

ICS 73.020; 73.080
CCS D 13

DZ

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

DZ/T 0213-2002

**Specifications for metallurgic, chemical limestone and
dolomite, cement-materials mineral exploration
(English Translation)**

Issued on: December 17, 2002

Implemented on: March 1, 2003

**Issued by: Ministry of Land and Resource of PRC 3.No action is required
- Full-copy of this standard will be automaticall**

Table of Contents

Foreword...	4
1 Scope...	5
2 Normative References...	5
3 Target Tasks of Exploration...	6
4 Study Degree of Exploration Work...	6
4.1 Geological study...	6
4.2 Test requirements for ore processing technology...	10
4.3 Mining technology condition...	11
4.4 Comprehensive exploration and evaluation...	12
4.5 Adopt new technology and new method...	12
4.6 Situations of scattered small mines...	13
5 Requirements for Exploration Study Degree...	13
5.1 Exploration type...	13
5.2 Confirmation principle of exploration engineering spacing...	13
5.3 Confirmation of control degree...	14
6 Exploration Work and Quality Requirements...	15
6.1 Main geological map...	15
6.2 Prospecting engineering...	15
6.3 Geophysical prospecting...	15
6.4 Chemical sampling...	16
6.5 Sample processing...	17
6.6 Chemical analysis quality inspection...	17
6.7 Rock-ore physical properties test...	19
6.8 Original geological record, comprehensive data arrangement...	19
7 Feasibility Evaluation Work...	20
7.1 Meaning...	20
7.2 Overview study...	20
7.3 Pre-feasibility study...	21
7.4 Feasibility study...	21
8 Resources/Reserves Classification and Type Conditions...	22
8.1 Resource/Reserve classification basis...	22
8.2 Resource/Reserve type...	23

9 Resources/Reserves Estimation...	26
9.1 Industrial Indicators of Resources/Reserves...	26
9.2 General principles of resources/reserves estimation...	27

1 Scope

This Standard specifies the degree of exploration study, exploration quality, classification and type condition of resources/reserves, estimation of resources/reserves, etc. for metallurgical, chemical limestone and dolomite, cement- material mineral (calcareous material, clay material, and siliceous material)¹⁾; and provides the deposit exploration type for analogy, and exploration engineering spacing for reference.

This Standard is applicable to the metallurgic, chemical limestone and dolomite, cement-materials mineral exploration, resource/reserves estimation; applicable to the acceptance and review for the exploration design and exploration result report of metallurgic, chemical limestone and dolomite, cement-material mineral; can also serve as the basis for assessing and estimating the mineral resources/reserves during the financing and the like activities of mining rights transferring, and mineral exploration and mining.

2 Normative References

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 13908-2002 General Requirements for Solid Mineral Exploration

GB/T 17766-1999 Classification for Resources/Reserves of Solid Fuels and Mineral Commodities

GB/T 12719-91 Exploration Specification of hydrogeology and Engineering Geology in Mining Areas

1) Cement-material mineral generally includes. calcareous material - limestone, argillaceous limestone, marble; clay material - clay, loess, mudstone, silt rock, shale, phyllite; siliceous material - sand, sandstone.

3 Target Tasks of Exploration

The exploration work can be divided into four phases, namely, pre-survey, general survey, detailed survey, and prospecting. The target tasks in each phase are as follows.

3.1

Pre-survey phase. through comprehensive study of geological data in the area, preliminary field observation, very small amount of engineering verification, analogy and prediction of the known deposit with the similar geological characteristics, propose the area with larger mineral resources potentials for the general survey.

3.2

General survey phase. through adopting outcrop inspection, geological mapping, limited number of sampling work, and the like field work against the area with larger mineral source potentials confirmed in the pre-survey phase, generally find out the geology and tectonics in the general survey area; generally understand the orebody shape, production condition, and quality characteristics; generally learn exploring technology of the deposit; conduct the mineral processing and separation analogy study; propose whether it is worth for the further detailed survey, and encircle the range for the detailed survey area.

3.3 Detailed survey phase. adopt several exploration methods and measures against

the detailed survey area encircled by the general survey; take certain network degree system to sample; basically identify the geological and tectonic characteristics, and control situation for the orebody, which mainly includes orebody shape, occurrence, size, and mineral quality; basically confirm the continuity of the orebody; basically find out the technical conditions of deposit mining; conduct the mineral processing and separation analogy and laboratory flow test study; make the assessment for whether it has industrial value or whether it can be used in the near future. If necessary, encircle exploration range; and provide basis for pre-feasibility study, master mine planning, and preparation of mine project proposals. For the mining areas that directly provide mining and utilization, it shall meet the requirements of mine construction design.

3.4 Prospecting phase. through encrypting various sampling projects against the

exploration area proposed by the detailed survey, identify the deposit geological characteristics in detailed; confirm the orebody shape, occurrence, size, change regularity of down-strike and inclination, spatial location and ore quality characteristics;

confirm the continuity of orebody; find out the technical conditions of orebody mining;

so that provide basis for the feasibility study or mine construction design.

4.1 Geological study

4.1.1

area geology occurrence, thickness, ore composition, ore type and distribution; generally, identify the grain size, mineral composition, chemical composition of loose clay material, siliceous material, and the plasticity of clay material; generally, learn the type and distribution of ore-bearing rock, as well as the mineral composition, chemical composition, structure and tectonics of ore-bearing rock.

During the detailed survey phase, it shall basically identify the orebody shape, scale, occurrence, thickness and change regularity; basically identify the ore type, grade, distribution and change regularity; basically identify ore mineral composition, chemical composition, structure and tectonics; study the grain size, mineral composition, chemical composition of loose clay material and siliceous material, as well as the plasticity of clay material; basically identify the ore-bearing rock type, scale, occurrence, distribution regularity; basically identify the ore-bearing rock mineral composition, chemical composition, st...

.....