3. Proposal For Reconnaissance Survey (G-4) For Ree And Associated Minerals In Pipargaon Area (65 Sq.Km), Districts: West Karbi Anglong, State: Assam

[Implementing Agency- MECL]

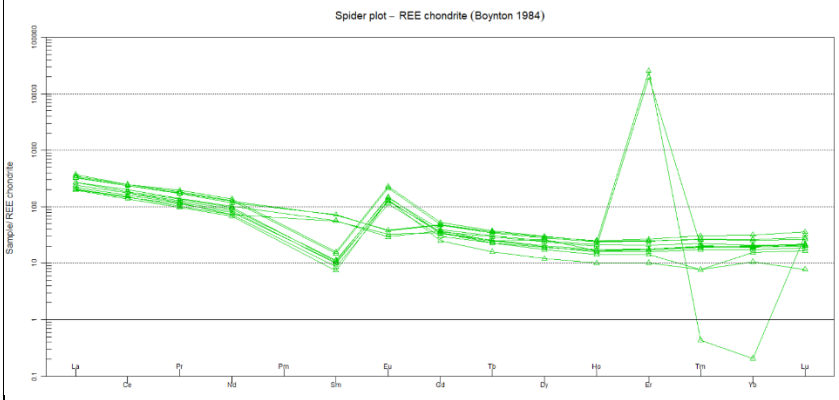
	Features	**Details**
	BlockID	Pipargaon area
	ExplorationAgency	Mineral Exploration and Consultancy Limited (MECL)
	Commodity	REE& associated minerals
	MineralBelt	Jashora Igneous Complex/Assam-Meghalaya Gneissic Complex
	Completion Period with entire Time schedule and cost	11 months **(01 month for obtaining NoC)**
	Objectives	Based on the evaluation of geological data available, the present exploration program has been formulated to fulfill the following objectives: To carry out geological mapping on 1:12,500 scale. To collect surface (Bedrock/Soil/Stream Sediment) and pit samples for analyses of REE and other associated minerals to decide further course of exploration program. To drill Auger and scout coring boreholes in case, analytical results of surface/pit/trench samples are positive. The future course of exploration program will be decided after reconnaissance survey (G-4) outcome to G-3/G-2 level of exploration. To estimate reconnaissance resources of REE bearing minerals as per UNFC norms and Minerals (Evidence of Mineral Contents) Amendment Rules, 2021 at G-4 level mineral exploration.
	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 o utsourceagency	Work will be carried out by the proposed agency
	Name/NumberofGeoscientists	Two
	ExpectedFielddays(Geology)Geological PartyDays	Geologist Party Days: 180 (Field) + 60 Days (HQ)
1.	**Location**	

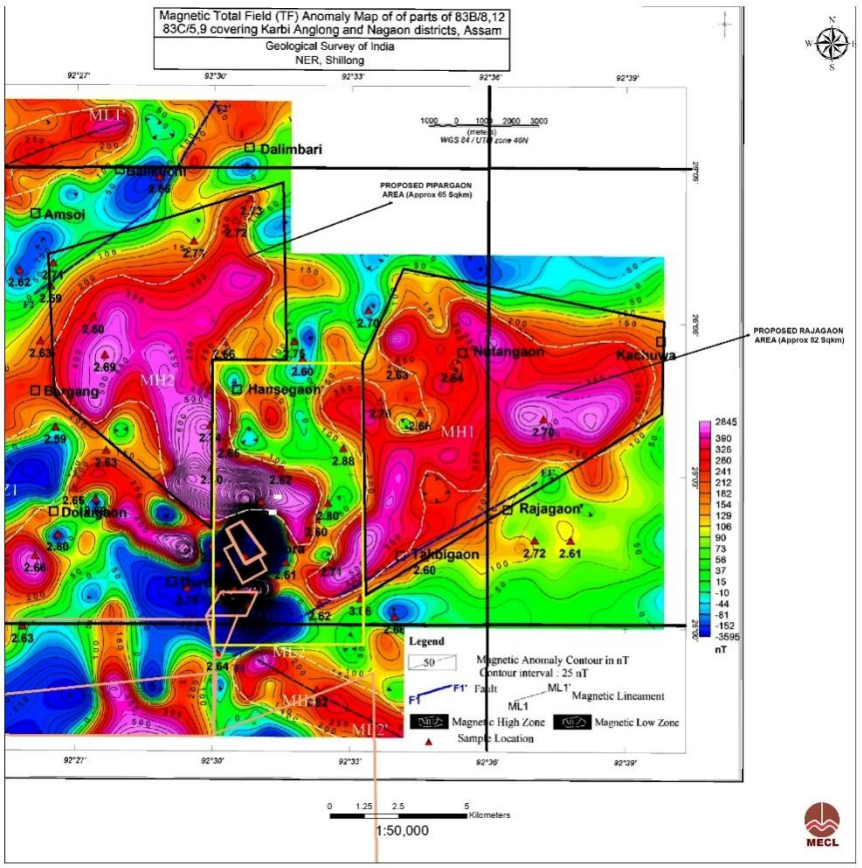
	Latitude and Longitude	

CORNER POINTS	LATITUDE	LONGITUDE
A	26° 8' 42.828" N	92° 31' 28.901" E
B	26° 5' 13.056" N	92° 31' 34.396" E
C	26° 5' 13.221" N	92° 29' 56.952" E
D	26° 1' 53.423" N	92° 29' 56.120" E
E	26° 4' 30.008" N	92° 26' 29.482" E
F	26° 7' 17.107" N	92° 26' 20.942" E

	Villages	Dalimbari, Timug Gaon, Hatigarh, Jukuta, Marteng Gaon, Pipar gaon
	Tehsil/Taluk	
	District	West Karbi Anglong
	State	Assam
2.	**Area(hectares/squarekilometers)**	
	BlockArea	65 sq.km
	ForestArea	Block area is free from ESZ and Wild life sanctuary area. Block partly falls in forest area (As per PM Gatishakti Portal)
	GovernmentLandArea	Data Not Available
	PrivateLandArea	Data Not Available
3.	**Accessibility**	
	NearestRailHead	Chaparmukh Junction is the nearest railway junction which is 30 Km North from the proposed block
	Road	Kampur - Amsoi road via Baithalangso, Amtreng and Bargang which passes through the south eastern part of the area

	Airport	The nearest airport is Lokpriya Gopinath Bordoloi International Airport which is located at a distance of 125 km West from the proposed block.
4.	**Hydrography**	
	LocalSurface Drainage Pattern(Channels)/ Rivers/Streams	Different types of drainage patterns such as parallel, trellis, rectangular were observed in the proposed block area. There are numerous swampy areas and these are locally known as 'Bil'. The area is drained by the Barapani River and a number of other small nalas (or 'Ku' which means stream in Karbi language).
5.	**Climate**	
	MeanAnnualRainfall	The average annual rainfall is 1698 mm.
	Temperatures(December)(Minimum) Temperatures(June)(Maximum)	The average annual temperature in the area is 24.6 °C. From the end of February, the mercury level gradually goes up and in June to August the temperature reaches the maximum point. The area experiences maximum temperature during these months and do not generally fall below 31°C and at times even goes beyond 40°C.
6.	**Topography**	
	ToposheetNumber	Part of Toposheet Nos. 83B/08 and 83B/12
	Morphology of the Area	
7	**Availabilityofbaselinegeosciencesdata**	
	GeologicalMap(1:50K/25K)	1:25,000
	GeochemicalMap	Geochemical Map were generated from the data mentioned in the report of NGCM program and also verified from NGDR portal.
	GeophysicalMap	Bouguer Garivty and Magnetic anomaly map is available and they are background of the taking up the proposal.
8.	**JustificationfortakingupG-3orG-2Stage mineralExploration**	The proposed Pipargao Block by virtue of its location falls in the north eastern fringe of the Shillong Plateau and adjacent to Jashora alkaline complex where GSI is carrying out G-2 level of exploration for REE. The area is mostly comprises of younger granites (porphyritic granite, biotite granite, Alkali feldspar granite etc), Nepheline syanite and pegmatites. Geologically, younger granites, Nepheline syanite and pegmatites are potential to host REE minerals. National Geochemical Mapping program of GSI has in the area reveals anomalous value of ΣREE. A total 12 Nos of stream sediment samples are falling within the proposed block and the

		ΣREE+Sc+Y value varies form 288.33 ppm to 5810.548 pm with an average of 1281.67 ppm.. There are 6 samples which shows ΣREE+Sc+Y value more than 500 ppm and 3 samples having more than 1000 ppm value. The REE normalized diagram shows enriched LREE with flat pattern of HREE. All the samples show negative Eu anomaly.It is evident from the data that fractional crystallization had played an important role. Geological setup and Geochemical data indicate the chance of occurrence of REE bearing minerals in the area with anomalous concentration.  The Total Magnetic Field Anomaly Map generated during geophysical survey in FSP 2019-2021 indicates high magnetic zone in the northern part of Jashora alkaline complex. This high magnetic area will be searched and heavy minerals samples shall be separated by isodynamic separator to find the rare earth minerals such as Monazite (Ce,La,Nd,Th)(PO_4), Fergusonite(Y,REE)NbO_4,Samarskite (Y,REE,U,Fe)NbO_4, Gadolinite(Ce,La,Nd,Y)$_2FeBe_2Si_2O_{10}$, Euxenite(Y,Ca,Ce,U,Th)(Nb,Ta,Ti)$_2O_6$ for their magnetic property.



Hence the proposal for G-4 level exploration for REE has been formulated in the area.