The deposit is located in Zaporizzhya district 55 km to the West from Berdyansk.

Geologic structure is characterized by:

— highly metamorphozed Archean rocks;

— granitized gneiss, marble, calciphyre and schist of Proterozoic age;

— Cenozoic loam O-50 metres thick (30m in average).

The deposit consists of three seams 10 -240 metres thick, that have rather complex structure as a result of alternating ore beds and non-ore gneiss, crystalline schist, quartzite, granite layers 8-70 m thick.

Ore bodies are steeply inclined (70—90°). Their length is up to 1600 m, thickness vary from 20 to 240 m, the depth of occurrence is identi fied up to 800 m.

Ores are represented mainly by amphibole-quartz-magnetite ones with 30—30.8% general iron content, 25.2— 25.54% magnetite-associated iron content, 0.19% sulphur and 0.08% phosphorus contents.

Measured magnetite quartzite reserves (calculated in 300-600 m depth interval) total 237.3 million tons, whereas nominal reserves amount to 1.7 million tons.

Technological testing has corroborated the production of high quality concentrates for blast-furnace and non-blast-furnace steel production and for powder metallurgy. The output of concentrates will amount to 37.7% in average with 70.7—72% iron mass share. The iron extraction to the concentrate will amount to 85,7%.

Supplementary investigations to determine the possibility of making the metallized semi-products for electrical steel production, powder metallurgy and sponge steel production from superconcentrates are expedient.

Rocks of crystalline overburden can give supplementary 219.7 million cubic metres of crushed stone (its extraction totals 82%). Raw material satisfy the requirements for radioactive safety.

Engineering feasibility studies and economic evaluation have proved advisability of:

— development of the deposit by way of open mining of 2 quarries with annual production of 9 mln. tons of crude ore and 3.32 mln. tons of concentrates;

— ore dressing with dry and wet magnetic separation;

— additional processing of overburden into crushed stone for construction works (13.1 million cubic metres per year) and of tailings after magnetite quartzite dressing into crushed stone and sand (accordingly, 0.7 and 1.03 million cubic metres per year);

Alternative versions may also be considered.

Hydrogeological and mining engineering conditions are favourable.

Expected maximum water inflow vary from 320 to 430 cubic metres per hour.

The nearest railway stations are located 30-40 km from the deposit, the nearest sea port — 55 km. There is a well developed motorway network.

Water of Azov sea and drainage waters can be used for technical purposes; Kakhovka water storage basin can serve as a source of potable water.

A construction of benefication enterprise and crushed stone mill with all related facilities is envisaged, as well as a construction of social and cultural objects, residential districts.

The labour employment problem is easily solved on the spot.

Potential value of iron ores as assessed on the basis of world market actual sales prices may amount to 2470 million US Dollars, investments will recoup in less than 30 years.

Unique raw material for highly pure magnetic concentrates, easiness of dressing, simple way of deposit's development, favourable geographic position and close location of the important consumers guarantee the profitability of Joint Venture and competitiveness of its production.

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