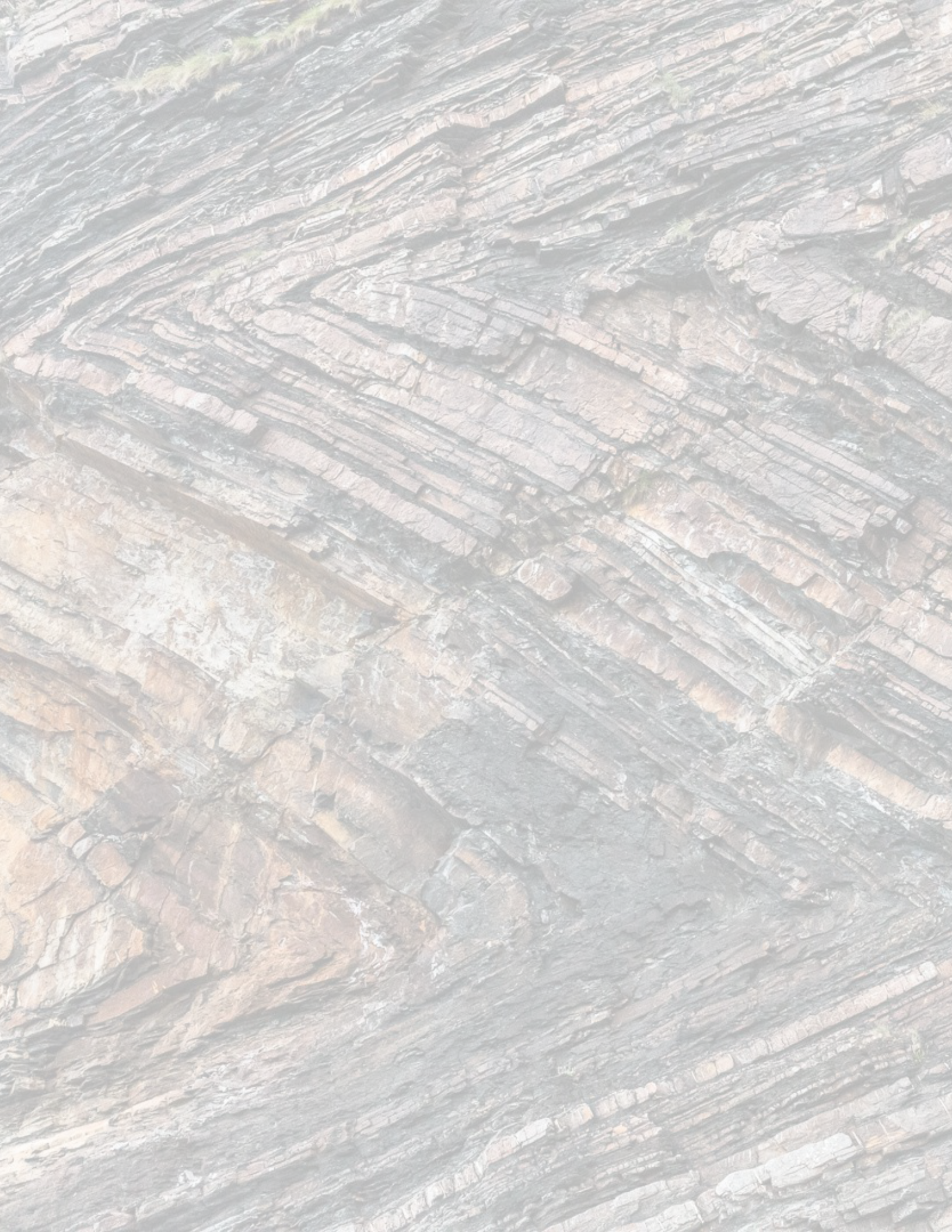


CONTENTS

	<u>PAGE NO</u>
INTRODUCTION	1
BASIC FUNCTIONS OF THE DEPARTMENT	1
ORGANIZATION SET-UP AND PRESENT STATUS OF MANPOWER IN THE DEPARTMENT	1-3
ACHIEVEMENTS OF THE DEPARTMENT DURING 2019-2020	4-15
TRAINING, SEMINARS/SYMPOSIUM & EXHIBITION	16
MUSEUM	16
LIBRARY	16
REVENUE GENERATED DURING 2019-2020	17
BUDGET OUTLAY FOR 2019-2020	17



1. INTRODUCTION

The State Directorate of Geology & Mining, which came into being in the later part of 1968, was established with a view to search and explore the existence of the mineral resources of this virgin part of the country, with the ultimate objective of their development for socio-economic benefit of the people of the State. Sincere efforts have been made to evaluate the mineral resources of the State in spite of the hardships faced due to harsh working conditions as well as inadequate logistic support. The minerals, in order of their economic importance so far discovered and proved, are petroleum and natural gas, nickel-cobalt-chromium, magnetite, limestone, marble, coal, clay, slate, decorative and dimension stones, building materials and ground water resources.

In the international geo-scientific scenario, it is observed that the geological studies are not only confined within the periphery of mineral/ground water exploration. It has become essential to adopt modern methods of meeting future challenges in all the spheres of mineral/ ground water developments, engineering geology, mitigation of natural hazards and disaster managements arising out of earthquakes, floods, landslides/subsidence, etc. Thus, the Department has diversified its activities towards geo-technical and geo-environmental studies, seismic and earthquake monitoring activities, groundwater recharge through rainwater harvesting etc.

2. BASIC FUNCTIONS OF THE DEPARTMENT

- I. To search, explore and establish mineral, raw materials available in the State with an ultimate objective of utilization for socio-economic development of the people in harmony with natural ecology
- II. To undertake various geo-scientific investigations for rural and urban development, civil construction, hydel project, etc.
- III. Mineral management, exploratory mining, liaisoning with exploratory agencies in the State.
- IV. Effective enforcement of the Nagaland Coal Mining Policy and Minor Mineral Concession Rules.
- V. To explore and develop ground water resources.
- VI. To implement various R&D projects relating to mineral developments, seismic surveillance and geo-technical related projects in the State.

3. DEPARTMENT'S ORGANIZATIONAL SET-UP/ MANPOWER STATUS

The Department is having its own double-storied office complex at Dimapur, besides 42 nos. of quarters for accommodating officers and staff. The total personnel strength of the Geology & Mining Department, both of technical and non-technical is 425 members, out of which 83 post are gazetted, 197 posts are class-III non-gazetted and 145 posts are Grade –IV staff. The Geology and Mining Department is a multi-scientific technical organization consisting of Geological, Drilling, Mining, Chemical, Administrative and Auxillary disciplines. The organization set-up is given below:-



A. MANPOWER SET-UP

DIRECTOR				
Geological Wing	Drilling Wing	Mining Wing	Chemical Wing	Administrative Wing
Joint Director	Joint Director	Joint Director	Joint Director	Registrar
Geologist	Drilling Engineer	Mining Engineer	Chemist	Superintendent
Asstt. Geologist	Asstt. Drilling Engineer	Asstt. Mining Engineer	Asstt. Chemist	Asstt. Superintendent
	Junior Engineer	Junior Engineer	J. T. A	U.D.A
	Drilling Asstt. Gd. 1,11 & 111	Mining Asstt.	Lab. Asstt Gd.II & III	L.D.A
	Rigman		Lab. Attendant	

B. AUXILIARY WINGS

1	2	3	4	5
Survey Section	Civil Wing	IT Cell	Drawing Section	Store
JE(Survey)	JE	Photographic Officer	JE (Draft)	Store Keeper Gd II & III
Surveyor Gd. I,II & III			Draughtsman	Store Attendant

6	7	8
Mechanical	Library Section	Legal Section
Foreman	Library Asstt.	Legal Officer
Head Driver		
Driver		
Handy man		
Mechanics		

No. of Manpower (Gazetted) in each discipline

SN	Particulars	Total No. of Post	Remarks
1	Director	1	
Geological Wing:			
2	Joint Director (Geology)	2	
3	Geologists	18	10 nos of Asstt. Geologist posts upgraded to Geologist Posts
4	Asstt. Geologists	12	2 Asstt. Geologist posts occupied by deputation, 1 Asstt. Geologist posts appointed on contract 3 posts of Asstt. Geologist under requisition to NPSC.
5	Photographic Officer	1	
6	Junior Engineer (Draughtsman)	1	
7	Junior Engineer (Survey)	4	
	Total	38	
Drilling Wing:			
8	Joint Director (Drilling)	1	
9	Drilling Engineer	4	
10	Asstt. Drilling Engineer	8	
11	Junior Engineer (Drilling)	10	
12	Legal Officer	1	1 post of JE(D) converted to Legal officer and appointed on contract
	Total	24	
Mining Wing:			
13	Joint Director (Mining)	3	2 JD(M) post upgraded from ME
14	Mining Engineer	2	1 ME post upgraded from AME
15	Asstt. Mining Engineer	1	JE upgraded to AME
	Total	6	
Chemical Wing:			
16	Joint Director (Chemical)	1	
17	Chemist	1	
18	Asstt. Chemist	1	
	Total	3	
Administration Wing:			
19	Registrar	1	
20	Superintendent	4	
21	Asst. Superintendent	5	
	Total	10	
Civil Wing:			
22	Junior Engineer (Civil)	1	
	Total Gazetted	83	
	Class-III Non-Gazetted	197	
	Grade-IV staff	145	
	GRAND TOTAL	425	

4. ACHIEVEMENT OF THE DEPARTMENT DURING 2019 – 2020.

(I) MINERAL EXPLORATION

a) Regional coal exploration in Changki Coal Block B, Mokokchung district, Nagaland
DGM, Nagaland is carrying out Regional coal exploration in Changki Coal Block B (CCBB), Melak-Tsurang valley coalfield, Mokokchung district. The exploration activities involve geological mapping and sub surface drilling by 4 drilling. The primary objective of regional exploration is to assess the occurrence of coal bearing strata, the lay and disposition of coal seams and its potentiality both quantitatively and qualitatively. The information generated will form basis for further detailed exploration activities and ultimately for judicious exploitation of the resources. The work achieved during the period March 2019 - January 2020 is given below.

Sl.No	Activity	Quantum of work achieved
1	Geological Mapping on RF 1:5000	3.15 sq.km
2	No. of boreholes drilled	7 nos (CCBB10, 4, 15, 6, 19, 5, 21)
3	Total meterage drilled	747.25 m
4	Chemical analysis at NEIST, Jorhat laboratory	45 samples

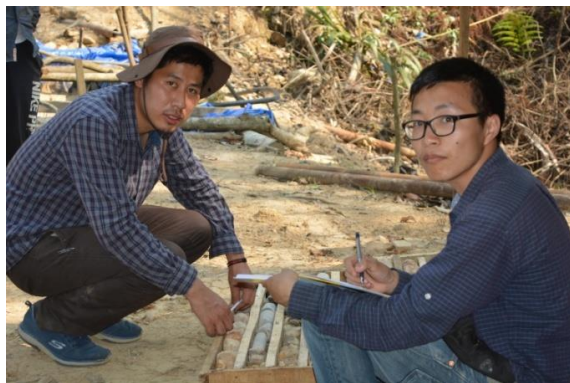
Field photographs of coal exploration in Changki block B, Melak-Tsurang Valley C.F., Mokokchung dist.



BHCCBB15



BHCCBB4



Geologist carrying out core logging



Coal seam exposure

b) Investigation of minor mineral deposits in Kohima and Dimapur district f.s. 2019-20

1). Minor mineral deposits in Kohima district that have been identified are given below:-

- i. Ponsuka Sandstone Deposit (Tesophenyu) Tseminyu (Estimated to have an Approximate Reserved of 18mmt)
- ii. Kasha Sandstone Deposit, Terogvunyu Area, Tseminyu
- iii. Chathu Sandstone Deposit (Tuophema) Chiepobozuo:
- iv. Slate Deposit at K.Nyishunyu, Tseminyu
- v. Dzuza Sandstone Deposit
- vi. Jotsoma Sandstone Deposit

2) Minor mineral deposits in Dimapur district that have been identified are given below:-

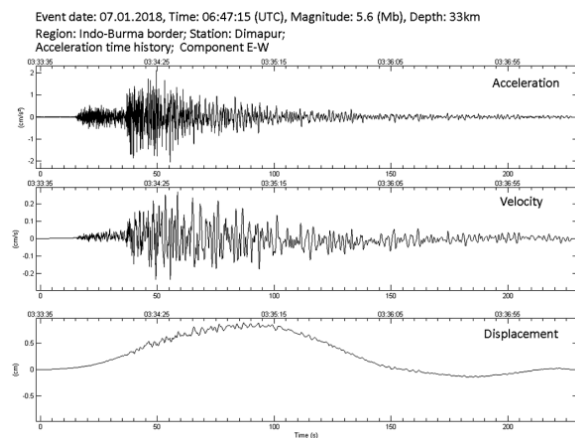
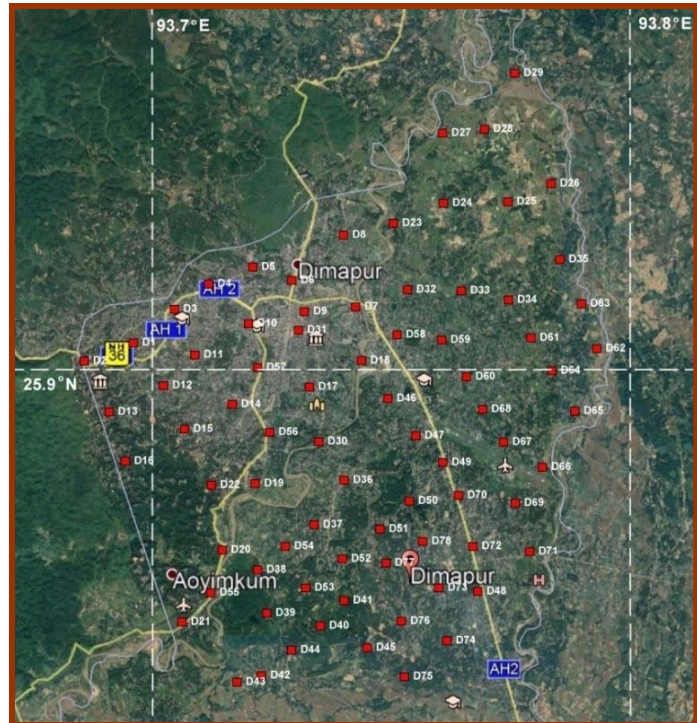
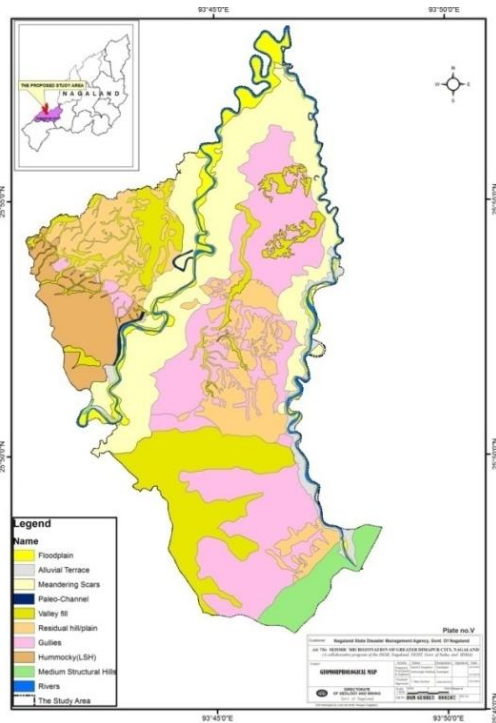
- i. Tsuuma Sandstone Deposit (probable reserved may be about 2.6 MT)
- ii. Pherima Sandstone Deposit (estimated reserve may be about 2.8 MT)
- iii. Huzhukhe Sandstone Deposit (reserved is estimated to be about 6.2 MT).
- iv. Clay Deposit (reserved of clay in Dimapur district is estimated to be more than 10MCM).
- v. Boulders and Gravels
- vi. Sand Deposit

II) GEOSCIENCE STUDIES/INVESTIGATION

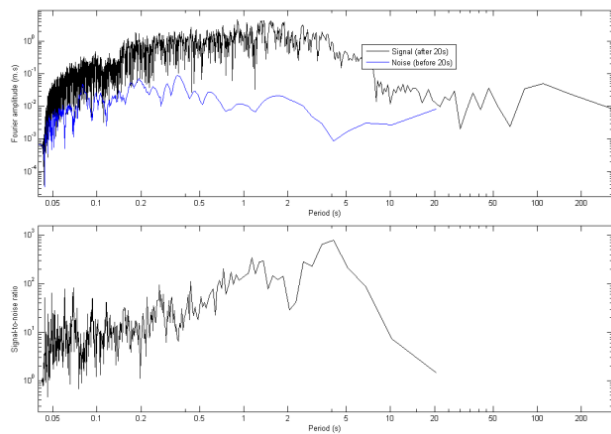
a) Seismic Microzonation of Greater Dimapur City, Nagaland During the FSP.2019-20, the following works were undertaken with respect to the ongoing project - Seismic Microzonation of Greater Dimapur City, Nagaland as:

- i. The work done under geological parameters include lithological, structural, geomorphological, geotechnical and geohydrological thematic parameters along with preparation of base-map in GIS platform.
- ii. The geophysical thematic parameters include Seismotectonic study, Acquisition of Seismic Ambient noise data, Ground penetration radar survey and acquisition of strong ground motion data along with analysis and interpretation for integration and final map generation.

iii. NSDMA, Kohima had undertaken Demographic survey and building categorization.



Event date: 07.01.2018, Time: 06:47:15 (UTC), Magnitude: 5.6 (Mb), Depth: 33km
Region: Indo-Burma border; Station: Dimapur;
Fourier Amplitude Spectrum



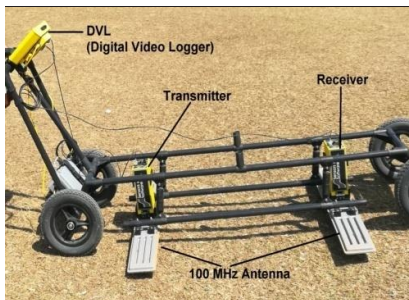


Seismic ambient noise data acquisition. Equipment used are:

1. 3D Seismic Sensor (Lennartz MK-III)
2. REFTEK high resolution 3D Data Acquisition System (DAS)
3. GPS receiver
4. Palmtop as interface between seismic sensor and DAS.



GURALP make CMG 5TD Accelerometer installed at DGM office, Dimapur to record earthquake strong ground motion.



Sensor & Software make Ground Penetrating Radar (GPR)

The equipment is used to understand shallow surface deformation with the aid of a pair of 100MHz antennas.



Geologists carrying out field work at Nagarjan



Floodplain at the right bank of Dhansiri river



Thin Layer of sand gravel at Dhansiri river bank



Lateritic Gravel at Thahekhu



Classic clay-gravel litho-unit

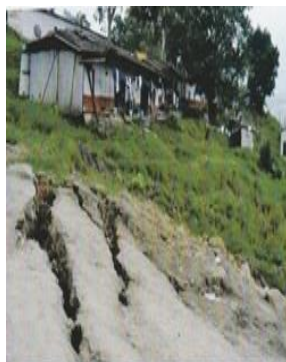
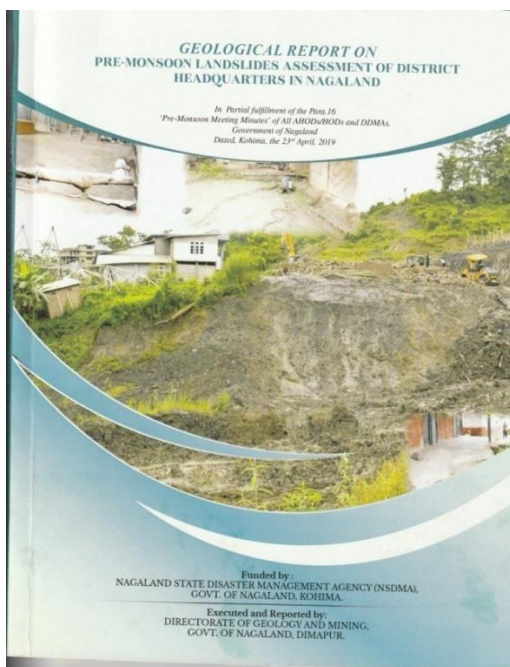


slightly compact sand exposure

b) Geological Report on Pre-Monsoon Landslides Assessment of District Headquarters in Nagaland

In pursuance of 'Pre-monsoon Meeting Minutes' – Para.16, of all AHODs/HODs and DDMA's, Letter No.NSDMA/MTG/PMP/208/2018/1736 dated, the 23rd April, 2019, DGM, Nagaland had undertaken 'Pre-monsoon landslide Assessment of District Headquarters in Nagaland' including NH-29 (Dimapur-Kohima) & NH-2 (Kohima-Khuzama). The present work was funded by Nagaland State Disaster Management Agency (NSDMA), Govt. of Nagaland, Kohima. As it was endorsed in the meeting that landslides is the most common and frequent geo-hazards in the state, therefore initiative has to be taken to mitigate the landslide hazards in the state. In the regards, four Geological teams comprising Geologist and staffs were detailed to execute the work.

Nagaland falls in Zone V i.e. very high hazard zone, in the Landslide Hazards Zonation Map of India. It is infested with numerous paleo-slides as well as active landslides. People of Nagaland are therefore made to live at the mercy of merciless hazardous landslides since time immemorial. Therefore DGM, Nagaland has been putting effort for prevention and mitigation of landslides by carrying out both Non-structural and Structural Methods of mitigation in the state. The former includes inventory mapping, hazard zonation mapping and risk assessment of landslide of town/village or region. The latter comprises of site specific investigation and exploration of landslide for obtaining both surface and sub-surface data and give appropriate methods of remedial measures for durable stability of the landslide site. The agencies such as Geological Survey of India (GSI), Directorate of Geology and Mining (DGM), Nagaland University (NU) and others had been involved mostly in mineral exploration till late 1990s and diversified its activity after that period involving in numerous landslide investigations in localized areas.



Open Crack along the crown of the slide



Partial View of High School Colony slide

c) Brief Report on Geological Stability for foundation studies in Medical and Paramedical area in Kohima Town

A study on Geological Stability for foundation in Medical and Paramedical area in Kohima Town was carried out covering an area of 1.8 sq Km. Approximately. The area comprises of Disang shales, Sandstone and soil layers. Geologically the area is mostly dominated by disang rocks. The rocks are very highly crumpled and jointed/fracture as a result of tectonic activities. The rocks on exposure to the atmosphere become weathered making it weak and unstable. Therefore the area is prone to landslides.

III) MINERAL DEVELOPMENT

a) COAL

The Mining section of Directorate of Geology and Mining is implementing the Nagaland coal Policy and rules. The officers and staff are monitoring and regulating Coal Mines and Coal Transportation and during 2018-19 the following achievements were made:

i. Issue of Coal Prospecting License, Coal Mining Lease and Small Pocket deposits License

The Department has been issuing Coal Prospecting Licensee (CPL), Coal Mining Lease (CML) and Small Pocket Deposit Lease (SPDL) to individuals and parties. So far, the department has issued 27 CML and 11 SPDL to individuals/ landowners. Out of which 13 CML are functional currently. With the rest of the Licenses are being either expired or non-functional.

ii. Mineral Check gates

The Department has established 17 mineral check gates and some mobile check gates in all conspicuous area/route in the State and are controlling coal transportations and collecting royalty at the check gates.

iii. Coal Depots License

The Department has also issued 4 (four) Coal Depot License during 2015-16 namely; (i) Singphan in Mon District (ii) Shetap in Longleng District (iii) Tuli and (iv) Tsutapela in Mokokchung District.

iv. Outsourcing of check gates

The Department has also outsourced two mineral check gates in Mokokchung District during the periods namely;

- 1) Tuli Gate to M/S Nagaland Emerald Enterprises
- 2) Tsutapela gate to M/S WanyeSemtech.
- 3) Anaki-Kangtsung gate to M/s Manshak Phom
- 4) Shetap gate to M/s Mosa Phom

v. The Govt. through a cabinet decision taken on the 7th January, 2019 has banned all coal mining activities with immediate effect. A committee headed by Secretary Geology and Mining was constituted to examine the issue of coal mining and the resultant damages caused to the environment in coordination with EF&CC, NPCB, District & Local administration and District police. The committee has accordingly carried out inspection of the coal mining sites of all coal bearing districts from 4th to 8th February, 2019 and submitted its report to the Govt.



b) MINOR MINERAL**i. Activities carried out under the Implementation of the Nagaland Minor Mineral Concession Rules, 2004:**

- 1) Transport and transits of minor minerals are been monitored and royalty on minerals are collected at the 5 (five) mineral check gates namely, Dillai gate, New field gate, Chumukedima gate, Seluophe gate and Khopanala gate respectively
- 2) The officers have carried out inspections of stone quarried in and around Hekishe Village and Molvon area. Proposal has been made for setting up of a check gate in the area to regulate the quarries in the area.
- 3) Two gates namely Watiyongpang Gate, Tuli sub-division and Tsutapela Gate, Mangkolemba Sub-division under Mokokchung District were being set up and Officials were deployed to the gates for collection of royalty on minor minerals, however due to the issues relating to double taxation from two departments it has been halted until further directives from the Government.

IV) GEO-TECHNICAL & GEO-ENVIRONMENTAL SECTOR**a) Assessment of Environmental Degradation in Coal Mining Areas of Nagaland**

Assessment of environmental degradation in Yanlong Coal mining in Lower Tiru Valley and Borjan Coal Mining in Mon District were carried out. In Yanlong Coal Mining and Borjan Coal Mining environmental degradation is caused by the anthropogenic open cast coal mining through CML/BPDL license holder issued by the department.

b) Detailed Studies of Geotourism Prospect in Kiphire District

A feasibility study of geo-tourism was carried out in Kiphire district which falls in survey of India toposheet No. 83K/13 & 14 in the scale of 1:50,000.

Places identified/located for geo-tourism resort prospect in the district are:

- i. Geological heritage site of Luther, NE of Pungro on the way to Pungro-Salomi road. The geological interest of this area is the ultra-mafic complex of tectonised Peridotites.
- ii. Salomi Limestone deposits and limestone cave.
- iii. Kamku Limestone deposits.
- iv. Mimi Limestone cave and Pyakatsu Limestone deposits.

c) Detailed Studies of Geotourism in Phek District, Nagaland

Detailed studies of Geotourism in Phek district were carried out. Geotourism is a new terminology on the discovery of natural landscape, environment and Geo-Ecology having distinct Geological structures, outcrop rock exposures, biodiversity, etc. and develop/ modify the landscape to sustain and attract the visitors, tourists, adventures and research scholars.

Phek district is located in the eastern part of Nagaland bordering Myanmar about 350km from Dimapur where potential topographical landscape with distinct Geological features, outcrop rock exposures, waterfall, natural lakes, mountain peak, rocky cliff, caves and pillow Lava structure has been identified for preservation of Geological heritage and geotourism site for recreational, meeting and picnic spot. Based on the existence of potential landscape, the following areas have been studied for Geotourism site.



1. Glory Peak Southeast of Pfutsero Town (2160m).
2. Wazeho Cement Plant and adjoining landscape.
3. Ziphu Limestone deposit for Geological heritage site.
4. Thangahu Peak (2096m) south of Moke.
5. Pillow lava structure and Arido natural network station (2243m) south west of Moke.
6. Washello Panoramic View Point.
7. Molhe Peak and Z-Lake south of New Thewati.
8. Shilloi/Lacham Lake.
9. Avangkhu Village with international trade centre/ Border Geotourism.
10. Perennial Waterfall with Pillow lava structure NW of Laruri Village.
11. Satuza View Point with pillow lava structure.
12. Akhen Cave in quartzite north of Akhen village.

Phek district has bountiful gifts from nature but unexplored, due to lack of infrastructures, road connectivity and other basic needs & facilities. Basic needs such as good road, guest house for accommodation are first priority. If the Government develop the Geotourism Sites and gives the basic needs and support, it would generate employment opportunity for youth and also generate revenue in future.

V. CHEMICAL LABORATORY

The following samples have been analyzed in the departmental chemical Laboratory during the period under report (2019 – 2020):-

a. Water Analysis:

- i. No of water sample submitted by field officers: 05 samples
- ii. Pre-monsoon groundwater quality analysis of Dimapur district: 35 samples
- iii. As per the directive from DC Office Dimapur, a report on groundwater quality assessment of samples collected from in and around Burma camp DMC dumping site and Chumukedima DMC dumping site was submitted: A total of 20 samples were analyzed i.e. 10 samples each from both dumping sites.

In this study, three parameters Viz., Fluoride (F⁻), Iron (Fe²⁺) and turbidity were found to be above the permissible limits of the Bureau of Indian Standards for Drinking water, in some of the water samples.

b. Coal analysis: Proximate analysis of 05 nos of coal samples was done.



VI. GROUNDWATER SECTOR

One of the core objectives of Groundwater section is sustainable development of groundwater resources on scientific lines for long term planning and management. Basing on this, the department regularly undertakes exploration of groundwater in the form of water tube wells for lithologging, monitoring, and domestic use, largely in unexplored areas of the State. During 2019-20, 11(Eleven) nos of exploratory and 10 (Ten) nos of deposit tube wells have been successfully constructed, developed and handed over to user agencies. In addition, the department also executes works on deposit basis as per the demand of the user agencies, which in turn generates revenue to the State exchequer.

Number of Wells constructed on exploratory and deposit basis during the financial year 2019-20 is as under:

Under Deposit – 10 Nos of Wells:

Plain Areas	– 2 Nos of Wells
Hilly Areas	– 8 Nos of Wells
Total	- 10 Nos of Wells

Under Exploratory – 12 Nos of Wells

Plain Areas	- 4 Nos of Wells
Hilly Areas	- 7 Nos of Wells
Total	- 11 Nos of Wells

Major programme under Groundwater section during 2019-20:

a) Periodic water level monitoring from National Hydrographic Network Stations (NHNS) in Nagaland.

Collection of water level data from NHNS covering Dimapur, Peren, Kohima, Wokha, Mokokchung, Tuensang and Mon districts in Nagaland is a continuous field item since 1999, a collaborative work with CGWB NER Guwahati. Monitoring of wells is done periodically four times a year in the month of Jan, March, August and Nov. There are presently 33 monitoring stations jointly set up by CGWB and DGM within the State. The data so collected were being sent to CGWB, NER Guwahati periodically.

In addition to periodic monitoring, monthly collection of water level data is done in 9 monitoring stations covering Dimapur, Kohima, Wokha and Mon districts for which data are also sent to CGWB, NER Guwahati.

b) Feasibility Studies & site selection.

The department takes up hydrogeological investigation and site selection for construction of tube wells as per the demand of the user agencies.

c) Drainage Mapping of Dimapur valley Objectives

- i. Mapping the drainage pattern of Dimapur valley.
- ii. Identification of the stage of the river course.
- iii. To know the nature of formation of lakes and ponds.
- iv. To bring out the formation of shifting channel and depositional history
- v. To understand the present environmental condition and suggest remedial measures.
- vi. To study the geo-tectonic setup of the area.
- vii. To confirm the migration or shifting of the river or stream and its impact on the settlements.

d) Artificial Recharge of groundwater in Kohima Secretariat Area

Large scale hydro geological mapping on 1:10,000 scale of Kohima Secretariat area is being implemented by the department keeping in view of the excessive exploitation of groundwater resources and to initiate urgent remedial measures. Unregulated pumping by user agencies including department offices and quarters has led to depletion of groundwater level in the area which is evident from drying up of most of the perennial spring fed/irrigated paddy fields.

The present work under progress is taken up to fulfil the following aims and objectives:

- i. To identify feasible sites for artificial recharge of groundwater.
- ii. To regulate over pumping and encourage rainwater harvesting.
- iii. To augment groundwater reserves in depleted areas.
- iv. To understand the hydrogeological set up of the area.
- v. To put up a proposal to the State Govt. for implementation of artificial recharge of groundwater in the study area.

Various hydrogeological parameters are taken into consideration while mapping on GIS platform which is further substantiated by ground truth. So far, more than 30 nos of tube wells have been constructed by the department as well by the private agencies within a radius of 1.2 sq.km. Until recently, the concerned area village councils have enforced a blanket ban for construction of tube wells within the jurisdiction.

e) Groundwater quality studies

Dimapur being a fast growing commercial/industrial district, there is high probability of effecting the quantity and quality of groundwater by pollutants in river, streams, lakes, nallahs, etc. As such, groundwater quality mapping has been initiated initially in Dimapur and Peren district to understand the level of contamination by surface pollutants and its adverse effects on health.

Moreover, for future reference, a cumulative record of water quality is required for long term planning and management. Depending on the geomorphologic/lithologic conditions, wells from various aquifers at different depth have been selected for sampling.





Drilling at Kiphire Town Baptist Lithro Prayer Home



Drilling at United Sangtam Baptist Lithro Association Kiphire Town



Drilling at DGM Rest House Kiphire



Groundwater monitoring at DC's Official Residence Phek Town



Seismic observatory DGM rest house Kiphire Town



Resistivity survey for groundwater exploration
at Dimapur Stadium



Drilling at Multipurpose Complex Longleng

5. TRAININGS, SEMINARS/SYMPOSIUM & EXIBITION

The department deputed one officer to attend Nine months Refreshers' course on the use of GIS and its Application during 2019-20 under Geological Survey of India Training programme. The 39th State Geological Programming Board Meeting was held on 6th Sep'2019 at DGM Office Conference Hall.

6. MUSEUM

The Department also has a good Museum for storing the samples of different types of minerals, rocks, fossils, geological structure etc. for identification and knowledge to help public and scholars, students etc.

7. LIBRARY

The department is maintaining and running a technical library which is the repository of knowledge. It stores Journals, book, research papers, Magazines etc. for knowledge updating and helps professionals, students and scholars.



8. REVENUE GENERATED DURING 2019-2020 BY THE DEPARTMENT:

The total revenue generated up to Jan. 2020 is Rs 86, 78,390/- (Rupees Eighty six Lakhs Seventy Eight Thousand Three hundred Ninety) Only.

1) Groundwater	- Rs 14, 13,742/-
2) Coal	- Rs 52, 21,600/-
3) Minor Minerals	- Rs 8, 96,500/-
Total	- Rs 86, 78, 390/-

9. BUDGET OUT LAY FOR 2019-20

Detailed break-up of Voted budget outlay under ‘DEVELOPMENT’ and ‘NON-DEVELOPMENT’ for the Financial Year 2019-20 is given below:

Major/Minor Heads of accounts	in Lakhs	
	NON DEVELOPMEENT	DEVELOPMENT
REVENUE SECTION		
2552 :North Eastern Area		
2552-54- :Mineral Development		
2552-54-102- :Mineral Development		
2552-54-102 (1) :Mineral Exploration		
2552-54-102 (2) :Setting up of Decorative stone (Marble) Projects		
2853-02- :Non-Ferrous Mining & Metallurgical Industries Regulation and Development of Mines		
2853-02-001 :Direction & Administration	725.44	
2853-02-101 :Survey & Mapping	825.79	20.00
2853-02-102 :Mineral Exploration	1375.28	30.00
2853-02-190-01 :Grant-in-aid (NSMDC)	423.50	
2853-02-800 :Other Exploration		
2853-02-800-01 : Petroleum & Natural gas activities (Grant-in-aid)	50.00	
2853-02-800-02 :Other charges – Groundwater resource Development	16.00	50.00
REVENUE TOTAL		
CAPITAL SECTION		
4853 :Capital Outlays on Non-Ferrous Mining & Metallurgical Industries		
4853-60-190 (1) :Investment (NSMDC Ltd)		100.00
4853-60-800 (1) :Major Works		
Grand Total	3415.87	200.00

It is expected that both outlays under “DEVELOPMENT” and “NON-DEVELOPMENT” would be more or less fully utilized.

39th STATE GEOLOGICAL PROGRAMMING BOARD MEET HELD

