

Details of Mineragraphic studies of borehole core samples of Thakurdih Area-1 Block, District: East Singhbhum, Jharkhand

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.	MTB-01/M1 (MTB-01:58.0-58.50m)	8	Pyrite (46) Chalcopyrite (28) Magnetite (26)	....	Pentlandite	....	Pyrite occurs as medium to moderately coarse patches and as fine anhedral to subhedral grains. Chalcopyrite is present as fine to very fine grains, patches, veinlets and streaks in association with pyrite. Magnetite is noted as fine to moderately coarse patches, often being cut across by chalcopyrite and pyrite patches and fillings. Pentlandite occurs as very fine to fine patchy inclusions within chalcopyrite. The specimen is showing very feeble magnetism.
2.	MTB-03/M1 (MTB-03:78.0-78.50m)	5	Magnetite/ Ilmenite (55) Chalcopyrite (30) Pyrite (13)	Pyrrhotite (2)	Pentlandite	....	Magnetite/ Ilmenite occur as fine to very fine subhedral prismatic/ bladed grains, mostly seen included within garnet porphyroblasts. Chalcopyrite occurs as patches, streaks and veinlets associating pyrite and pyrrhotite patches with it. Pyrite patches are often seen being cut across by chalcopyrite veinlets. Pentlandite is noted as very fine inclusions within pyrrhotite.
3.	MTB-04/M1 (MTB-04:62.0m-62.50m)	12	Chalcopyrite (48) Pyrrhotite (30) Magnetite (15)	Pentlandite (4) Ilmenite (2) Pyrite (1)	....	....	Chalcopyrite and pyrrhotite are present as mutually associated and often intermixed patches and veinlets. Magnetite occurs as fine to moderately coarse subhedral to anhedral grains and patches, being cut across by chalcopyrite-pyrrhotite veinlets in areas. Pentlandite is noted as very fine lamellar and flame shaded exsolutions within pyrrhotite. Ilmenite is seen present as fine to very fine blades. Pyrite occurs as fine to very fine grains in association with chalcopyrite-pyrrhotite patches.
4.	MTB-05/M1 (MTB-05:87.30m-)	23	Magnetite (52) Chalcopyrite (40) Pyrite (6)	Pyrrhotite (2)	Molybdenite	Magnetite is present as medium to fine subhedral to anhedral grains and patches in dissemination. Chalcopyrite occurs as patches, veinlets and fillings cutting across magnetite in

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	87.80m)						areas. Pyrite is present as fine to medium anhedral patches in association with and often being entrapped within chalcopyrite. Pyrrhotite is seen present as fine anhedral grains in association with chalcopyrite. Molybdenite is noted as very fine flaky inclusions within chalcopyrite, at places. The specimen is showing very strong magnetism.
5.	MTB-06/M1 (MTB-06:89.0m-89.50m)	18	Chalcopyrite (47) Magnetite (45) Pyrite (7)	Pentlandite/ Violarite (1)	Covellite Pyrrhotite	Hematite	Chalcopyrite occurs as coarse patches, veinlets and as fine to very fine fillings. Magnetite is present as fine to moderately coarse subhedral to anhedral grains, segregated pockets and patches often being cut across by chalcopyrite fillings. Pyrite occurs as fine to medium anhedral grains and patches in association with chalcopyrite. Pentlandite/ violarite occur as fine anhedral patches within chalcopyrite. Covellite is noted as fine patchy fillings replacing chalcopyrite in areas. Pyrrhotite is seen present as very fine inclusions within chalcopyrite. Hematite occurs as very fine specks along fracture fillings in traces. The specimen is showing very strong magnetism.
6.	MTB-07/M1 (MTB-07:65.0m-65.50m)	7	Magnetite/ Ilmenite (44) Pyrite (36) Chalcopyrite (20)	....	....	....	Magnetite/ ilmenite occurs as fine to moderately coarse subhedral to anhedral grains, patches, fillings and as fine disseminated blades. Pyrite occurs as fine to moderately coarse anhedral grains and patches. Chalcopyrite is seen present as patches, veinlets and fillings cutting across pyrite and magnetite in areas.
7.	MTB-08/M1 (MTB-08:203m-203.50m)	82	Magnetite (94) Chalcopyrite (5)	Pyrite (1)	Hematite Pyrrhotite	Magnetite occurs as coarse to massive patches throughout the specimen leaving gangues in-between. Chalcopyrite occurs as fine to medium anhedral grains and very fine specks, often included within magnetite. Pyrite is present as anhedral patches in areas. Hematite is seen developing in areas after martitisation of magnetite. Pyrrhotite is noted as

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							very fine inclusions within magnetite in association with chalcopyrite. The specimen is showing strong magnetism.
8.	MTB-12/M1 (MTB-12:81m-81.50m)	8	Chalcopyrite (45) Magnetite (42) Pyrite (13)	....	....	....	Chalcopyrite occurs as patches and dendritic fillings along inter-granular spaces. Magnetite occurs as fine subhedral to anhedral grains, patches and blades in dissemination. Pyrite is seen present as patches and fine fillings, often showing association with chalcopyrite.
9.	MTB-10/M1 (MTB-10:94.0m-94.50m)	2	Pyrrhotite (46) Magnetite (40) Chalcopyrite (12)	Pyrite (2)	....	....	Pyrrhotite occurs as medium patches and fine fillings associating chalcopyrite with it. Magnetite is present as fine fillings, subhedral to anhedral grains and as clustered pockets. Chalcopyrite is noted as fine to very fine fillings and grains in association with and often being included within pyrrhotite. Pyrite occurs as fine anhedral grains in association with chalcopyrite and pyrrhotite.
10.	MTB-17/M1 (MTB-17:105.50m-106.0m)	74	Magnetite (80) Chalcopyrite (16)	Pyrite (3) Pyrrhotite (1)	Hematite	Sphalerite	Magnetite occurs as coarse elongated patches and fine anhedral grains showing crude parallel alignment. Chalcopyrite occurs as fine to medium anhedral grains, patches and as inclusions within magnetite. Pyrite is present as fine anhedral patches and vermicular grains in association with magnetite. Pyrrhotite is seen present as fine to very fine anhedral grains. Hematite is noted as fine to very fine grains, especially in contacts with magnetite and pyrite. Sphalerite occurs as very fine inclusions/ intergrowths within chalcopyrite patches. The specimen is showing very strong magnetism.