

Proposal _____ for _____ Block,
_____ District, _____ State for
Reconnaissance Survey (G4 Stage) under NMET.

**(Basemetals/ Ferrous/ Non-Ferrous/ Industrial/
Strategic & Critical/ Precious metals etc.)**

By

_____ **Agency**

Place:

Date:

Summary of the Block for Reconnaissance Survey (G4 Stage)
GENERAL INFORMATION ABOUT THE BLOCK

	Features	Details
	Block ID	
	Exploration Agency	
	Commodity	
	Mineral Belt	
	Completion Period with entire Time schedule to complete the project	
	Objectives	
	Whether the work will be carried out by the proposed agency or through outsourcing and details thereof. Components to be outsourced and name of the outsource agency	
	Name/ Number of Geoscientists	
	Expected Field days (Geology) Geological Party Days	
1.	Location	
	Latitude	
	Longitude	
	Villages	
	Tehsil/ Taluk	
	District	
	State	
2.	Area (hectares/ square kilometres)	
	Block Area	
	Forest Area	
	Government Land Area	
	Private Land Area	
3.	Accessibility	
	Nearest Rail Head	
	Road	
	Airport	
4.	Hydrography	
	Local Surface Drainage Pattern (Channels)	
	Rivers/ Streams	
5.	Climate	
	Mean Annual Rainfall	
	Temperatures (December) (Minimum) Temperatures (June) (Maximum)	
6.	Topography	
	Toposheet Number	
	Morphology of the Area	
7	Availability of baseline geoscience data	
	Geological Map (1:50K/ 25K)	Available / Not Available

	Geochemical Map	Available / Not Available
	Geophysical Map (Aeromagnetic, ground geophysical, Regional as well as local scale GP maps)	Available / Not Available
8.	Justification for taking up Reconnaissance Survey / Regional Exploration	Details should be furnished with surface/subsurface (pits/old work) geological, geochemical. Geophysical data. In case of exploration proposed near the active mine area, sufficient justification should be given by collecting surface samples in suitable location which represent the mineralisation from the area proposed for current exploration work along with analytical data

Detailed description on the following titles to be made in the proposal.

1. Block Summary

Physiography

Background Geology (Regional Geology, Geology of the Block).

Mineral potentiality based on geology, geophysics, ground geochemistry etc.

Scope for proposed exploration.

Observation and Recommendations of previous work.

2. Previous Work

Previous Exploration in adjoining area (Regional area); All the sample (bed rock/trench/groove/soil), borehole location should be plotted on the geological map and analytical data should be discussed briefly

Previous Exploration in the proposed block area: All the sample (bed rock/trench/groove/soil), borehole location should be plotted on the geological map and analytical data should be discussed briefly

3. Block description

Block Corner points Cardinal Points	Latitude	Longitude
A		
B		
C		
D		
E etc.		

4. Planned Methodology

5. Nature Quantum and Target

G4 stage GR should be submitted for G3 stage proposal and G3 stage GR for G2 proposal
Succinct details of the previous stage exploration

Nature and Quantum of work proposed

Components	G4 Stage
Aerial reconnaissance	Remote sensing, airborne geophysical survey etc.
Geological Survey	i) 1.25K/ 12.5K ii) Assessment of lithology, structure, surface mineralisation and analysis of old history of mining, if any.
Geochemical Survey	i) Regional Grab / chip / Stream Sediment / Soil Sampling ii) Recording of broad geomorphology, drainage, etc.
Geophysical Survey	Aero-geophysical / Regional ground geophysical survey (Refer another table below)
Pitting/ Trenching	Five to ten to expose mineralised zone. The location of Pitting and trenching should be judiciously planned to cover the entire mineralised body, to delineate the strike extension and also for planning scout boreholes. Sample length to be specified
Scout drilling / Systematic drilling	Few boreholes if required along the positive profiles delineated by surface sampling/pitting trenching
Grab and Chip sampling	A few samples from bed rock (few representative samples from all the exposed rocks in the area for first-hand information and more

	samples from rocks which host the mineralisation). Few representatives samples to be subjected to Davis tube recovery test in case of BMQ.
Core sample	Sample from mineralised zones as well as hanging wall/footwall side to be collected. Sample length to be specified
Petrographic and mineragraphic studies	Principal rock types, mineral assemblage, identification of minerals of interest
Synthesis of all available data	<ul style="list-style-type: none"> i) Integration of regional geophysical, geological and geochemical data. ii) Synthesis of all available data and Report writing

Borehole spacing (As per MEMC, 2015)

Type of deposit	Bedded Stratiform and Tabular deposit of regular habit minerals to be identified	Bedded stratiform and tabular deposits of irregular habit (Minerals to be identified)	Lenticular bodies occurring en echelon Lenses, pockets. (Different minerals)
G4 Stage	Scout drilling, if necessary (In line with grid specified by the Central Government / IBM time to time).	Scout drilling, if necessary (In line with grid specified by the Central Government / IBM time to time).	Scout drilling, if necessary (In line with grid specified by the Central Government / IBM time to time).
Remarks	For shallow surficial deposits continuing to a depth of up to 6 m from surface pitting in grid spacing for various levels of prospecting may suffice. For deposits continuing further in depth, drilling is recommended.	For shallow surficial deposits continuing to a depth of up to 6m from surface pitting in grid spacing for various levels of prospecting may suffice. For deposits continuing further in depth, drilling is recommended.	-----
(Vertical depth of intersection of mineralised zone should be specified (first level), number of boreholes, approximate borehole spacing, approximate length of boreholes may be specified)			

Geophysical Studies

General specifications of geophysical studies for various commodities is practice by GSI are as below, however, the parameters likely to vary depending on the local geological set-up. In general, after delineation of surface indication of mineralization and surface mineralization control, areas are selected for regional ground geophysical data acquisition and its studies.

Commodity	Parameters	Technique	G4 stage (Reconnaissance Survey)
Chromite	Method	Gravity	1-2 km or GPM data can be used
	Spacing		
	Method	Magnetic	1-2 km or GPM data can be used
	Spacing		
Manganese	Method	Gravity	1-2 km or GPM data can be used
	Spacing		
	Method	Magnetic	1-2 km or GPM data can be used
	Spacing		
Basemetals	Method	Gravity	1-2 km
	Spacing		
	Method	Magnetic	1-2 km
	Spacing		
Method	Electrical Resistivity, IP, SP	Profiles as per objective	
Spacing			
Iron Ore	Method	Magnetic	1-2 km grid, Regional
	Spacing		
REE & RM	Method	Gravity	--
	Spacing		
	Method	Resistivity	--
	Spacing		
Method	Radiometric	--	
Spacing			
Gold/ PGE & Ni/ Basemetals	Method	IP / Resistivity	Traversing, 200 m – 400 m traverse interval, 10-20 m Station interval
	Spacing		
	Method	Magnetic	Traversing, 200 m – 400 m traverse interval, 10-20 m Station interval
	Spacing		
Method	SP	Traversing, 200 m – 400 m traverse interval, 10-20 m Station interval	
Spacing			
Graphite	Method	SP	Traversing, 200 m – 400 m traverse interval, 10-20 m Station interval
	Spacing		
	Method	Gravity	Traversing, 200 m – 400 m traverse interval, 10-20 m Station interval
	Spacing		
	Method	Magnetic	Traversing, 200 m – 400 m traverse interval, 10-20 m Station interval
	Spacing		

Diamond	Method	Gravity	Random grid, 1-2 Km
	Spacing		
	Method	Magnetic	Random grid, 1-2 Km
	Spacing		
	Method	Resistivity	Random grid, 1-2 Km
	Spacing		
Gemstone	Method	Methods, profiles, spacing will be as per the nature of host rocks	
	Spacing		
Potash and Phosphorite	Method	Methods, profiles, spacing will be as per the nature and association of these deposits 2D & 3D Seismic, radiometric survey	
	Spacing		
Tin, Tungsten and Molybdenum	Method	Methods, profiles, spacing will be as per the nature and association of these deposits	

6. Manpower deployment
7. Break-up of expenditure
8. References

List of Plates

- Plate 1: Geological map on 1:50,000 with location index.
Plate 2: Geological map/s on 1:50,000.
Plate 3: Ground geophysical map/s (NGPM) on 1:50,000.
Plate 4: Aeromagnetic map/s.
Plate 5: Proposed block boundary over Geological map.
Plate 6: Proposed block boundary over Land use/ Accessibility map. Not required at this stage.
Plate 7: Proposed block boundary over topographic map on 1:50,000.
Any other relevant plates.