Minerals (Evidence of Mineral Contents) Rules, 2015

(As Amended up to 12.06.2025)

1.	Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.
1A.	Minerals (Evidence of Mineral Content) Rules, 2015 Second Amendment, 2021 G.S.R. 856(E) No. 697 dated 14.12.2021.
2.	Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.
3.	Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2025 G.S.R. 382(E) No. 339 dated 12.06.2025.

Minerals (Evidence of Mineral Contents) Rules, 2015

G.S.R. 304(E). - In exercise of the powers conferred by section 13 of the Mines and Minerals (Regulation and Development) Act, 1957 (67 of 1957), the Central Government hereby makes the following rules, namely:-

1. Short title and commencement:

(1) these rules may be called the Minerals (Evidence of Mineral Contents) Rules, 2015.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Application: These rules shall apply to all minerals except -

(i) Petroleum and natural gas;

(ii) Coal, lignite and sand for stowing;

(iii) Minerals listed in Part B of the First [1][Schedule-I] to the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) [2][having grade equal to or more than the threshold value as specified and notified under the Atomic Minerals Concession Rules, 2016][2] and

(iv) Minor minerals.

3. Definitions and interpretation:

In these rules, unless the context otherwise requires, -

(a) "Act" means the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957);

(b) [1][Omitted]

(c) "Conforming" means in a form as near thereto as circumstances of each case may require;

(d) "evidence of mineral contents" means the existence of mineral contents established as specified in [1][Omitted] rule 5, or sub-rule (2) of rule 7, as the case may be;

(e) "threshold value of minerals" means the limits prescribed by the Indian Bureau of Mines from time to time based on the beneficiability and marketability of a mineral for a given region and given time, below which the material obtained after mining can be discarded as waste;

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.
2. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.

(f) "Schedule" means the Schedule annexed to these rules;

(g) the expressions Reconnaissance Survey (G4), Preliminary Exploration (G3), General Exploration (G2), Detailed Exploration (G1), Reconnaissance Mineral Resource (334), Inferred Mineral Resource (333), Indicated Mineral Resource (332), Measured Mineral Resource (331), Probable Mineral Reserve (121 and 122), Proved Mineral Reserve (111), Feasibility Mineral Resource (211), Pre-Feasibility Mineral Resource (221 and 222), Modifying Factors, Geological Study (F3), Pre-Feasibility Study (F2), Feasibility Study (F1), Intrinsically Economic (E3), Potentially Economic (E2) and Economic (E1) used in these rules shall have the meanings assigned to them in Part I of the [1][Schedule-I];

(h) all other words and expressions used in these rules, but not defined, shall have the same meaning as assigned to them in the Act or the rules made thereunder.

4. [1][Omitted]

5. Existence of mineral contents [1][for grant of mining lease under clause (a) of sub-section (2) of section 5 and] for auction of mining lease under sub-section (3) of section 10B and sub-section (2) of section 11 [2][or section 11D] of the Act:

An area shall be considered to be having existence of mineral contents under [1][clause (a) of sub-section (2) of section 5 and] sub-section (3) of section 10B or sub-section (2) of section 11 [2][or section 11D] of the Act, if, in respect of such area, -

(a) at least General Exploration (G2) has been completed to establish Indicated Mineral Resource (332); and

(b) a geological study report has been prepared conforming to Part IV of the [1][Schedule-I].

[1][Provided that for the minerals specified in Schedule-II occurring in such type of deposits as specified therein, the existence of mineral contents for the purpose of auction shall be deemed to have been established under this rule, if, in respect of such area-

(a) at least Preliminary Exploration (G3) has been completed to establish Inferred Mineral Resource (333), which shall be considered akin to Indicated Mineral Resource (332), and

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.
2. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.

(b) a geological study report has been prepared conforming to Part IV of Schedule-I.][1]

6. Grant of a mining lease through auction in respect of mining leases after expiry of the mining lease period and of leases which have been surrendered, [1][terminated,] determined or lapsed:

Before notifying any area for grant of mining lease through auction, in respect of -

(a) mining lease after expiry of the lease period; and

(b) mining lease which has been surrendered, [1][terminated,] determined or lapsed a detailed reassessment of resources, in the area proposed to be auctioned shall be carried out in accordance with rule 5.

[1][Provided that detailed reassessment of resources shall not be required to be carried out in cases where the estimate of Mineral Resource required for auction can be assessed on the basis of the available report of exploration or geological study report or last approved mining plan for the said area, after adjusting for the mineral already produced from the mine.][1]

7. Existence of mineral contents for grant of composite licence:

(1) An area may be notified for auction to grant a composite licence under sub-section (2) of section 10B or sub-section (3) of section 11 [2][or section 11D] of the Act, if, in respect of such area, -

(a) [1][at least Reconnaissance Survey (G4) has been completed to estimate Reconnaissance Mineral Resource (334) or mineral potentiality of the block has been identified based on the available geoscience data but resources are yet to be established; and][1]

(b) a geological study report has been prepared conforming to Part-IVA and Part IV-B of the [1][Schedule-I].

[1A][(1A) Any person intending to obtain composite licence in respect of an area may submit a proposal to the State Government in the format specified in Schedule III along with available geoscience data for notification of the area for auction to grant a composite licence.

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.

1A. Minerals (Evidence of Mineral Content) Rules, 2015 Second Amendment, 2021 G.S.R. 856(E) No. 697 dated 14.12.2021.

2. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.

[2][Provided that in respect of any mineral specified in the Part D of the First Schedule to the Act, the proposal shall be submitted to the Central Government.][2]

(1B) In order to identify mineral potentiality of a block based on the available geoscience data where resources are yet to be established as referred in clause (a) of sub-rule (1), including in any block proposed by any person under the sub-rule (1A), the State Government shall place it before a committee consisting of the following members:-

(a) Principal Secretary or Secretary in the Mining and Geology Department of State Government (by whatever name called) – Chairman;

(b) Deputy Director General of Geological Survey of India – Member;

(c) Director in the Mining and Geology Department of State Government (by whatever name called) - Member Secretary.

[2][Provided that in respect of any mineral specified in Part D of the First Schedule to the Act, in order to identify mineral potentiality of a block based on the available geoscience data where resources are yet to be established as referred in clause (a) of sub-rule (1), including in any block proposed by any person under the sub-rule (1A), the Central Government shall place it before a committee consisting of the following members, namely:—

(a) Additional Secretary or Joint Secretary in the Ministry of Mines, Government of India – Chairman;

(b) Deputy Director General of the State Unit of Geological Survey of India of the State concerned – Member;

(c) Principal Secretary or Secretary in the Mining and Geology Department of State Government (by whatever name called) or his representative – Member

(c) Director (Technical), Ministry of Mines, Government of India - Member Secretary.][2]

(1C) On being satisfied of mineral potentiality of the area, the committee may recommend the area for notification for auction with such alteration in it as may be required.

---

2. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.

(1D) The committee shall recommend or reject the proposal within sixty days of its receipt in the [2][State Government or the Central Government, as the case may be][2] and thereafter the [2][State Government or the Central Government, as the case may be] shall notify recommended block for auction or reject the recommendation within sixty days of such recommendation.][1A]

(2) [1][On completion of prospecting operations under sub-section (10) of section 11 of the Act, Geological Study Report shall be prepared in accordance with the parameters specified in rule 5, which shall include at least a Pre-Feasibility Study Report to establish Probable Mineral Reserve (121 and 122) conforming to Part V of Schedule-I.][1]

8. Relaxation:

Depending upon the local geological setup, mode of occurrence and nature of mineralisation, the State Government may, with the previous approval of the Central Government, relax the exploration norms as specified in Part III of the [Schedule-I], in whole or in part for any mineral or any area.

[Schedule-I]

[See rule 3(f), 3(g), 4(1)(a)(ii), 4(1)(b)(ii), 5(b), 7(1)(b), 7(2)(b)]

The terms used, pertaining to levels of exploration and the category of resources and reserves achieved through various levels of exploration have been defined in Part-I of the [Schedule-I]. The parameters for establishing the existence of mineral content in an area in terms of quantity and grade have been specified in Part-II, Part-III, Part-IVA, Part-IVB, and Part-V of the [Schedule-I].

[1][PART I
DEFINITIONS

1. The definitions and codes used in this Part are drawn mainly from the United Nations Framework Classification (UNFC) and Committee for Mineral Reserves International Reporting Standards (CRIRSCO) Template and have been suitably modified to suit the needs of the country.

(a) Definition of stages of exploration:

The exploration for any mineral deposit involves four stages namely, Reconnaissance Survey (G4), Preliminary Exploration (G3), General Exploration (G2) and Detailed Exploration (G1) and these stages of exploration lead to four resource categories, namely, Reconnaissance Mineral Resource, Inferred Mineral Resource, Indicated Mineral Resource and Measured Mineral Resource respectively reflecting the degree of geological assurance, which are explained as follows:

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.
2. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.

Sl. No.	Stages of Exploration	Definition with explanation
1	**Reconnaissance Survey (exploration)** **(G4)** Quantity with grade estimated mostly based on indirect evidences	Reconnaissance Survey (G4) identifies areas of enhanced mineral potential based primarily on results of regional geological studies, regional geological traverses and mapping, airborne geophysical survey, remote sensing or satellite data study; identifying the mineralised zones through spectral signatures; combination of geophysical surveys like ground gravity and magnetic, Resistivity surveys, Induced Potential (IP) surveys and other such advanced techniques; geochemical study and other indirect methods as well as geological inference and extrapolation; delineation of mineralised area boundaries and surface contouring by Lidar and Drone surveys and sampling data from existing pits, old workings, nala cuttings, dug wells etc., and also sampling data extrapolated from nearby mining lease areas or explored blocks having similar surface geological features may be used for assessment of resources, if possible. Limited ground truthing by means of few drill-holes, as may be required, may be carried out to substantiate the information so collected and asses the quantity and grade of resources, if any.
2	**Preliminary Exploration** **(G3)** Quantity with grade estimated with low level of confidence	(1) Preliminary Exploration involves the initial delineation of an identified mineral deposit area of previous stage by furthering the exploration to extend and identify both laterally and vertically down (third dimension) of the ore body. The methods utilised are outcrop identification, surface geological mapping, and indirect methods such as geophysical and geochemical studies or mapping on appropriate scale based on nature of mineralisation. Limited wide

		spaced pitting or trenching and drilling to ensure maximum core recovery depending on the geological formation with appropriate spacing to understand nature, style and control of mineralisation followed by systematic sampling to identify a deposit, which will be the target for further exploration.
		(2) Estimates of quantities are inferred, based on interpretation of geological, geophysical, geochemical and geo-technical investigation results. Certain degree of extrapolation beyond the normal sample spacing may be allowed with proper justification depending upon the style and mode of occurrence of a mineral deposit.
3	**General Exploration (G2)** Quantity with grade estimated with moderate level of confidence	General Exploration involves increasing the geological confidence level and understanding style and mode of occurrence of mineralisation. Methods used include surface geological mapping (if not done in the previous stage of exploration), pitting or trenching or drilling (appropriate spacing closer than the previous stage, according to nature of mineralisation), followed by sampling for evaluation of mineral quantity and quality (including beneficiation tests on laboratory scale if required). The objective is to establish the main geological features of a deposit, giving a reasonable indication of continuity along lateral and vertical (third dimension) extensions which provide an initial estimate of size, shape, structure of mineralised zone, quantity and grade of the mineral deposit.
4	**Detailed Exploration (G1)** Quantity with grade estimated with high level of confidence	Detailed Exploration involves the detailed three-dimensional delineation of a known mineral deposit achieved through sampling, such as from outcrops,

		pits, trenches, boreholes, shafts and tunnels etc. Sampling locations are closely spaced such that size, shape, structure, quantity, grade and other relevant characteristics of the deposit are established with a high degree of accuracy. Bench scale beneficiation tests involving bulk sampling may be required in certain cases to understand the recovery and any additional by products.

(b) Definition of stages of feasibility study:

Sl. No.	Classes	Definition with explanation
1	**Geological Study (F3)**	A geological study involves reporting of all the exploration activities undertaken during each stage of exploration including the assessment of the mineral resources with quantity and grade. A preliminary economic evaluation of the deposit should be done based on the gathered field data and a comparison with the similar deposits already in operation. This is achieved by applying meaningful threshold values, cut off values for grade, thickness and depth of the mineralised zone.
2	**Pre-Feasibility Study (F2)**	Pre-Feasibility Study is the study to demonstrate the possible techno economic and socio-environmental viability of a mineral deposit through application of various modifying factors wherein a preferred mining method has been ascertained including the mineral beneficiation method, if any. The study shall also include a preliminary financial analysis based on reasonable assumptions on the applicable modifying factors and the evaluation of any other relevant factors which are sufficient to convert all or part of the resources to reserves. The study should lead to part or whole

		of the Mineral Resource being converted to Mineral Reserve. A Pre-Feasibility Study has a lower confidence level than a Feasibility Study (wherein the cost estimates of the project will have ±30% degree of accuracy).
3	**Feasibility Study (F1)**	Feasibility Study is a detailed comprehensive techno-economic and socio-environmental evaluation of a mineral deposit through application of various modifying factors to establish the technical feasibility, economic and financial viability of a mineral deposit. At this stage the preferred mining method, beneficiation technology of the deposit has been adequately established with detailed assessments of the applicable modifying factors, relevant operational factors and detailed financial analysis to demonstrate that extraction is reasonably justified. It is expected that all Governmental clearances to start mining operations are already in place and where such clearances have not been obtained on the date of commencement of the Minerals (Evidence of Mineral Contents) Amendment Rules, 2021, the same shall be obtained in due course. The study may lead to part or whole of the Mineral Resource being converted to Mineral Reserve. The result of the study may reasonably serve as a basis for final decision by a proponent or financial institution to proceed with or finance the development of the project. (wherein the cost estimates of the project will have ±20% degree of accuracy)
4	**Modifying Factors**	**Modifying Factors** are those factors which are taken into consideration while conducting a Prefeasibility or feasibility study so as to convert mineral resources to mineral reserves. These include, but are not limited to, mining, processing, end use, cut-

		off grade, threshold value, metallurgical, infrastructure, economic, marketing, legal, environmental, social and Governmental factors.

(c) Definition of stages of economic viability:

Sl. No.	Category	Definition with explanation
1	**Intrinsically Economic (E3)**	Quantities, reported in tonnes or volume with grade or quality, estimated by means of a Geological Study identified to be of intrinsic economic interest, implying that the resources identified may or may not have any immediate economic value. The economic viability of the resources is further ascertained through a prefeasibility or feasibility study by application of appropriate modifying factors. The classes defined are Measured, Indicated, Inferred and Reconnaissance Mineral Resources.
2	**Potentially Economic (E2)**	Quantities with grade reported by means of a Prefeasibility or Feasibility Study in order of increasing accuracy, not justifying extraction under the prevailing technological, economic, environmental and other relevant conditions. realistically assumed at the time of the determination, but possibly so in the future. The classes defined as per the mineral resources for which are Prefeasibility Mineral Resources and Feasibility Mineral Resources, including only indicated and measured resources.
3	**Economic (E1)**	Quantities with grade identified on the basis of a

		Prefeasibility or Feasibility Study in order of increasing accuracy that justify extraction under the prevailing techno-economic, socio-environmental and other relevant conditions, realistically assumed at the time of the determination. The classes defined are Proved and Probable Mineral Reserves.

(d) Definition of classes of mineral resources and reserve:

Sl. No.	Classes	Definition with explanation
1	**Mineral Resource**	Mineral Resource is a concentration or occurrence of solid material in or on the earth's surface for which quantities with grade or quality have been estimated based on certain geological considerations and understanding which may or may not have any immediate or near-term economic value but are assessed for their future prospective value.
2	**Reconnaissance Mineral Resource (334)**	Reconnaissance mineral Resources (334) are estimates of quantity and grade based on indirect evidences including data and information generated through a reconnaissance survey, limited surface and subsurface sampling data from within the exploration block or data extrapolated from nearby mining or explored areas as may be required. The quantity and grade estimates have a lower level of confidence than that of inferred mineral resources.
3	**Inferred Mineral Resource (333)**	(1) Inferred mineral resource is the quantity

		with grade associated with a mineral deposit which can be estimated with a low level of confidence.
		(2) This is achieved through application of appropriate exploration techniques involving widely spaced drilling, pitting, trenching etc. followed by appropriate sampling and analysis to assume geological continuity of the mineralised body, both laterally and vertically. Certain level of extrapolation beyond the sampling points may be allowed with suitable justification depending upon the type of deposit and its mode of occurrence.
		(3) This resource cannot be converted to mineral reserve but may be upgraded to indicated mineral resource with additional information.
4	**Indicated Mineral Resource (332)**	(1) Indicated mineral resource is the quantity with grade associated with a mineral deposit which can be estimated with a moderate level of confidence.
		(2) This is achieved through application of appropriate exploration techniques involving close spaced drilling than the previous stage, pitting, trenching, etc., having spacing wider than that required for estimation of measured resources which ensures assumption of the geological continuity of the mineralised body, both laterally and vertically. This also includes the laboratory scale beneficiation studies to

		understand the recovery and by-products, if any.
		(3) Indicated Mineral Resource may be wholly or partly converted to Probable Mineral Reserve through a prefeasibility study.
5	**Measured Mineral Resource (331)**	(1) Measured mineral resource is the quantity with grade associated with a mineral deposit which can be estimated with a very high level of geological confidence.
		(2) This is achieved through application of appropriate exploration techniques involving sufficiently close spaced drilling, pitting, trenching etc. followed by appropriate sampling and analysis to ensure geological continuity of the mineralised body both laterally and vertically. Bench scale beneficiation studies to confirm the percentage recoverability with additional minerals, if any recovered.
		(3) Measured Mineral Resource may be wholly or partly converted to Proved or Probable Mineral Reserve through a feasibility or a prefeasibility study.
6	**Mineral Reserve**	Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted. The quantity and grade of the mineral Reserves is ascertained through suitable prefeasibility or feasibility study by application of

		appropriate Modifying Factors.
7	**Proved Mineral Reserve (111)**	Proved mineral reserve is the economically mineable part of a Measured Mineral Resource. The quantity with grade is demonstrated to be economically mineable by means of a feasibility study. A Proved Mineral Reserve implies a high degree of confidence in the Modifying Factors.
8	**Probable Mineral Reserve (121 and 122)**	(1) Probable mineral reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The quantity with grade is demonstrated to be economically mineable by means of a prefeasibility study.
		(2) The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.
9	**Feasibility Mineral Resource (211)**	Feasibility Mineral Resource is that part of Measured Mineral Resource which is not economically mineable and has been defined by studies at feasibility level as appropriate that extraction is presently not justified. This material is identified as being possibly economically viable subject to changes in technological, economic, and environmental or other relevant conditions.
10	**Pre-Feasibility Mineral Resource (221 and 222)**	Pre-feasibility Mineral Resource that part of an Indicated mineral resource, and in some circumstances Measured Mineral Resource, which is not economically mineable and has been defined by studies

		at Pre-feasibility level as not appropriate for extraction at present. This material is identified as being possibly economically viable subject to changes in technological, economic, and environmental and/or other relevant conditions.";][1]

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.

Part-II
Geological Parameters for exploration

1	**Aerial reconnaissance:** Satellite imagery/ remote sensing/ airborne geophysical survey etc. using appropriate technology (applicable mainly for reconnaissance exploration (G4) stage).
2	**Topographic & Geological survey (Mapping):** [1][On 1:50,000 or larger scale for reconnaissance (G4) stage][1] ; on 1:25000 to 1 : 10,000 or larger scale for preliminary exploration (G3) stage; 1:4000/1 : 5,000 or larger scale for general exploration(G2) stage; on 1 : 2,000 or larger scale for detailed exploration (G1) stage.
3	**Ground Geophysical and Geochemical survey:** Geophysical and geochemical survey using appropriate techniques as may be necessary.
4	**Technological:** Exploration and sampling using appropriate techniques from locations such as outcrops, trenches, pits, old workings and drill holes. The sampling locations are spaced suitably (in a grid pattern to the extent possible and may be modified depending on structural complexity) for establishing existence of ore body and its lateral and vertical continuity. Part III of the [Schedule-I] may be referred for further details.
	[1][For Reconnaissance Survey (G4) stage sampling data from existing pits, old workings, nala cuttings, dug wells, etc., and also sampling data extrapolated from nearby mining lease areas or explored blocks having similar surface geological features may be used for assessment of resources, if possible.][1]
	For General (G2) and detailed (G1) stages of exploration the depth continuity of mineralisation may be considered limited to the depth upto which direct evidence of mineralization is established.

	The lateral extension to be considered for resource assessment shall depend on geological considerations supplemented by geological continuity by mapping or by other means and in any case shall not be more than 50% of the grid spacing of the probe points.	
	Assessment based on selected information such as isolated assays, isolated drill holes, assays of panned concentrates etc. is not recommended.	
5	**Sampling & sub sampling:**	
	(a)	Random grab/chip/channel sampling from surface exposure/escarpments/ nallah cuttings/ pit/ channel etc. for reconnaissance stage.
	(b)	Systematic sampling from pits/ trenches/ outcrops/ workings etc. spaced closely enough to confirm geological and grade continuity for other stages of geological assessment.
	(c)	Geological logging and sampling of drill core/chip samples at regular interval, preferably meter wise or less for the mineralized portions.
	(d)	The drill technique to be deployed shall depend on the rock type to be penetrated and with an aim to achieve maximum sample/core recovery.
	(e)	The exploration samples including surface samples, drill core/ chip samples shall be preserved, for future use.
6		**Assay data & Laboratory tests:** Analysis of all samples generated for major radicals appropriate to the mineral under investigation. Analysis of by products such as Ga in bauxite, Ni, PGE in chromite, Au in iron ore, Ag in lead and zinc, Au in copper ore etc. and other deleterious elements wherever necessary.
7		**Petrographic & Mineragraphic studies:** Petrographic analysis of mineralized portions to ascertain the rock types and mineral assemblages including grain size, texture, gaunge and its liberation characteristics etc. if considered necessary.
8		**Bulk density study:** The bulk density must be measured by methods that adequately account for incipient void spaces (vugs, porosity, etc.) in mineral/ ore body
9		**Bulk Sampling for Beneficiation studies:** Bulk sampling if necessary for testing processing technology.
10		**Environmental setting:** Details about local infrastructure, host population, historical sites, forests, sanctuaries, national park and base line information on environmental setting of the area to be collected.
11		**Any other relevant data:** Groundwater, geo-technical and rock characteristics etc. that may be relevant.

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.

Part -III
Exploration Norms for different types of deposits

(The grid spacing given below are indicative. A closer spacing may be necessary depending upon the geological complexity of the deposit)

Type of deposit & principal minerals	**G4 stage**	**G3 stage**	**G2 stage**	**G1 stage**	**Remarks**
I. Bedded Stratiform and tabular deposits of regular and irregular habit: Iron ore, manganese ore, bauxite, limestone, chromite/ potash and salt beds etc.	Scout drilling, if necessary (In line with grid specified by the Central Government from time to time)	For limestone, bauxite, potash and salt beds the grid spacing of bore holes may be 800m or closer for deposits of regular habit and 400m or closer for irregular habit; for others the spacing may be 400m or closer for regular and 200m or closer for irregular habit. [1][Provided that for deposits specified in Schedule II, 3 bore holes drilled so as to form a polygon in blocks of less than 100 hectares and 5 bore holes in blocks of	For limestone, bauxite, potash and salt beds the grid spacing of bore holes may be 400m or closer for regular habit and 200m or closer for irregular habit; for others the spacing may be 200m or closer for regular habit and 100m or closer for irregular habit.	For limestone, bauxite, potash and salt beds the grid spacing of bore holes may be 200m or closer for regular habit and 100m or closer for irregular habit; for others the spacing may be 100m or closer for regular habit and 50m or closer for irregular habit.	[1][For G4 and G3 stages, sampling data from existing pits, old workings, nala cuttings, dug wells, etc., within the block and also sampling data extrapolated from nearby mining lease areas or explored blocks having similar surface geological features may also be used for assessment of resources if possible.][1] For shallow surficial deposits continuing to a depth of up to 6m from surface pitting in a grid pattern as per the grid spacing for various levels of prospecting may suffice.

		more than 100 hectares may be sufficient. The lateral influence beyond the bore hole spacing may be limited to a maximum of 50 per cent. of the spacing depending on the results of surface geological mapping.][1]			For deposits continuing further in depth drilling is recommended.
II. Lenticular bodies of all dimensions including bodies occurring en echelon, silicified linear zones of composite veins. Lenses, pockets, stockworks; irregular shaped modest to small sized bodies Iron and manganese ore bodies in lateritoid terrain, pockety bauxite and nickel-cobalt laterites, base metal sulphides of Cu-Pb-Zn- Sb-Hg, pediform	Scout drilling, if necessary (In line with grid specified by the Central Government from time to time)	Bore-hole spacing along strike may be kept 200-100m or closer interval	Bore-hole spacing along strike may be kept 100-50m or closer. In specific cases, depending on necessity, it may be brought down to 25m or closer, especially for precious metals.	Bore-hole spacing along strike may be kept 50-25m or closer interval	Exploratory mine openings-open pit or underground with bulk determination of grades wherever necessary at G2 and G1 stage.

chromite, auriferous quartz reefs, PGM, graphite lenses, molybdenum, tin bodies, pyrite, skarn bodies of scheelite, wollastonite, fluorite etc., vermiculite, magnesite, insitusilimanie and kyanite lenses etc.					
[3][**III. Gem-stones:** Beryl, topaz, emerald deposits, diamond, pockets/ lenses/ veins of fluorite in carbonatite, etc.	Scout drilling, if necessary (in line with grid specified by the Central Government from time to time).	8 to 10 pits/ trenches per sq.km. Boreholes to test the continuity of host rock, at 200m. or closer interval.	Trenching preferably at 50m. interval Borehole to test continuity of host rock at 100-50m. or closer interval.	Borehole spacing may be kept closer to that of G2 stage.	Borehole spacing may be kept closer to that of G2 stage.
IIIA. Rare metal and Rare Earth Elements (REE) occurring in pegmatites, reefs and veins/ pipes.	Scout drilling/ random pitting/ trenching as per necessity	10 to 25 pits/ trenches per sq. km. In case of drilling, borehole spacing may be 40m. x 20m. or 40m. x 40m.	Pitting/ Trenching/ preferably at 20m. interval. In case of drilling, borehole spacing may be 20m. x 10m. or 20m. x 20m.	Exploratory open pit or boreholes at 10m. x 10m. or closer or underground sampling with bulk determination of grades and recovery wherever necessary.	
IIIB. Rare metal and Rare Earth Elements (REE) occurring in					

carbonatite and other alkali igneous rocks:					
(i) Tabular Rare metal and Rare Earth Elements (REE) deposits.	Scout drilling/ random pitting/ trenching as per necessity	Borehole grid/ sample spacing may be 400m x 200m or closer	Borehole grid/ sample spacing may be 200m x 100m or closer	Borehole grid/ sample spacing may be 100m x 100m or closer	
(ii) Lenticular Rare metal and Rare Earth Elements (REE) deposits in the form of veins / lenses.	Scout drilling/ random pitting/ trenching as per necessity	Borehole/ Sample spacing may be 200m x 200m or closer	Borehole/ sample spacing may be 100m x 100m or closer	Borehole / sample spacing may be 100m x 50m or closer.][3]	
IV. Float or Placer deposits: Iron, manganese ore float; Placer tin and gold deposit; garnet, ilmenite, rutile, zircon; diamond, corundum, kyanite, sillimanite floats.	Scout drilling, if necessary (In line with grid specified by the Central Government from time to time)	400m along trend of the deposit and 200m across	200m* along trend of the deposit and 100m across	100m* along the trend of the deposit and 50m across	For shallow deposits pitting in grid may suffice. Stream sediment or placer sediment sampling as may be required at each stage. Laboratory scale separation and testing and analysis of concentrates.

*In case replenishment is reported in placer deposit associated with beach sand, river sand etc., periodic reassessment of resources may be necessary.

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.

3. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2025 G.S.R. 382(E) No. 339 dated 12.06.2025.

[1][PART IV- A]
REPORTING OF MINERAL RESOURCES

Standard Template for a Geological study Report which shall also form a part of the pre-feasibility or feasibility report

1. A Geological Study Report for estimation and reporting of Mineral Resources integrating all data of exploration, sampling and testing generated through geophysical (aerial and ground), geochemical, geological surveys and technological study shall be undertaken for every stage of exploration, i.e., from G4 to G1 for assessing the resources.

2. Mineral resource assessment is normally a collective effort involving a multidisciplinary approach. It is expected that individuals/ subject matter experts involved in each part of the report preparation are given due credit for that part with proper acknowledgement in the report and also, they are willing to take due responsibility regarding the accuracy and authenticity of that part. However, the final responsibility of the report shall lie with the lead expert or a group of experts who, after proper due diligence of all the parts of the report have arrived at the final estimation of the resources and reserves and are convinced about the methodology and processes followed in arriving at the resource estimates. These experts taking the final responsibility for the report shall be referred to as the qualified persons and shall certify the report by signing off the report with their credentials.

Sl No.			Criteria with parameters of reporting
1.	**Executive Summary**		
	i		The executive summary shall include details about the location of the mineral deposit, purpose of the mineral investigation and the stage of the exploration, brief geology, mineralization, exploration plan with spacing of the sample points, depth of exploration and whether the mineralisation extends beyond the depth of direct evidence. Outcome of the exploration studies including the quantity of resources identified with grade and quality under various classes.
	ii		The summary shall also include observation on the issues regarding the future plan or strategy for the deposit including likely mine ability of the deposit based on present technological, environmental, social and market conditions.
2.	**Details of the Qualified Person(s) / Exploration Agency** (To be provided separately for all the qualified persons signing off the report)		
	i	(a)	Name:
		(b)	Address:
		(c)	Contact Mobile No:
		(d)	E-Mail id:
		(e)	Qualification:
		(f)	Experience:
		(g)	Affiliation to any organization/ company, if yes, specify the name of the organisation or company:

	ii	Details of qualification and experience of persons associated with various aspects of exploration assessment of resources and reserves	
3.	**Title and ownership**		
	i	Name of the explorer/ Mining or prospecting rights holder: Address: Telephone No: E-Mail id:	
	ii	Details of period of prospecting/mineral right if any: In case of a licence or lease:	
		(a)	Date of grant:
		(b)	Date of execution:
		(c)	Period of licence or lease:
		(d)	Date of completion:
4.	**Details of the Area Under Study**		
	(i)	Village, District, State	
	(ii)	Survey of India Toposheet No., Differential Global Positioning System(DGPS) coordinates of all corner points of the area and borehole points in latitude and longitude (Degree Minutes Second) format WGS-84 Datum	
	(iii)	Cadastral details of the area with land use, area under forest with type of forest. In case the cadastral details are not available an indicative data of breakup of government, private and forest land	
	(iv)	Mineral(s) under investigation or granted under licence or lease	
5.	**Physiography and environment** *(Data to be furnished up to five km. radius from the peripheral boundary of project area in case of G3,G2 and G1 stage of exploration)*		
	(i)	Relief of the area with minimum and maximum elevation, drainage pattern, natural water courses, reservoirs, etc.	
	(ii)	Roads, railway track, electric transmission line, telephone line, etc., passing through the area or nearby	
	(iii)	Host population (local tribes), Human settlements within and nearby the area	
	(iv)	Socio Demographic profile of the area and nearby	
	(v)	Historical sites and archaeological monuments, places of worship, public utilities etc. within or near by	
	(vi)	Forests, sanctuaries, national park and wild life sanctuaries; grazing land and gochar land within or near by the area with distance from periphery of the area explored.	
	(vii)	Flora and Fauna within and nearby	
	(viii)	Water bodies such as river, nala, stream, reservoir, etc., within or nearby	
	(ix)	Climatic conditions:	
		(a)	Temperature (annual) min____max____ Avg____
		(b)	Rain fall (annual) min____max____ Avg____
		(c)	Humidity (annual) min____max____ Avg___

	(x)	Any other physiographic, social and environmental factor having potential to affect the viability of the project and assessment of resources and reserves.
6.	**Infrastructure**	
		Local infrastructure with roads, railways, port facilities, electricity, water etc. with distance from the area. Details of nearby industries in the area which may use the mineral commodity likely to be mined
7.	**Geology**	
	(i)	Brief regional geology of the area outlining the broad geological, stratigraphical and structural frame work.
	(ii)	Local geological setting detailing the common rock types, controls of mineralization, details of old workings if any, surface exposures, etc., of the area under study also of adjoining nearby areas, if the information is likely to have an impact on the area under study.
	(iii)	Structural details of the area such as dip, strike, folds, faults, etc.
	(iv)	A discussion on the type of the deposit based on the style of mineralisation and minerals under investigation. Suggested exploration plan with spacing of the sampling points and depth of exploration commensurate with the stage of exploration.
	(v)	The extent and variability of the mineralisation expressed as length (in meter) (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.
8.	**Previous Exploration**	
	(i)	Name and address of prospecting agency or permit holder or licensee involved in the exploration of the area with year and period of exploration (if more than one agency is involved details to be given separately for each agency)
	(ii)	Brief details of the exploration carried out (to be given separately for each agency)
	(iii)	Reserves or resources estimated, if any, during the previous exploration campaign with quantity and grade under various categories
9.	**Aerial or ground geophysical or geochemical data**	
		Details of aerial, ground geophysical and geochemical survey taken up and their results.
10.	**Exploration undertaken during current investigation**	
	(i)	Details of pitting, trenching, drilling, etc., with spacing and distribution of the sample points along with geographical co-ordinates.
	(ii)	**Data spacing for reporting of exploration results:** Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the mineral resource estimation procedure(s) and classifications applied.
11.	**Location of data point**	
	(i)	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys, azimuth, inclination, coordinates of bore holes etc), trenches, mine workings and other locations used in mineral resource estimation.

	(ii)	Quality and adequacy of topographic control.	
12.	**Sampling technique**		
		Nature and quality of sampling (eg. cut channels, random chips, etc.) and measures taken to ensure sample representation.	
13.	**Drilling technique and drill sampling employed**		
	(i)	Drill type (eg. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (eg. core diameter, triple or standard tube).	
	(ii)	Whether core and chip sample recoveries have been properly recorded and results assessed.	
	(iii)	Measures taken to maximise sample recovery and ensure representative nature of the samples.	
	(iv)	Whether a relationship exists between sample recovery and grade and whether sample bias could have occurred due to preferential loss or gain of fine or coarse material.	
	(v)	Logging: -Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	
	(vi)	Discussion on the analysis results of handheld X-ray fluorescence (XRF), if used in the investigation.	
14.	**Sub-sampling techniques and sample preparation**		
	(i)	If core, whether cut or sawn and whether quarter, half or all core taken.	
	(ii)	(a)	If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.
		(b)	For all sample types, the nature, quality and appropriateness of the sample preparation technique.
	(iii)	Quality control procedures adopted for all sub-sampling stages to maximize representation of samples.	
	(iv)	Measures taken to ensure that the sampling is representative of the in-situ material collected.	
	(v)	Whether sample sizes are appropriate to the grain size of the material being sampled.	
15.	**Quality of assay data and laboratory tests**		
	(i)	(a)	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
		(b)	Nature of quality control procedures adopted (eg. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. lack of bias) and precision have been established.
		(c)	Check analysis of at least 10% of samples should be analyzed from third party National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited or Department of Science and Technology (DST) or Bureau of Indian Standards (BIS) recognized laboratories or government laboratories for assessing the acceptable levels of accuracy.

		(d)	Security and chain of control of samples should be clearly mentioned.
16.	**Moisture**		
		Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	
17.	**Bulk Density**		
		Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	
18.	**Beneficiation studies as may be required**		
		Details of beneficiation studies carried out at laboratory scale of bench scale involving bulk sampling tests to understand and suggest technological factors for optimum recovery of explored mineral commodity, any additional by-products or co-products that may be available in the ore which is recoverable should also be discussed. The detailed flow sheet with yield recovery factors and to be discussed	
19.	**Resource estimation techniques**		
	(i)	Discussion on sufficient data density to assure continuity of mineralisation and synthesis adequate data base for estimation procedure used.	
	(ii)	Whether previous exploration data has been used and integrated with the current exploration data for assessment of the updated resources.	
	(iii)	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of extrapolation from data points	
	(iv)	The basis for the classification of the mineral resources into varying confidence classes.	
	(v)	The assumptions made regarding recovery of by-products.	
	(vi)	Detailed description of the method used and the assumptions made to estimate tonnages and grades (section, polygon, inverse distance, geostatistical, or other method).	
	(vii)	Description of how the geological interpretation was used to control the resource estimates.	
	(viii)	Discussion of basis for using or not using grade cutting or capping. If any computer software was used for estimation of resources then name of the software with the version and method chosen, description of programmes and parameters used.	
	(ix)	Geostatistical methods are extremely varied and should be described in detail. The method chosen should be justified. The geostatistical parameters, including the variogram, and their compatibility with the geological interpretation should be discussed. Experience gained in applying geo-statistics to similar deposits should be taken into account.	
	(x)	Data verification or validation procedures used, including peer review report.	
20.	**Reporting of resources**		

		Basis of reporting of resources into various classes. The criteria and methods used for the classification to be specified. The quantities with grades, for each class are to be specified. The average grade under each class is to be specified. Grade wise classification should also be reported under suitable cases. In case of metallic deposits such as gold, precious metals and base metals the metal content is to be specified and resources should be estimated at various cut off grades. Factor, if any, applied to take care of the confidence level from the actual estimates should also be specified. The inferred, indicated and measured resources should be highlighted in a table.	
21.	**Summary and recommendations**		
	(i)	(a)	A discussion on the outcome of the exploration work detailing the nature of the deposit, the dimension of the deposit, general structural trend, depth of occurrence and depth up to which exploration has been done, possibility of continuity of mineralisation beyond the depth of exploration and future exploration requirements, if any.
		(b)	The resources estimated under various classes with grade.
		(c)	The possibility of economic extraction based on present technological, environmental, social and market conditions.
		(d)	Hindrances, if any, anticipated in the economic extraction of the deposit.
	(ii)	Discussion on the suggested future plan or strategy for the deposit for further exploration and mining.	
22.	**Plates and maps**		
	(i)	Location plan of the area on 1:50000 showing various topographic and physiographic features nearby the project site.	
	(ii)	Topographic Map/ Cadastral plan on 1:4000, if available.	
	(iii)	A physiography or surface topography plan showing various topographical and physiographical features.	
	(iv)	Surface geological plan on appropriate scale showing reliable geological map of appropriate scale with Differential Global Positioning System (DGPS) - global coordinates of the corner points showing major lithological units, structural and tectonic features; extent of surface mineralisation, structure, location of boreholes, pits, trenches, old workings, etc. If the area or part of it has been covered under exploration earlier then the same with the location details should be shown in a map in appropriate scale.	
	(v)	Cross sections at suitable intervals showing vertical projections of litho-units and mineralisation.	
	(vi)	Level plan or slice plan at suitable intervals showing horizontal projections of mineralisation, if necessary.	
23.	**Annexures or enclosures to the report**		
	(i)	The report shall include all relevant data including maps, sections, logs, analysis reports, photographs, etc., in support of the estimates made.	
	(ii)	In case of a Prospecting Licences or Reconnaissance Permit, all relevant orders of grant, execution of licence, permissions to carry out	

		exploration from forest department, Letter of Intent, etc., shall also form part of the report.
24.	**Any other information**	
		Any other information as may be available or required by any authority as prescribed
25.	Certificate from the qualified person with name, date and signature.	

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.

Part IV-B
Estimation and Reporting of Diamonds and other Gemstones

Criteria listed in Part IVA also apply to this group; additional guidelines are available in the 'Guidelines for the Reporting of Diamond Exploration Results' issued by the Diamond Exploration Best Practices Committee established by the Canadian Institute of Mining, Metallurgy and Petroleum.

1	Indicator minerals	- Reports of indicator minerals, such as chemically/ physically distinctive garnet, ilmenite, chrome spinel and chrome diopside, should be prepared by a suitably qualified laboratory.
2	Source of diamonds.	- Details of the form, shape, size and colour of the diamonds and the nature of the source of diamonds (primary or secondary) including the rock type and geological environment.
3	Sample collection.	- Type of sample, whether outcrop, boulders, drill core, reverse circulation drill cuttings, gravel, stream sediment or soil, and purpose, e.g. large diameter drilling to establish stones per unit of volume or bulk samples to establish stone size distribution.
		- Sample size, distribution and representativity.
4	Sample treatment.	- Type of facility, treatment rate, and accreditation.
		- Sample size reduction. Bottom screen size, top screen size and re-crush.
		- Processes (dense media separation, grease, X-ray, hand-sorting etc.).
		- Process efficiency, tailings auditing and granulometry.

		- Laboratory used, type of process for micro diamonds and accreditation.
5	Carat	One fifth (0.2) of a gram (often defined as a metric carat or MC).
6	Sample grade.	- Sample grade in this section is used in the context of carats per units of mass, area or volume.
		- The sample grade above the specified lower cut-off sieve size should be reported as carats per dry metric tonne and/or carats per 100 dry metric tonnes. For alluvial deposits, sample grades quoted in carats per square metre or carats per cubic metre are acceptable if accompanied by a volume to weight basis for calculation.
		- In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive sample grade (carats per tonne).
7	Reporting of Bulk Exploration Results	- Complete set of sieve data using a standard progression of sieve sizes per facies. sampling results, global sample grade per facies. Spatial structure analysis and grade distribution. Stone size and number distribution. Sample head feed and tailings particle granulometry.
		- Sample density determination.
		- Per cent concentrate and under size per sample.
		- Sample grade with change in bottom cut-off screen size.
		- Adjustments made to size distribution for sample plant performance and performance on a commercial scale.
		- If appropriate or employed, geo-statistical techniques applied to model stone size, distribution or frequency from size distribution of exploration diamond samples.
		- The weight of diamonds may only be omitted from the report when the diamonds are considered too small to be of commercial significance. This lower cut-off size should be stated.
8	Grade estimation for reporting Mineral	- Description of the sample type and the spatial arrangement of drilling or sampling reporting Mineral designed for grade estimation.

	Resources and Ore Reserves.	- The sample crush size and its relationship to that achievable in a commercial treatment plant.
		- Total number of diamonds greater than the specified and reported lower cut-off sieve size.
		- Total weight of diamonds greater than the specified and reported lower cut-off sieve size.
		- The sample grade above the specified lower cut-off sieve size.
9	Value estimation.	- Valuations should not be reported for samples of diamonds processed using total liberation method, which is commonly used for processing exploration samples.
		- To the extent that such information is not deemed commercially sensitive, Public Reports should include:
		• Diamonds quantities by appropriate screen size per facies or depth.
		• *Details of parcel valued.*
		• *Number of stones, carats, lower size cut-off per facies or depth.*
		• The average $/carat and $/tonne value at the selected bottom cut-off should be reported in US Dollars. The value per carat is of critical importance in demonstrating project value.
		• The basis for the price (e.g. dealer buying price, dealer selling price etc.).
		• An assessment of diamond breakage.
10	Classification.	- In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive grade (carats per tonne). The elements of uncertainty in these estimates should be considered, and classification developed accordingly.

Part-V
[1][CONTENTS OF PRE-FEASIBILITY AND FEASIBILITY REPORT][1]

[1][Criteria for Prefeasibility or Feasibility Report for Estimation and Reporting of Mineral Reserves (the criteria listed in the geological study report shall also constitute an integral part of this template).][1]

Sl. No.	Contents	Explanation
1	Mineral Resource estimate for conversion to Mineral Reserve	- Description of Mineral Resource estimate used as a basis for the conversion to a Mineral reserve.
		- Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Mineral Reserves.
		- The type and level of study undertaken to enable Mineral Resources to be converted to Mineral Reserves i.e. Prefeasibility/ Feasibility level.
2	[1][Cut-off grade or quality parameters][1]	- The basis of the adopted cut-off grade(s) or quality parameters applied, including the basis, if appropriate, of equivalent metal formulae& the threshold values prescribed.
3	Mining factors or assumptions	- The method and assumptions used to convert the Mineral Resource to a Mineral Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design supported with Conceptual plan for mining).
		- Anticipated Ore to OB ratio, mine recoveries, dilutions etc. for both open cast and U/G workings.
		- The choice of, the nature and the appropriateness of the selected mining method(s), the size of the selected mining unit (length, width, height) and other mining parameters including associated design issues such as pre-strip, access, etc.
		- The assumptions made regarding geo-technical parameters (eg. pit slopes, stope sizes, etc.), grade control and pre-production drilling.
		- The major assumptions made and Mineral Resource model used for pit optimisation (if appropriate).
		- The mining dilution factors, mining recovery factors, and minimum mining widths used.
		- The infrastructure requirements of the selected mining methods. Where available, the historic reliability of the performance parameters.

4	Metallurgical factors or assumptions	- The metallurgical process proposed and the appropriateness of that process to the type of deposit.
		- The nature, amount and representativeness of metallurgical test work undertaken and the metallurgical recovery factors applied.
		-Any assumptions or allowances made for deleterious elements.
		- The existence of any bulk sample or pilot scale test work and the degree to which such samples are representative of the ore body as a whole.
		- The tonnages and grades reported for Mineral Reserves should state clearly whether these are in respect of material to the plant or after recovery. Comment on existing plant and equipment, including an indication of replacement and salvage value.
5	Cost and revenue factors	- The derivation of, or assumptions made, regarding projected capital and operating costs.
		- The assumptions made regarding revenue including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, etc.
		- The allowances made for royalties payable, both Government and private.
		- Basic cash flow inputs for a stated period.
		- Yearly planned production, Net Present Value (NPV) and Internal Rate of Return (IRR) of the deposit, intrinsic value of the deposit based on annual projected production.
6	Market assessment	- The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.
		- A customer and competitor analysis along with the identification of likely market windows for the product.
		- Price and volume forecasts and the basis for these forecasts.
		- For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.

7	Other modifying factors	- The effect, if any, of natural risk, infrastructure, environmental, legal, marketing, social or governmental factors on the likely viability of a project and/or on the estimation and classification of the Mineral Reserves.
		- The status of titles and approvals critical to the viability of the project, such as mining leases, discharge permits, government and statutory approvals.
		- Environmental descriptions of anticipated liabilities. Location plans of mineral rights and titles.
8	Classification	- The basis for the classification of the Mineral Reserves into varying confidence categories.
		- Finalization of estimates of grade wise mineable quantities in contemplation with proposed preliminary mine design/ conceptual plan subject to all necessary approvals/ contracts have been confirmed or there are reasonable expectations that all such approvals/ contracts will be obtained within a reasonable time frame and with certification that that Economic viability is not affected by short-term adverse market conditions provided that longer-term forecasts remain positive.
[1][9. Certificate	Certificate from the qualified person	Name, date & signature.][1]

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.

[1][Schedule-II]
[See proviso to rule 5]

Parameter For Establishment The Existence of Mineral Content in Certain Area in Respect of Certain Minerals

Sl. No.	Principle mineral	Type of deposit
1.	Limestone, iron ore and bauxite	Bedded, stratiform and tabular deposits of homogenous, regular sedimentary and metasedimentary basins without

		significant structural deformations of limestone and iron ore and residual high level tabular deposits of bauxite.”

[1][Schedule III]
[See rule 7(1A)]
Format for Submitting Proposal for Auction of an Area for Grant of Composite Licence

To,
The Director,
Mining and Geology Department,

Government of _____ *[mention name of State Government]*

[2][OR

To,
The Director (Technical),
Ministry of Mines
Government of India,
Shastri Bhawan,
New Delhi – 110001.

[strike-out whichever is not applicable][2]

Madam/ Sir,

Under the provision of sub-rule (1A) of rule 7 of the Minerals (Evidence of Mineral Contents) Rules, 2015, I/we am/are submitting the following details and other particulars of the area for consideration of the State Government [2][/the Central Government [strike-out whichever is not applicable][2] for auction of composite licence in respect of the area. It is submitted that I/we intend to participate in auction of composite licence in respect of the said area.

1. Name and Address of the Applicant

(a)	Name:	
(b)	Postal address:	
(c)	Telephone Number (Office):	
(d)	Fax number (Office):	
(e)	Mobile No.:	
(f)	Telephone Number (Residence):	
(g)	E-Mail address:	

2. Location Details of the Area Proposed for Auction

(a)	State	
(b)	District (s)	
(c)	Nearby Village(s)	
(d)	Survey of India (SOI) Toposheet (s) No.	
(e)	Area in sq. km.	
(f)	Boundary coordinates of the proposed block (in Decimal degree)	

3. Mineral Potential of the Area

(a)	Name of Mineral(s) identified/ expected in the area/ block	
(b)	Basis on which mineral potential in the area has been identified	
(c)	List of documents and references relied upon in support of item (b) above.	

4. Documents to be enclosed with the application

i) Location of the proposed block demarcated on Survey of India (SOI) Toposheet No.

ii) Documents mentioned in item 3(c) above.

Place
Date

Signature of Applicant

---

1. Minerals (Evidence of Mineral Content) Rules, 2015 First Amendment, 2021 G.S.R. 421(E) No. 337 dated 18.06.2021.
2. Minerals (Evidence of Mineral Content) Rules, 2015 Amendment, 2024 G.S.R. 52(E) No. 46 dated 21.01.2024.