ANNEXURE-V/1

CHITRANGI BLOCK
PETROGRAPHIC STUDY RESULTS

Sl. No.	Sample Number & Location	Texture	Mineral Composition			Description
			Major >5%	Minor <5%->1%	Accessory <1%	
1	CTRPT-01	It is a greenish grey, very fine grained massive rock.	Chlorite Opaques Calcite Plagioclase	Biotite	Pyroxene	The specimen is mostly made up of very fine micro-crystalline chloritic aggregates showing vermicular texture. Opaques occur as fine subhedral grains and anhedral patches in dissemination. Calcite is present as fine to medium anhedral patches in dissemination and also seen intruded as thin to moderately thick fillings. Plagioclase occurs as very fine anhedral grains and its aggregates. Biotite is present as very fine disseminated flakes/ patches. Very fine relicts of pyroxene grains are noted within chloritic patches.The specimen is an **altered basalt.**
2	CTRPT-02	It is a very fine to fine grained rock showing alternate light and dark grey coloured bands and structural	Quartz Opaques (Hematite)	Ferruginous matter Carbonaceous matter	….	Quartz occurs as thick to thin sub-parallel bands comprising very fine to fine subhedral to anhedral grains showing sharp quartzitic contacts. Opaques (hematite) are present as thin to moderately thick sub-parallel bands comprising granular aggregates and anhedral patches. Ferruginous

		deformations.		Sericite		matter occurs as reddish patches and stains in association with opaques. Carbonaceous matter and sericite together occur as very fine dirty segregations in pockets. The specimen is showing evidences of brittle structural deformations in areas. The specimen is a **banded (hematite) quartzite.**
3	CTRPT-03	It is a thinly laminated grey coloured very fine to fine grained rock showing slaty cleavage.	Quartz Illite/ Sericite Biotite Feldspar	Ferruginous matter Opaques	….	Quartz and feldspar occur as very fine to fine silt sized clasts. Illite/ sericite and biotite are present as very fine flakes showing parallel alignment. Ferruginous matter is present as reddish/ brownish patches in areas. Opaques occur as very fine disseminated grains. The specimen is a **shale/ slate.**
4	CTRPT-04	It is a greenish grey coloured medium grained rock showing granular texture.	Actinolite-Tremolite Plagioclase Chlorite	Epidote Calcite	Opaques	Actinolite-tremolite occurs as fibrous/ acicular and columnar aggregates and as coarse prismatic pseudomorphs. Plagioclase is present as medium to fine subhedral prismatic laths. Chlorite occurs as anhedral patches. Epidote is seen present as fine subhedral to anhedral grains and as granular aggregates in pockets. Calcite has intruded as anhedral patches and fine fillings. Opaques are noted as fine to very fine disseminated grains in accessories. The specimen is an **amphibolite.**

5	CTRPT-05	It is a very fine grained rock showing alternate light and dark grey coloured bands.	Chert Opaques (Hematite) Calcite Carbonaceous matter	Ferruginous matter Sericite/ Biotite	….	Chert occurs as thin to moderately thick sub-parallel bands comprising very fine micro-crystalline aggregates. Opaques (hematite) occur as fine subhedral aggregates, segregating into thin to moderately thick bands. Calcite is present as very fine dissemination throughout the specimen. Carbonaceous matter is seen present as very fine lamellar segregations within cherty bands. Reddish ferruginous patches and stains are seen associated with opaques in areas. Sericite/ biotite are noted as very fine flaky segregations in patchy pockets. The specimen is a **banded (hematite) chert.**
6	CTRPT-06	It is a grey coloured fine to very fine grained rock showing granular texture and mineralization.	Quartz Chert Opaques (Hematite)	Sericite Ferruginous matter	….	Quartz occurs as fine to very fine subhedral to anhedral grains showing sharp quartzitic texture. Chert is present as very fine microcrystalline aggregates in patchy/ lensoidal pockets and often in association with quartz. Opaques (hematite) are present as fine subhedral aggregates, segregated patches and also occur as fine to medium fillings. Sericite is noted as very fine irregular patchy aggregates, segregating in patchy pockets. Reddish ferruginous patches are often seen associated with opaques in areas. The specimen is **hematite chert quartzite.**

7	CTRPT-07	It is a greenish grey coloured medium grained rock showing hypidiomorphic granular texture.	Plagioclase Chlorite Calcite Opaques Biotite	….	….	Plagioclase occurs as medium subhedral prismatic laths showing relicts of sub-ophitic and intergranular texture. Chlorite is present as medium to moderately coarse anhedral patches. Calcite occurs as medium disseminated and as well as segregated patches. Opaques occur as medium subhedral to anhedral grains in dissemination. Biotite is noted as fine to very fine flaky dissemination, especially in association with chlorite patches. The specimen is an **altered (chloritised & carbonatised) dolerite.**
8	CTRPT-08	It is a dark grey coloured very fine to fine grained massive rock. It reacts instantly with cold and dilute HCl.	Calcite Plagioclase Opaques	Chlorite Quartz	Ferruginous matter	Calcite occurs as very fine granular aggregates and fine to medium patches disseminated throughout the specimen. It also occurs as moderately thick veins comprising fine to medium subhedral to anhedral aggregates and associating quartz and plagioclase grains with it. Plagioclase is present as very fine to fine subhedral prismatic laths and its relicts set in calcitic matrix. Opaques occur as fine subhedral to anhedral disseminated grains. Chlorite is seen present as fine to medium anhedral patches comprising very fine micro-crystalline aggregates. Reddish ferruginous patches and stains are noted in accessories. The specimen is an **altered (carbonatised & chloritised) basalt.**