

Report on
TECHNICAL VISIT
to
NATIONAL GEOPHYSICAL RESEARCH INSTITUTE
(NGRI)

Habsiguda, Uppal Road, Hyderabad.

Date: 23rd August, 2019.

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National Geophysical Research Institute shortly known as NGRI, is the geoscientific research organization established in 1961 under the Council of Scientific and Industrial Research, India's largest Research and Development organization.

Main Purposes of its establishment are

CSIR-NGRI's basic objectives have always relate in the fields of

- Exploration of Hydrocarbons/Coal, Mineral Exploration,
- Engineering Geophysics, Exploration, Assessment,
- Management of Groundwater Resources,
- Earthquake Hazard Assessment,
- Structure of the Earth's Interior,
- History of its Evolution in Space & Time,
- Geo-environmental Studies and
- Development of Geophysical Instruments.





✚ All the students of our class have gathered at 10 am and started our journey towards NGRI. We have been taken to there by the means of two buses. **Accompanied Faculty:** Mr. Manjunath Sir, Mrs. Padmaja Mam, Mrs. Roopa Kolan Mam and Mr. Shiva Chandra Sir, accommodated us in the visit guiding us the purpose of the visit.

- The purpose of our visit is to know the various ways of studies that undergo to identify and describe the earth's physical, geological, climatic affects, groundwater exploration, management, minerals exploration, seismic reactions on various places.

We have been taken to WET CHEMICAL LABORATORY, PETROLOGY LABORATORY, SIEMIC REACTIONS LABORATORY.

Initially we were subjected to have a look at a presentation. Presentation by Mr. John was all about identification of groundwater by different methods. We were made to know the concepts and principles behind the methods of identification of water underground. This was quite interesting as we were not just listening but also interacting.



- Wet Chemical Laboratory:

Then we have been taken to a Wet Chemical Laboratory. There we learnt how a stone or mineral or a specimen of Earth is studied under chemical aspects.

There are many ways to extract the information hidden in a single specimen that comes under Chemical composition, weathering to certain chemical conditions in natural conditions. The steps involved were like powdering the specimen to know its reaction with various acids and bases, Applications of them to have our economical and geological benefits, etc.



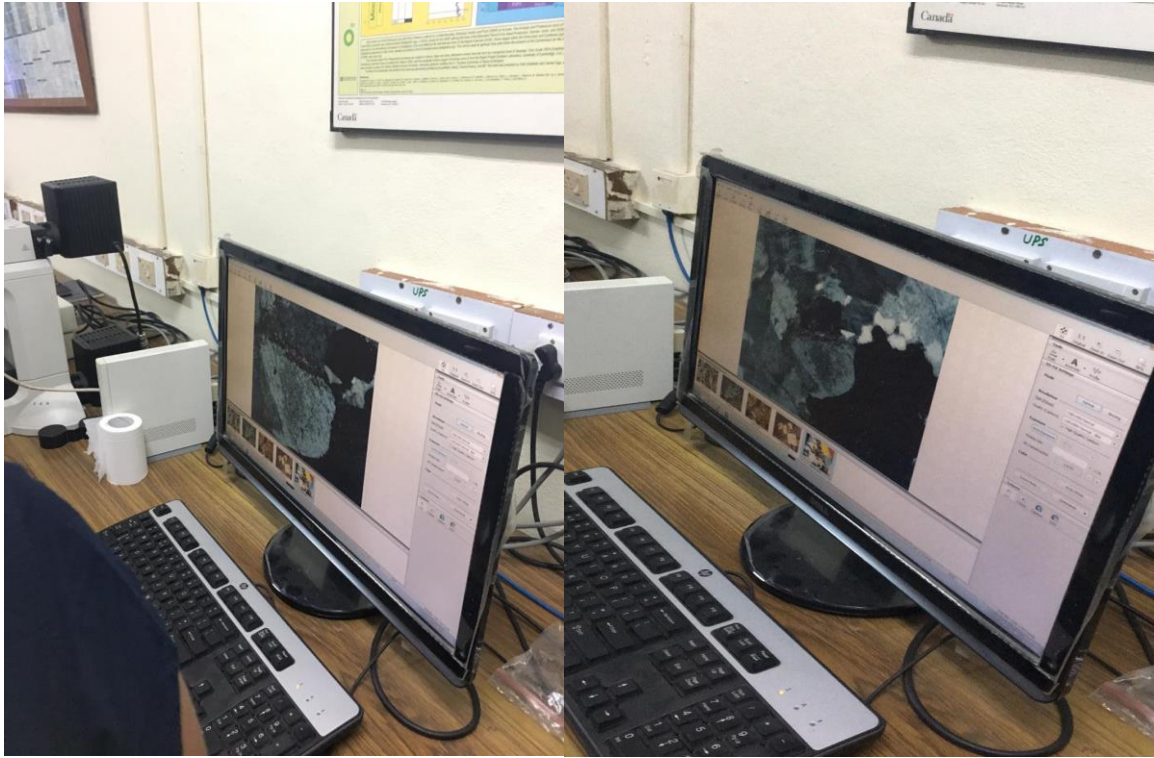
- Petrology Laboratory:

Here the lab does have Telescope kind things which work for purposes more than the telescopes. Here the rocks are studied. Rocks are being made into strips and studied under the telescope which depicts the grain size and composition of that particular rock.

Telescope we observed in Petrology Lab:

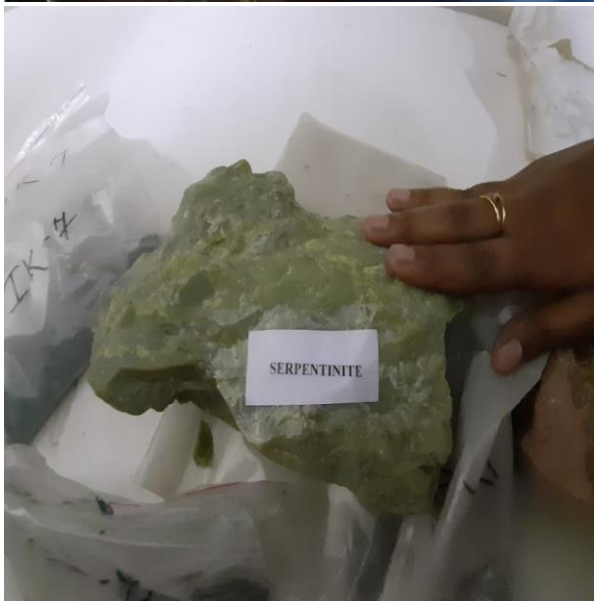


They are projected onto the monitor behind connected to this telescope and then the grain model, size, composition, colour of various elements present in it are identified.



In between we have seen many kinds of rocks that are displayed in the foyer of these laboratories.

ROCKS:





- **What we have learnt:**

- ✓ We have learnt about groundwater and its management by identifying them underground.
- ✓ We have learnt how a rock is studied based on its chemical aspects.
- ✓ The texture, structure, colour, physical features of rocks are studied under telescope.
- ✓ We have seen different kinds of rocks and their appearances.

The location of the Institute was very beautiful that supported the environmental harmony with the institute erection. There was a lot to learn about in the institute which we didn't cover in one day. The greenery and the beauty of the weather there was enough for us to have a wish to gain a job in it and acquire skills to work with a zeal.

Our technical visit was a knowledge gaining one that helped us know how the earth's physical, components are being studied and also the way we need to go to get a passionate job in it.



- 105 civil students with our Faculty.



I hereby conclude my report by thanking all the faculty who have come with us to guide and made us know the things. We had a great fruitful time that we enjoyed and gained much knowledge.