Hello students, this module is

for the third year BSc in the

subject of geology semester 6th.

Course code is GEC 110

titled Indian Stratigraphy.

Name of the module is Protero

zoic's of peninsular India.

Cuddapah super group.

Their distribution lithology,

stratigraphic sequence

structure and economics, Part 2.

This is model number 10.

My name is Dattaraj Jawdekar.

I work as assistant professor in Government,

College of Arts,

Science and Commerce at Sanquelim GOa

In this topic we are going to

study lithology of character,

super group, structure of character,

super group, and economic importances

of the Cuddapah Super Group.

After learning this topic,

you will be able to acquire

knowledge about lithology,

structure and economic importance of.

Cuddapah Super Group lithology

and structure of Cuddapah super Group.

The rocks of Cuddapah Super Group are

primarily made up of quartzites,

sandstones, shales,

and a few outcrops of limestone.

A characteristic quartzite shale

quartzite pattern can be seen

in the stratigraphic sequence.

The rocks are mostly UN metamorphosed

with the degree of metamorphism

increasing towards the East of

the base and the Lower Cuddapah

also has volcanic mafic rocks

in form of thick lava flows.

In addition to this,

the rocks of cuddapah succession have

been intruded by many dykes and sills.

igneous rocks have also been found

in this group
Structurally, Cuddapah Super Group can be

divided into 2 contrasting zones.

Intensely deformed rocks lie in the East,

whereas the relatively flat

rocks can be found in the West.

The formation in the West have low

dip and have a domal structure that

is they deep in all the direction

radiating from a central point.

The rocks in the eastern boundary are folded.

They are found in the Nallamali Fold belt.

The intensity of folding increases

from open folds.

In the West to the isoclinal

folds in the East,

so the folding becomes tighter and

tighter as we go towards the East.

The correct path succession has

been traversed while several faults,

including the strike,

sleep and thrust faults.

Normal faults are also found

by geophysical surveys as well.

The geophysical surveys have

indicated the presence of step folds,

which in turn point towards the origin.

Of the Cuddapah basin.

Rocks of Cuddapah succession also show

cross stratification Ripple marks

another sedimentary structures so

the rocks of Cuddapah super Group have

a characteristic sedimentary cycle,

like sand stones,

which get deposited on top of.

Underlying shales,

which in turn are found underlying

carbonate rocks.

So now this happens usually when the

besin is experiencing transgression.

So translation is the process

when flooding takes place,

the flooding because of the intruding.

See now this flooding may take

place either because sea level

is rising in general or becauses.

All for sedimentary basin is

getting subsided,

so one of these factors will

contribute towards transgressions.

So during translation,

what happens is when you are on

the coast or on the shore you

may expect deposition

of rocks, like sandstones,

but as a transgression progress is an SC.

Water level keeps on rising,

the same spot will become

part of slightly deeper.

Or shallow shelf environment

So these environments are typically

known for deposition of argillaceous

clastic sedimentary rocks,

such as shales, and as the transgression

progress is even further the same

region will experience even deeper

or kind of sedimentary environment,

which is ideal for deposition of limestones.

So this explains why the sediments are

showing cycle..

Now let us go.

Each Group One by one.

First is the Papaghni group,

the Papaghni Group consists

of Basel quartzites,

which is overlain by Vampalle Formation.

Gulcheru Quartzites have basal conglomerates,

glauconitic sandstones,

and micaceous shales.

The vampalle formation consists

of limestone and some amount

of shells and some intrusions.

Next is the chitravati group.

The travertine group consists of

Basel pulivendala Quartzites,

which is overlain by tadpatri

Formation and Gandikota quartzites.

The believe in the law,

cordsets consists of quartzites,

conglomerates and sandstones.

Tadpatri.

Formation is made up of slaty shells.

Dolomite, and mafic lava flows.

Which also holds some truth.

It also hosts intrusion of dykes.

And since the Gandikota quartzites is

made up of medium to coarse grained quartz

arenite with cross stratification.

Ripple marks another sedimentary

structures are also found in this group.

Next is the Nallamala Group

of rocks is intensely folded and faulted,

and forms the eastern flank

of the Cuddapah

Super group.

This group consists of Bairankonda

quartzites and kumbum formations.

These two formations form Synclinal

folds where Kumbum formation forms core

of the syncline Bairenkonda quartzites

is made up of quartzites and

Shale and sandstone which show intercalations.

Kumbum formation is primarily made up of

shales and dolomitic limestones about.

This is Srisailam Quartzites.

Srisailam quartzite is in tectonic

contact with Nallamalai group and

contains well sorted

quartzarenites

Quartzarenite is ferruginous

to glauconitic in different places.

The sandstone of srisailam quartzite

is texturally mature.

That is,

the grains of sand here are rounded.

The metrics is lower and they are all

of them are almost having equal grain size.

That is,

they belong to the same class of the same size.

Cuddappah has several economic importance in the

process of converting sulfides into sulfates.

We got formation of barites.

Uranium has also been reported

in the character Super Group.

Diamonds have also been found.

The Kohinoor Diamond and several

famous diamonds have been derived

from the Kadapa Super Group copper

lead and zinc ores have also been

found in the several successions

of the character Super Group.

This diamond that we talked about

in the Cuddapah group have been

found in the conglomerates of

the Kurnool Group

as well. The source of these

diamonds are kimberlite dikes.

For this topic, I've referred

books by Ravindra Kumar,

Ms Krishnan and some papers

that I've listed in this.

Slide. Thank you.