

**Details of Mineragraphic studies of Surface & borehole core samples of
Bargur Block, District: Krishnagiri, Tamil Nadu**

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.	MBBR/M1 (Amphibolite)	9	Magnetite (64) Sphene (30)	Pyrite (2) Goethite (2) Chalcopyrite (1) Hematite (1)	Covellite Digenite Ilmenite	....	Magnetite occurs as fine to medium subhedral to anhedral grains in dissemination. Sphene occurs as fine wedges and anhedral patches in dissemination showing relicts of very fine ilmenite within it, at places. Pyrite and chalcopyrite are present as fine anhedral grains and patches. Goethite is noted as patches replacing magnetite. Hematite occurs as very fine lamellae developing after martitisation of magnetite. Covellite and digenite are present as very fine fillings cutting across and replacing chalcopyrite. The specimen is showing magnetism.
2.	MBBR/M2 (Banded Magnetite quartzite)	26	Magnetite (84) Hematite (7)	Goethite (4) Pyrite (3) Pyrrhotite (2)	Chalcopyrite Covellite	....	Magnetite occurs as fine to medium subhedral grains, segregating into thin to moderately thick sub-parallel bands and showing martitisation. Hematite is present as subhedral grains, patches and very fine lamellae developing after martitisation of magnetite. Goethite occurs as thin filling along the banding and also noted as very thin criss-cross fillings. Pyrite and pyrrhotite are present as very fine to fine disseminated grains/ specks. Chalcopyrite is noted as very fine specks in association with pyrite and pyrrhotite. Covellite is seen present as very fine patches in association with chalcopyrite and pyrite. The specimen is showing strong magnetism.
3.	MBBR/M3 (Amphibolite)	7	Magnetite (62) Sphene (29)	Goethite (3) Hematite (2)	Pyrrhotite Covellite	....	Magnetite occurs as medium to fine subhedral to anhedral gains and patches showing martitisation. Sphene



ANNEXURE VIII/2

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%	
				Chalcopyrite (2) Pyrite (1) Digenite- Chalcocite (1)	Ilmenite Limonite		occurs as fine wedges and fine to medium anhedral patches showing relicts of very fine ilmenite, at places. Goethite is present as patches and fillings showing compositional zoning. Hematite occurs as fine subhedral to anhedral grains and as very fine lamellae developing after martitisation of magnetite. Chalcopyrite and pyrite are present as fine anhedral grains, patches and as very fine specks. Digenite-chalcocite and covellite together occurs as fine patches and fillings replacing chalcopyrite and pyrite. Pyrrhotite is noted as very fine specks in association with chalcopyrite and pyrite. Limonite is found present as very fine reddish amorphous aggregates and patches in association with goethite fillings. The specimen is showing feeble magnetism.
4.	MBBR/M4 (Amphibolite)	5	Sphene (60) Magnetite (20) Ilmenite (16)	Goethite (2) Hematite (2)	Chalcopyrite Pyrrhotite Pentlandite	....	Sphene occurs as fine to medium wedges and anhedral patches. Magnetite occurs as fine to medium subhedral to anhedral grains showing martitisation. Ilmenite is present as fine to medium anhedral patchy relicts within sphene. Goethite is seen present as fine anhedral patches and fillings. Hematite occurs as fine to medium subhedral to anhedral grains developing after magnetite replacement and also seen present as very fine specks as fracture fillings. Chalcopyrite, pyrrhotite and pentlandite are seen present as very fine specks in accessories.
5.	MBBR/M5 (Amphibolite)	6	Sphene (74) Ilmenite (18)	Chalcopyrite (3) Pyrite (2) Pyrrhotite (1) Digenite (1) Goethite (1)	Covellite Pentlandite Hematite Limonite	....	Sphene occurs as fine to medium wedges and anhedral patches showing fine to very fine relicts of ilmenite within it. Chalcopyrite, pyrite and pyrrhotite together occur as mutually associated and often intermixed patches and as very fine disseminated specks. Digenite



ANNEXURE VIII/3

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%	
							and covellite are present as anhedral patches and as thin rim around chalcopyrite and seen replacing it. Goethite is seen present as patches and fillings associating reddish amorphous aggregates of limonite. Pentlandite is noted as very fine exsolutions within pyrrhotite. Hematite is found present as very fine specks in accessories.
6.	MBBR/M6 (Metachert)	4	Pyrite (95)	Chalcopyrite (2) Sphene (2) Sphalerite (1)	....	Galena	Pyrite occurs as fine to very fine subhedral to anhedral disseminated grains. Chalcopyrite and sphalerite are present as very fine grains/ specks in association with pyrite and also occurs as very fine inclusions within pyrite. Sphene is noted as very fine wedges, anhedral patches and fillings. Galena occurs as very fine specks in association with chalcopyrite-sphalerite in traces.
7.	MBG/M-01 (MBG-01@111-1-111.2m)	17	Pyrrhotite (85) Magnetite (8) Chalcopyrite (7)	....	....	....	Pyrrhotite occurs as fine to medium anhedral grains and patches disseminated throughout the specimen. Magnetite occurs as fine to very fine subhedral to anhedral grains and blades. Chalcopyrite is noted as very fine grains in association with and often being included within pyrrhotite. The specimen is showing very feeble magnetism.
8.	MBG/M-02 (MBG-01@104.8-104.9m)	39	Pyrrhotite (80) Magnetite (10) Pyrite (7)	Chalcopyrite (3)	Sphalerite	....	Pyrrhotite occurs as fine to medium disseminated grains, patches, veinlets and fillings. Magnetite occurs as fine to medium anhedral to subhedral grains and patches being cut across by pyrrhotite fillings. Pyrite and chalcopyrite are present as fine very fine grains/ patches and fillings in association with pyrrhotite. Sphalerite is noted as very fine grains in association with chalcopyrite in areas. The specimen is showing magnetism.



ANNEXURE VIII/4

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%	
9.	MBG/M-03 (MBG-02@126-126.05m)	20	Magnetite (74) Ilmenite (18) Pyrrhotite (8)	....	Chalcopyrite Pentlandite Pyrite	....	Magnetite occurs as fine to medium subhedral to anhedral grains and moderately coarse patches. Ilmenite is present as fine to medium grains in contact with magnetite and as fine to very fine lamellae within magnetite. It also found present as very fine vermicular grains within silicates. Pyrrhotite occurs as fine anhedral grains, patches and very fine fillings. Chalcopyrite is noted as very fine fillings in association with pyrrhotite fillings. Pentlandite occurs as very fine lamellar and patchy exsolutions within pyrrhotite. Pyrite is noted as very fine grains and fillings in accessories. The specimen is showing strong magnetism.