ANNEXURE-XII/1

MINERAGRAPHIC STUDY RESULTS, SITAPUR G-3 BLOCK

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.	MSCB/MIN01	Accessories	Hematite Anatase Pyrite Pyrrhotite Pentlandite Violarite Limonite	….	….	….	Hematite and anatase occur as very fine blades and specks along fractures as fillings. Pyrite, pyrrhotite and pentlandite are present as very fine specks, in which pentlandite is seen being replaced by violarite fillings. Limonite is noted as reddish amorphous aggregates along pores and cavities.
2.	MSCB/MIN02	8	Ilmenite (70) Pyrrhotite (18) Sphene (6)	Chalcopyrite (4) Pyrite (2)	Sphalerite Pentlandite	Galena	Ilmenite occurs as medium to moderately coarse skeletal grains in dissemination. Pyrrhotite and chalcopyrite together present as fine to very fine anhedral grains and patches, often segregated in pockets. Sphene is present as very thin corona around ilmenite and seen replacing it. Pyrite occurs as fine anhedral grains, patches and fillings cutting across pyrrhotite. Sphalerite and galena are present as very fine specks in association with pyrrhotite-chalcopyrite. Pentlandite is noted as very fine lamellar exsolutions within pyrrhotite.
3.	MSCB/MIN03	4	Sphene (95) Ilmenite (5)	….	Pyrite Chalcopyrite Pyrrhotite	….	Sphene occurs as fine wedges, streaky aggregates, fine fillings and medium to moderately coarse segregated patches. Ilmenite is present as very fine to fine relicts within sphene. Pyrite occurs as fine subhedral grains in accessories. Chalcopyrite and pyrrhotite are noted as very fine specks, often being included within sphene.
4.	MSCB/MIN04	2	Ilmenite (98)	Hematite (1) Pyrite (1)	….	….	Ilmenite occurs as fine to medium subhedral prismatic and anhedral patchy grains and also occurs as very fine bladed segregations in pockets. Hematite is present as very fine specks and anhedral patches. Pyrite is noted as very fine specks and stringers.
5.	MSCB/MIN05	Accessories	Hematite Rutile/ Anatase	….	….	….	Hematite and rutile/ anatase are present as very fine blades and specks along fractures as fillings.
6.	MSCM-01	7	Sphene (72)	Chalcopyrite	Pyrite	Sphalerite	Sphene occurs as fine to medium wedges, streaky aggregates

ANNEXURE-XII/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%	
	(BH. No. MSC-01 @ 74.0-74.10m)		Ilmenite (24)	(3) Pyrrhotite (1)			and patches disseminated throughout the specimen. Ilmenite is present as very fine to fine relicts within sphene. Chalcopyrite and pyrrhotite are seen present as very fine to fine disseminated specks/ grains, often segregating in pockets. Pyrite occurs as very fine specks and stringers in areas. Sphalerite is noted as very fine inclusions within chalcopyrite, at places.
7.	MSCM-02 (BH. No. MSC-02 @ 79.90-80.0m)	8	Ilmenite (54) Sphene (40)	Pyrrhotite (4) Chalcopyrite (2)	Pyrite	Cobaltite	Ilmenite occurs as medium to fine skeletal grains, patches, blades and relicts within sphene. Sphene is present as patches and wedges replacing ilmenite and showing corona around it. Pyrrhotite and chalcopyrite together occur as very fine to fine disseminated grains and as well as seen segregated in pockets. Pyrite occurs as fine anhedral patches. Cobaltite is noted as very fine near idiomorphic grains in association with pyrrhotite-chalcopyrite in traces.
8.	MSCM-03 (BH.No. @ 99.55-99.65m)	2	Sphene (88) Pyrite (8)	Magnetite/ Ilmenite (3) Chalcopyrite (1)	….	….	Sphene occurs as fine to very fine wedges and as fine to medium anhedral patches. Pyrite occurs as fine anhedral to subhedral grains, patches and as fillings. Magnetite/ ilmenite are seen present as very fine hair line fillings and very fine blades. Chalcopyrite is noted as very fine specks in areas.
9.	MSCM-04 (BH.No. MSC-04 @ 101.10-101.20m)	8	Ilmenite (100)	….	….	Chalcopyrite Pyrite	Ilmenite occurs as fine to very fine lamellar/ bladed and skeletal grains in dissemination. Chalcopyrite and pyrite are noted as very fine specks in traces.
10.	MSCM-05 (BH.No. MSC-04@149.20-149.30m)	1	Sphene (98)	Magnetite/ Ilmenite (2)	Pyrite Chalcopyrite	….	Sphene occurs as fine to medium wedges, streaks and patches. Magnetite/ ilmenite are seen present as very fine hairline fillings. Pyrite and chalcopyrite are noted as very fine specks in accessories.