Field Visits

(Sample Reports)

Field Trip - Report

ABSTRACT:

Department of Mining Engineering organized a Field Trip for 4th Semester Mining Engineering students at BRR Enterprises Road Metal Quarry On 22nd April, 2022.

INDUSTRY PROFILE:

- BRR Enterprises Road Metal Quarry Pvt. Ltd. was established in 1998 and is engaged in manufacturing & exporting a wide range of production in road metal
- They have total quarry lease spread over 3 hectares, and the industry is able to develop and design newer & innovative products with their flexible manufacturing infrastructure.
- The commitment for quality and product excellence is non-compromising.

PURPOSE OF VISIT:

1. Interaction between students and industry personnel.
2. To make students aware about actual industry working and the industrial environment.
3. To develop awareness among students regarding road metal production processes.
4. To prepare students for selection of career in different departments of industry.

NOTE WORTHY MENTIONS:

Special thanks to:

1. Dr.M.Sreenivasa Reddy, Principal and Mr. Satyajeet Parida, Head of the Department, Mining Engineering, approved the Industrial Visit and encouraged students and faculty members for the same.
2. Mr. B Ramireddy, Owner of BRR Enterprises Road Metal Quarry Pvt. Ltd
3. Mr. Akash has taken continuous follow up with Mr. A. Manhor,Assistant Manager
4. Mr. A. Manhor,Assistant Manager, BRR Enterprises Road Metal Quarry Pvt. Ltd. for allowing the students to visit the industry premises.

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GROUND REPORT:

49 students of 4th semester, Mining Engineering from Aditya Engineering College. along with 2 faculty members reached the place according to planned route at 8:30 am. The security guard, guided for the entry of the quarry.

Photograph of Students, Faculties along with Assistant Manager

- The Assistant Manager of the BRR Road metal quarry introduced the students and faculty members to the Sr. Managers at the quarry and 3 batches of students were made. Each batch was taken to different departments of the quarry. Mr. A Manohar guided the students to the material handling department from where the journey of the final product actually starts.
- The major need of building stone is due to its high compressive strength and durability (among the hardest, dimensional & structural stones) it can effectively withstand the vagaries of nature. This is majorly used in civil construction works.

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- Road metal is crushed rock for use in paving. This term references the early origins of the word "metal," which involves materials generally mined or quarried, like rock, and was originally used to discuss all hard quarried materials. To avoid confusion, terms like "gravel" are used to refer to this material in most regions of the world. People in some locales, like New Zealand, continue to refer to aggregate rock used in road construction as road metal.

- This product is made by quarrying rock and crushing it. Crushing equipment is capable of controlling the size of the pieces, which can be run through sorting drums. Pieces above a certain size can be pulled out successively to create a series of rock piles containing pieces of a roughly similar size. When contractors order road metal, they can specify the size range or ranges they need for given projects.

- Plain road metal can be used for rural and lightly trafficked roads. Work crews may use spreaders to scatter the crushed rock over the surface of a prepared road bed. They can follow with compression devices like rollers to push the rock together, compacting the surface. This can improve both driving conditions and drainage, two key concerns on finished roads. Gravel fill can also be used to fill in holes in a roadway, although eventually the entire road may need to be regraded.

- The rock produced from the quarry is sent to the Crusher unit e. The aggregate produced is sold to the contractors and to the consumers which is finally consumed locally for road (State Highway & National Highway) & building construction works. Fine Material is also sold to the hollow block / solid block manufactures.

- The material (Road Metal & Building Stone) in the quarry area is excavated by conventional method of opencast mining. Excavating, loading and shifting through dumpers/tippers.

- The quarry consisting of stones of various sizes from fines to large boulders are unloaded into hopper. The material is fed to the primary crusher via chute. After crushing the material is conveyed to the vibratory screen for screening. The oversize from screen goes to secondary crusher via belt conveyor and chute.

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- The crushed material from the secondary crusher goes to the same screen via the same belt conveyor (conveyor used to separate products. The dust is stored in hopper and directly unloaded into the truck. The products are conveyed out of the screen via conveyor belts to stockpile. From stockpiles the product is loaded is loaded into trucks with help of loaders and delivered at the point of use.

- No raw material will be required for production of stone. The final product will be sent to consumer based on their demand. The mode of transportation of raw material and finished product will be by road. Tippers/ trucks will be used for transportation to the end users.

OBSERVATIONS:

1. The safety in the quarry is was very good.
2. Blasting- It is the process of removal of stones with the help of controlled explosives is filled in the holes of the stones. Line of least resistance plays very important role in the blasting process. The controlled blasting techniques has been followed in the blasting operations
3. Drilling holes – Blast holes are drilled by using drilling machines.
4. Charging – Explosive powders are fed into the cleaned & dried blast holes.
5. Tamping – The remaining portion of the blast holes are filled by clay, ash, fuse & wirings.
6. Firing –The fuses of blasting holes are fired by using electrical power supply or match sticks.
7. The workers were aware about the steps to be taken at the time of accidents and emergency.
8. The extra care has been taken during the quarry operations like drilling and Blasting.
9. The record for accidents in the plant was made according to the amount of damage done and number of causalities reported. Also the report was displayed on the notice board of each and every place.
10. Slabs - Many quarry stones such as marble, granite, limestone, and sandstone are cut into larger slabs and removed from the quarry. The surfaces are polished and finished with varying degrees of sheen or luster. Polished slabs are often cut into tiles or countertops and installed in many kinds of residential and commercial properties. Natural stone quarried from

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the earth is often considered a luxury and tends to be a highly durable surface, thus highly desirable.

11. Backup machineries were available for use in case of breakdown and maintenance of critical machines.
12. Maintenance of machines is carried out on regular basis to prevent breakdowns.
13. Workers, managers and foremans were in uniform of the industry which shows thediscipline and uniformity.
14. Workers working under dusty and noisy environments were using face masks and ear plugs respectively.
15. All the students were provided with dust masks during the visit.
16. First aid kits were available at the desks at each and every department.

HOSPITALITY:

The hospitality of all the people working there was overwhelming.

1. Excellent quality of lunch was provided and sponsored by the company to the students.
2. The industrial guides assigned to each group were very friendly and explained each andevery detail without any hesitation and hurry.
3. The workers and the staff were very cooperative to the students.
4. Company also provided us tasty lunch after completion of visit.

OUTCOME OF THE INDUSTRIAL VISIT / FIELD VISIT:

Students will be able to

1. Understand the road metal quarry operations like drilling and blasting
2. Understand the controlled blasting techniques
3. Understand the importance of safety aspects during the auxiliary operations in the quarry
4. Aware the Use and Handling of explosives during transportation and while charging in the drill holes

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Geological Tour - Report

ABSTRACT:

Department of Petroleum Technology organized a Geological Tour for 4th Semester engineering students at Rajahmundry and nearby places on 1st April, 2022. The document contains a detailed report of the geological tour.

GEOLOGICAL PLACES DETAILS:

- Geological tour was planned at Rajahmundry and nearby places like Bommuru, Gowripatnam, Devarapalli and Korukonda.
- These places were having the various types of rock formations, hills and valleys,

PURPOSE OF VISIT:

1. Interaction between students and faculty personnel in the field to enhance the knowledge.
2. To make students aware about actual environment conditions of the geography.
3. To develop awareness among students regarding formations of various types of rocks.
4. To prepare students for selection of career in the field of geology and geophysics.

GROUND REPORT:

32 students of 4th semester, Petroleum Technology from Aditya Engineering College (A) along with 2 faculty members reached the field according to planned route at 9:30 am. The faculty members guided the students about the places with explanation of geological conditions.

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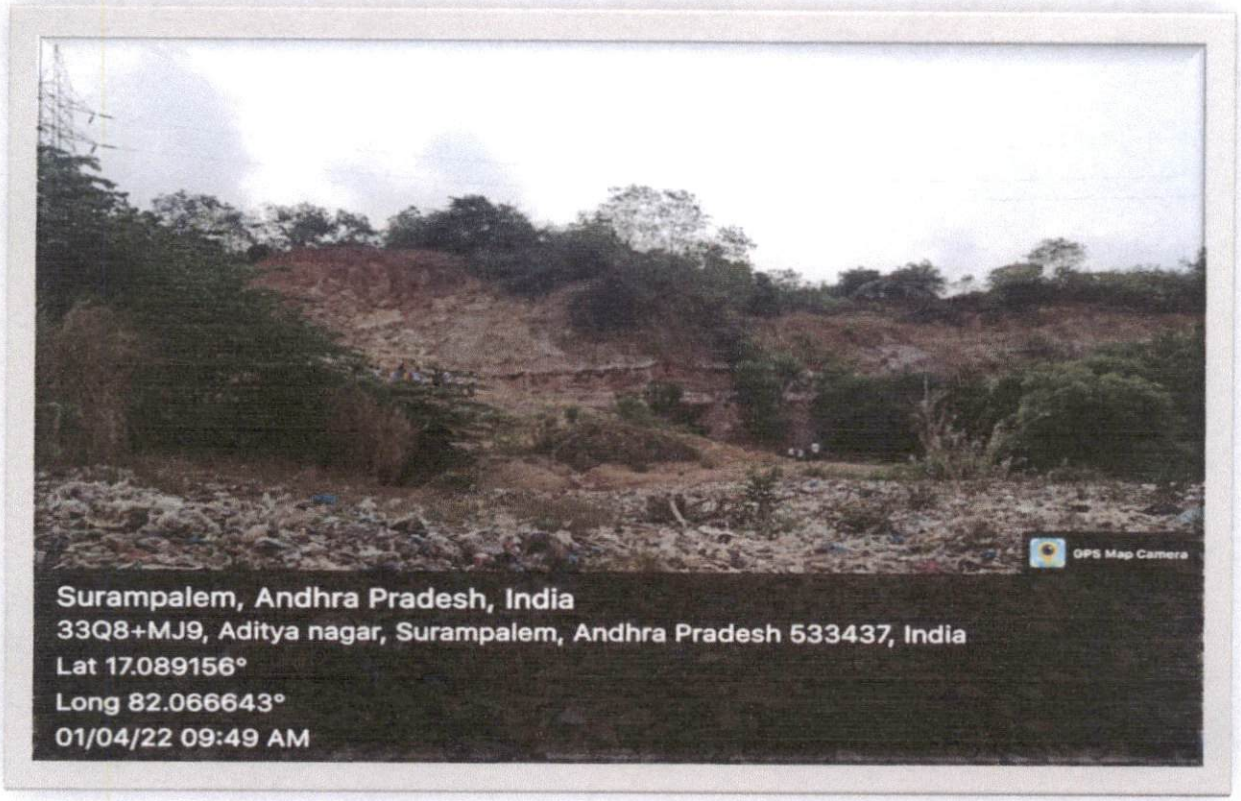
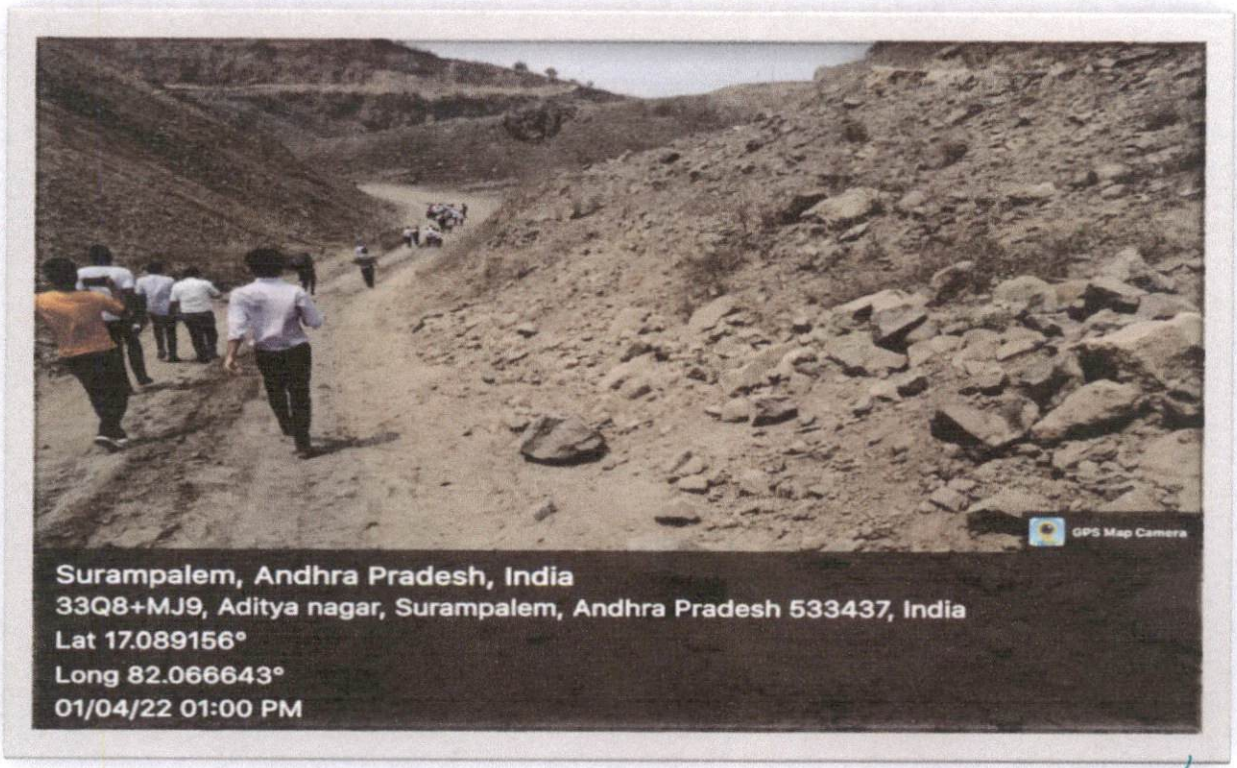


Field Photograph at Surampalem



Field Photograph at Bommuru

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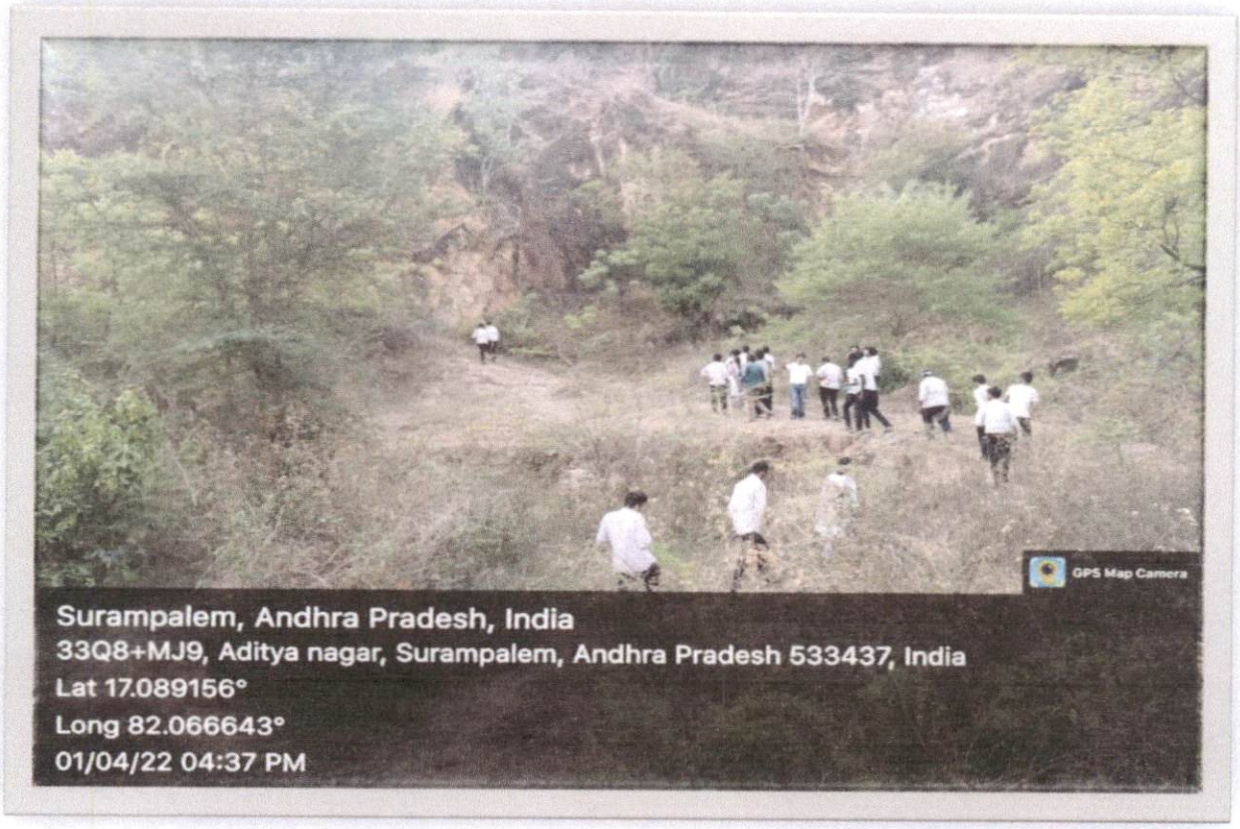
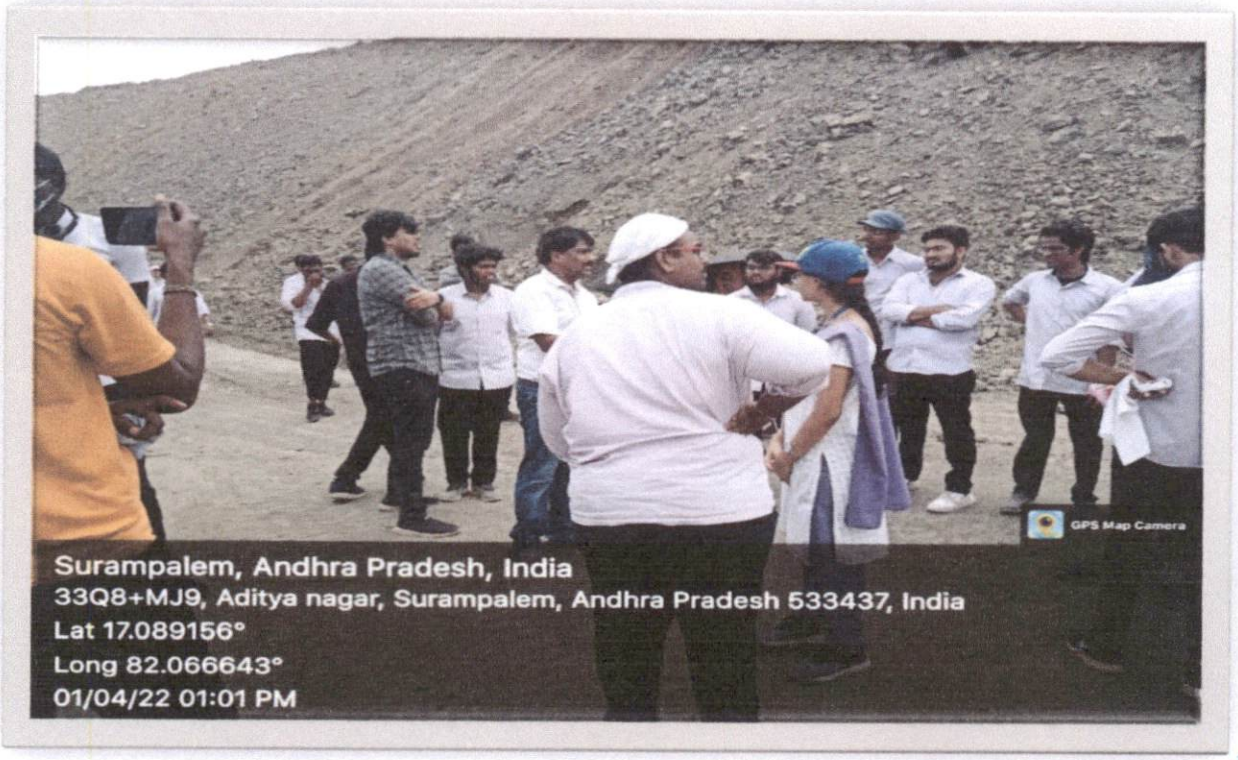


Field Photograph at Pandavula Metta, Surampalem



Field Photograph along with students and faculty

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- The faculty members and students are reached the Bommuru, there one of our faculty member explained the geological conditions and behavior of the rocks there we observed. He explained the how the rocks are formed and how to check the behavior of rocks present on Bommuru area.

- After completion of Bommuru area visit, we reached the place that is Gowripatnam, there one of our faculty member explained the geological conditions and behavior of the rocks there we observed. He explained the how the rocks are formed and how to check the behavior of rocks present on Gowripatnam area.

- After completion of Gowripatnam area visit, we reached the place that is Devarapalli, there one of our faculty member explained the geological conditions and behavior of the rocks there we observed. He explained the how the rocks are formed and how to check the behavior of rocks present on Devarapalli area.

- After completion of Devarapalli area visit, we reached the place that is Korukonda, there one of our faculty member explained the geological conditions and behavior of the rocks there we observed. He explained the how the rocks are formed and how to check the behavior of rocks present on Korukonda area.

- He explained the various rock formations in the different field, how they formed and charactestics of the rocks present on the particular field. And also he explained the variation of valley and hill places and how to identify that types of areas.

OBSERVATIONS:

1. Rock formations in the different fields are observed.
2. Geological conditions of the various fields are observed.
3. Identification of hills and valleys are observed.
4. Charactestic behavior of rocks are observed.
5. Identification of age of rocks are observed.

HOSPITALITY:

1. Excellent quality of lunch was provided and sponsored by the college to the students
2. The faculty members explained the concepts regarding the field is very good.

OUTCOME OF THE INDUSTRIAL VISIT / FIELD VISIT:

1. After successful completion of the field visit the students' ability to identify the rock formations.
2. After successful completion of the field visit the students' ability to identify and observed the Charactestic behavior of the various types of rocks.
3. After successful completion of the field visit the students' ability to identify the hill and valley places by using contour maps.

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