

CHITRANGI BLOCK

MINERAGRAPHIC STUDY RESULTS

Sl. No.	Sample No. & Location	% of ore minerals in polished section	ORE MINERAL COMPOSITION				Description
			Major >5%	Minor <5% - >1%	Accessory <1% - >0.1%	Traces <0.1%	
1.	CTRMN-01	5	Ilmenite/ Magnetite (94) Pyrite (5)	Goethite (1)	Limonite Chalcopyrite Pyrrhotite Digenite	....	Ilmenite/ magnetite occur as medium to fine skeletal grains and as very fine grains/ specks in dissemination. Pyrite occurs as medium to moderately coarse subhedral to anhedral grains and as very fine specks. Goethite is present as patches and fillings replacing pyrite from periphery and showing colloform texture in areas. Limonite occurs as reddish patches and stains along pores and cavities. Chalcopyrite and pyrrhotite are present as very fine specks/ grains and as inclusions within pyrite. Digenite is noted as very thin corona around chalcopyrite, at places.
2.	CTRMN-02	49	Goethite (76) Magnetite (20)	Hematite (3) Limonite (1)	Pyrite	....	Goethite occurs as patches and fillings throughout the specimen. Magnetite occurs as fine subhedral grains and relicts within goethite, segregating into thin sub-parallel bands. Hematite is seen developing after martitisation of magnetite in areas. Limonite occurs as reddish fillings and amorphous aggregates replacing goethite. Pyrite is noted as very fine specks in

							accessories. The specimen is showing feeble magnetism.
3.	CTRMN-03	6	Ilmenite (98)	Hematite (2)	Pyrite	Chalcopyrite	Ilmenite occurs as medium to fine skeletal grains and segregated patches in dissemination. Hematite is seen developing after ilmenite replacement in areas. Pyrite and chalcopyrite are noted as very fine specks in accessories and traces.
4.	CTRMN-04	28	Hematite (60) Goethite (35)	Limonite (2) Graphitoid (2) Ilmenite (1)	Pyrrhotite	....	Hematite occurs as fine bladed segregations in pockets and also occurs as fine to medium subhedral prismatic to anhedral grains, patches and as very fine aggregates in areas. Goethite is seen present as anhedral patches and subhedral prismatic pseudomorphs replacing hematite. Limonite occurs as very fine reddish amorphous aggregates in association with hematite and goethite. Graphitoid occurs as patches and patchy inclusions within hematite/ goethite comprising very fine aggregates. Ilmenite is present as fine skeletal grains. Pyrrhotite is noted as very fine specks in accessories.
5.	CTRMN-05	36	Hematite (62) Goethite (33)	Limonite (3) Graphitoid (1) Ilmenite (1)	Pyrrhotite	....	Hematite occurs as moderately thick sub-parallel bands comprising segregated patches and very fine aggregates. Goethite is present as patches and fillings replacing hematite and showing colloform texture in areas. Limonite occurs as reddish patches, amorphous aggregates and stains in association with hematite and along pores & cavities. Graphitoid occurs as very fine particles and flakes showing crude parallel alignment. Ilmenite is seen present as very fine skeletal grains and specks in areas. Pyrrhotite is noted as very fine specks in accessories.

6.	CTRMN-06	20	Hematite (94)	Goethite (4) Limonite (2)	Pyrrhotite	....	Hematite occurs as very fine to fine subhedral to anhedral grains, its aggregate, blades and segregated patches. Goethite and limonite are present as patches and fillings replacing hematite. Pyrrhotite is noted as very fine specks in accessories.
7.	CTRMN-07	72	Magnetite (55) Hematite (44)	Limonite (1)	Goethite	Pyrrhotite	Magnetite and hematite are present as very fine to fine subhedral grains segregating into thick to thin sub-parallel bands, where magnetite is being replaced by hematite. Limonite occurs as very fine reddish amorphous aggregates, patches and stains mostly within gangue rich bands. Goethite occurs as very fine fillings cutting across magnetite/ hematite bands in areas. Pyrrhotite is noted as very fine specks in traces. The specimen is showing strong magnetism.
8.	CTRMN-08	7	Ilmenite (95) Magnetite (5)	....	Goethite Pyrite	Chalcopyrite	Ilmenite occurs as fine to very fine skeletal grains disseminated throughout the specimen. Magnetite occurs as fine to medium subhedral grains and blades, mostly associated within calcite-quartz intermixed veins. Goethite is present as patches and fillings in areas. Pyrite occurs as very fine grains/ specks and as relicts within goethite. Chalcopyrite is noted as very fine specks in traces.