

**AMRITPUR 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.	MBL/MG/01	56	Pyrite (99)	Goethite (1)	Galena Hematite Rutile/ Anatase Limonite	....	Pyrite occurs as thick intrusive veins. Goethite is present as very thin fillings intruding across the pyrite veins. Hematite and rutile/ anatase are seen present as very fine blades and specks in accessories. Limonite is noted as reddish patches and fillings in areas.
2.	MBL/MG/02	8	Hematite (100)	....	Anatase	Chalcopyrite	Hematite occurs as very thin to thin dendritic veins/ veinlets, very fine disseminated blades and as segregated patches. Anatase is seen present as very fine specks along fractures as fillings. Chalcopyrite is noted as very fine specks in traces.
3.	MBL/MG/03	6	Sphene (70) Ilmenite (29)	Chalcopyrite (1)	Hematite Anatase Pyrite	Covellite	Sphene occurs as fine to medium anhedral patches showing relicts of bladed and lamellar ilmenite within it. Chalcopyrite is present as very fine disseminated specks and inclusions within sphene. Hematite and anatase are seen present as very fine specks, occurring as fracture fillings. Pyrite occurs as very fine hairline fillings in areas. Covellite is noted as very thin corona around chalcopyrite and is seen replacing it.
4.	MBL/MG/04	3	Hematite (96)	Ilmenite (4)	Chalcopyrite	Digenite	Hematite occurs as fine to medium disseminated patches, possibly developing after pyrite alterations.

							Ilmenite occurs as very fine blades, segregated in pockets. Chalcopyrite is seen present as very fine specks, often rimmed and replaced by digenite.
5.	MBL/MG/05	1	Hematite (88) Ilmenite (12)	....	....	....	Hematite occurs as very fine to fine disseminated grains. Ilmenite is seen present as fine subhedral prismatic grains in pockets.
6.	MBL/MG/06	6	Sphene (76) Ilmenite (24)	....	....	....	Sphene occurs as intrusive veins/ veinlets, patches and as fine disseminations. Ilmenite is seen present as fine to very fine bladed grains and as very fine skeletal grains in dissemination and is seen being replaced by sphene in areas.
7.	MBL/MG/07	1	Hematite (91) Goethite (9)	....	Chalcopyrite	....	Hematite occurs as very fine blades, bladed segregations in pockets, anhedral patches and as fillings. Goethite is present as patchy fillings in areas. Chalcopyrite is noted as very fine specks in accessories.
8.	MBL/MG/08	1	Hematite (96)	Ilmenite (4)	Chalcopyrite	....	Hematite occurs as very fine disseminated specks, fracture fillings and as anhedral patches. Ilmenite is noted as fine skeletal grains. Chalcopyrite is seen present as very fine specks in accessories.
9.	MBL/MG/09	68	Pyrite (100)	....	Hematite Rutile/ Anatase Limonite	Chalcopyrite Pyrrhotite	Pyrite occurs as coarse to medium intrusive patches and veins/ veinlets. Hematite and rutile/ anatase are present as very fine blades, specks and as fracture fillings. Limonite is noted as reddish amorphous aggregates, often segregating in patches. Chalcopyrite and pyrrhotite are found present as very fine specks in traces.
10.	MBL/MG/10	1	Hematite (90) Ilmenite (10)	....	Sphene	....	Hematite occurs as very fine specks disseminated throughout the specimen. Ilmenite is seen present as very fine to fine bladed/ prismatic grains. Sphene is noted as very fine wedges in accessories.
11.	ABL/MG/11	3	Hematite (100)	....	Limonite	....	Hematite occurs as very fine disseminated blades, often seen segregated in pockets. It also seen present

							as very fine fillings. Limonite is noted as very fine reddish amorphous aggregates in association with hematite, in areas.
12.	ABL/PET/ 03	4	Hematite (96)	Magnetite/ Ilmenite (4)	....	Pyrite	Hematite occurs as very fine bladed and subhedral dissemination throughout the specimen. Magnetite/ilmenite are seen present as fine to very fine subhedral prismatic grains. Pyrite is noted as very fine specks in traces.
13.	ABL/PET/ 05	6	Hematite (100)	....	Goethite Limonite	Chalcopyrite	Hematite occurs as very fine bladed disseminations, often segregated in pockets and seen associating very fine reddish amorphous aggregates of limonite in areas. Goethite occurs as fine patches. Chalcopyrite is noted as tiny specks in traces.
14.	ABL/PET/ 07	6	Magnetite (80) Ilmenite (20)	....	Sphene Chalcopyrite Digenite	Hematite	Magnetite occurs as medium to fine subhedral prismatic disseminated grains showing very fine to fine inter-grown lamellae of ilmenite within it. It also occurs as very fine granular dissemination. Sphene is noted as very fine patches replacing ilmenite from periphery in areas. Chalcopyrite occurs as very fine specks, often seen being replaced by digenite patches. Hematite is found present as very fine specks in traces.
15.	ABL/PET/ 12	2	Sphene (86) Ilmenite (14)	....	Magnetite Hematite	Pyrite Chalcopyrite	Sphene occurs as very fine wedges and anhedral grains in dissemination. Ilmenite is noted as very fine relicts within sphene. Magnetite occurs as very fine blades in accessories. Hematite, pyrite and chalcopyrite are seen present as very fine specks.
16.	ABL/PET/ 16	1	Chalcopyrite (88) Rutile/ Anatase (9)	Hematite (3)	Pyrite	....	Chalcopyrite occurs as very fine disseminated grains, often seen segregated in pockets. Rutile/anatase and hematite are present as very fine subhedral and bladed grains, often intruding as fracture fillings. Pyrite occurs as very fine specks in accessories.

17.	ABL/PET/ 18	2	Magnetite/ Ilmenite (90) Hematite (6)	Digenite (4)	....	Pyrite Chalcopyrite	Magnetite/ ilmenite are seen present as fine subhedral grains. Hematite is seen replacing magnetite/ ilmenite from core in areas. Digenite occurs as fine patches showing relicts of very fine pyrite and chalcopyrite within it.
18.	ABL/PET/ 23	Accessories	Hematite Anatase Goethite Chalcopyrite	....	....	....	Hematite and anatase occur as very fine specks, mostly seen present as fracture fillings. Goethite is noted as fine patches and patchy fillings. Chalcopyrite occurs as very fine specks in traces.
19.	ABL/PET/ 27	Accessories	Magnetite/ Ilmenite Hematite Anatase Chalcopyrite	....	....	....	Magnetite/ ilmenite are present as very fine bladed grains, mostly along the cleavage traces of mica minerals. Hematite and anatase are seen present as very fine specks, mostly occurring as fracture fillings. Chalcopyrite is noted as very fine specks in traces.
20.	ABL/PET/ 32	Accessories	Ilmenite/ Magnetite Hematite Anatase Chalcopyrite	....	....	....	Ilmenite/ magnetite occur as fine to very fine subhedral and skeletal grains altering to hematite. Hematite and anatase are seen present as very fine specks, mostly occurring as fracture fillings. Chalcopyrite is noted as very fine specks in traces.