9. Reconnaissance Survey (G4) for REE and Associated Minerals in Maddur area, Narayanpet District, Telangana

Implementing Agency: Critical Mineral Trackers

	Features	Details
	Block ID	CMT/NMET/G4-020/2025
	Exploration Agency	Critical Mineral Trackers (CMT)
	Commodity	REE and Associated Minerals /Elements
	Mineral Belt	Narayanapet Kimberbite Belt
	Budget & Time schedule to complete the project.	10 months
	Objectives	G-4 reconnaissance Survey to Identify and dilineate potential zones for REE Mineralisation
	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	Predominantly the work would be carried out by the proposed agency i.e CMT . Only geophysical works will be outsourced
	Name/Number of Geoscientists	2 Senior Geologists, 2 Junior Geologists
	Expected Field days (Geology, Geophysics, Surveyor)	180 days
1.	**Location**	
	Latitude and Longitude	Latitude - A.16.95, B.16.951, C.16.752, D.16.752 Longitude - A.77.596, B.77.659, C.77.663, D.77.596
	Villages	Chintaladinne Dorepalli, Pallerla, Maddur

	Tehsil/Taluk	**Maddur**
	District	Narayanpet and Vikarabad districts
	State	TELANGANA
2.	**Area (hectares/ square kilometres)**	
	Block Area	160 sq.km
	Forest Area	1.67 sq.km
	Government Land Area	Not Known
	Charagaha	Not Known
	Private Land Area	158.33 sq.km
3.	**Accessibility**	
	Nearest Rail Head	Vikarabad
	Road	Well connected
	Airport	Shamshabad, Hyderabad
4.	**Hydrography**	
	Local Surface Drainage Pattern (Channels)	Sub - dendritic
	Rivers/ Streams	Surya, Goljara
5.	**Climate**	
	Mean Annual Rainfall	1008 mm
	Temperature:	17^0C - Minimum 45^oC - Maximum
6.	**Topography**	
	Toposheet Number	56 H/9
	Morphology of the Area	Undulating topography withgranite hill range in the northern pa

7.	**Availability of baseline geoscience data**	
	Geological Map (1:50K)	Available
	Geochemical Map	**Available**
	Geophysical Map (Aeromagnetic, ground geophysical, Regional as well as local scale GP maps)	**Available**
8.	**Justification for taking up Preliminary Exploration**	The Maddur block area is part of the Narayanpet Kimberlite Belt where G.S.I has carried out their studies for nearly two decades and identified 37 kimberlites bodies. These kimberlites are the host rocks for diamonds but unlike Wajrakarur and other areas these kimberlites did not yield diamonds. These bodies are mantle derived and few of them are located in the area proposed. Besides this, the block area is predominantly composed of of grey biotite granite with small patches of migmatite gneiss and metabasalt . But significantly the northern part of block area has a major shear zone in which quartz reef is emplaced and it runs for several kilometers discontinuously. GSI has carried out investigation in this area exclusively for kimberlites and diamonds which are mantle derived. Therefore, there is every likelihood that REE and associated elements/minerals may be hosted by the lithounits of the area. Moreover, grey biotite granite in other areas is giving encouraging values for REE Recconoitory traverse was taken in the block area and few samples of the granite variants and one sample of the quartz reef occupying the major shear zone were collected. The granite samples gave encouraging values for Europium(19.6 ppm) Samarium (23.6), Praseodymnium(15.2ppm) apart from Cerium (164.4 ppm) , Lanthanum(84.1 ppm) and Neodymnium(73.1 ppm). The Quartz sample from the shear zone gave 82 ppm Arsenic, 3.6 ppm Antimony and 1.4 ppm Gold Therefore it is worth taking up for the investigation of REE and associated minerals/elements in the area, hence proposed for G4 reconnaissance survey .