[Implementing Agency: Mining Tech Consultancy Services Limited (MTCS), Ahmedabad]

2. Proposal for Reconnaissance Survey (G4) for Gold, Base Metals and Associated Minerals in Pidariya-Nawanagar Area, Singrauli District, Madhya Pradesh

<table>
<tr><td></td><td>Features</td><td>Details</td></tr>
<tr><td></td><td>Block ID</td><td>MTCS/NMET-005/2025/MP/Singrauli</td></tr>
<tr><td></td><td>Exploration Agency</td><td>Mining Tech Consultancy Services Limited (MTCS), Ahmedabad</td></tr>
<tr><td></td><td>Previous Exploration Agency</td><td>Geological Survey of India – G4 Level</td></tr>
<tr><td></td><td>Previous Stage Geological Report</td><td>GSI has carried out Field Season Programs during Year 2018-19 (G4) and 2018-20 (G4)</td></tr>
<tr><td></td><td>Commodity</td><td>Gold, Base metal and Associated Minerals</td></tr>
<tr><td></td><td>Mineral Belt</td><td>Mahakoshal Belt</td></tr>
<tr><td></td><td>Completion Period with entire Time schedule and cost</td><td>10 months</td></tr>
<tr><td></td><td>Objectives</td><td>The exploration scheme of Pidariya & Nawanagar block has been formulated with the following objectives:
4. Geological mapping.
5. Geochemical Sampling
6. Ground Geophysical Survey
7. Exploratory scout drilling as per G4 level of exploration.
8. Establishing the extent of mineralization of gold, base metal and associated minerals within the area.
Preparation of geological report in line with the Minerals (Evidence of Mineral Contents) Amendment Rules 2015 and prescribed guidelines.</td></tr>
<tr><td></td><td>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</td><td>The work will be carried out by the exploration agency (Mining Tech Consultancy Services Limited).</td></tr>
<tr><td></td><td>Name/ Number of Geoscientists</td><td>Four (3 Field + 1 HQ).
Names will be provided prior to filed work.</td></tr>
<tr><td></td><td>Expected Field days (Geology) Geological Party Days</td><td>Geology – 140 days
Geophysics – 70 days</td></tr>
<tr><td>1.</td><td>Location</td><td></td></tr>
<tr><td></td><td>Latitude and Longitude</td><td>
<table>
<tr><th rowspan="2">Card. Point</th><th colspan="2">WGS-84</th><th colspan="2">WGS-84 / 44 N</th></tr>
<tr><th>Latitude</th><th>Longitude</th><th>Northing</th><th>Easting</th></tr>
</table>
</td></tr>
</table>

		A	24° 22' 01.658" N	82° 26' 31.722" E	269563 3.21	646273 .25
		B	24° 22' 01.493" N	82° 29' 54.037" E	269568 8.51	651974 .25
		C	24° 23' 16.290" N	82° 29' 53.872" E	269798 9.40	651944 .77
		D	24° 23' 15.923" N	82° 31' 27.822" E	269800 6.95	654591 .86
		E	24° 20' 01.345" N	82° 31' 28.730" E	269202 1.52	654683 .15
		F	24° 20' 01.146" N	82° 26' 31.824" E	269192 6.09	646314 .62
	Villages	Pidariya, Nawanagar, Dala, Rajasarai				
	Tehsil/ Taluk	Deosar and Chitrangi				
	District	Singrauli				
	State	Madhya Pradesh				
2.	**Area (hectares/ square kilometers)**					
	Block Area	3700 Ha. / 37.0 Sq. Km				
	Forest Area	Not Available				
	Government Land Area	Not Available				
	Private Land Area	Not Available				
3.	**Accessibility**					
	Nearest Rail Head	Singrauli (~35 km)				
	Road	NH-39 (~30 km)				
	Airport	Varanasi (~200 km)				
4.	**Hydrography**					
	Local Surface Drainage Pattern (Channels) / Rivers/ Streams	The drainage pattern of the area is dendritic to sub-dendritic in nature. Stream of first and second order with dendritic pattern is observed around the proposed area.				
5.	**Climate**					
	Mean Annual Rainfall	1100 mm (avg. of previous 10 years)				
	Temperatures (December) (Minimum) Temperatures (June) (Maximum)	Minimum – 4^{o} C Maximum – 45^{o} C				
6.	**Topography**					
	Toposheet Number	63 L/07 and 63 L/11				
	Morphology of the Area	The area exhibits moderate to highly undulating				

		topography with minimum and maximum elevation of 334m aMSL and 570m aMSL respectively.
7	**Availability of baseline geosciences data**	
	Geological Map (1:50K/ 25K)	Available
	Geochemical Map	Available
	Geophysical Map	Available
8.	**Justification for taking up G-3 or G-2 Stage mineral Exploration**	8. The Mahakoshal Group comprises of orthoquartzite, meta volcanics, phyllites, banded iron formations (BIF), dolomites, carbonatite pillow lava, dolerites, and volcanic agglomerate which is characterized by a greenstone setting. 9. The proposed Pidariya-Nawanagar area forms a part of Mahakoshal Group of Madhya Pradesh which is known for hosting Gold, sulphides, Nickel, PGE and associated minerals. 10. Geological Survey of India, since long, has been engaged in delineating various mineral occurrences (viz. gold. base metal, PGE, Nickel etc.) within Mahakoshal Group of rocks. Some of the important finding in and adjacent to the proposed block is described as below. 11. The findings (around the proposed area), based on the previous studies undertaken by GSI during various field season (FS) programs, are summarized as below; i. During FS 1985-88, mineralization in drill cores is marked by the occurrence of sulphides. Some of the sulphide zones have assayed gold values ranging up to **1.00 g/t** and are also rich in galena. Trenches have shown encouraging gold values **(1.00- 4.25 g/t**) form sheared -oxidised quartz veins. ii. Exploration at Gurhar Pahar during FS 1997-98 and FS 2001-2004 has established shear controlled Gold mineralization. A total of probable and possible gold ore reserves of the five zones were estimated to be **7.29 million tonnes** with an average grade of **1.03g/t** over cumulative strike length of 3037.94m. iii. During FS 2018-19, encouraging values of Cu and Pb (**0.12% Cu and 1.17% Pb)** have been reported within the quartz vein at Parihasi. Similarly, Pitting-trenching samples are also showing higher values for Cu and Pb ranging from **0.08% to 0.37% for Cu and 90ppm to 510ppm for Pb.** Silver values ranging upto **4 ppm** in PTS and **upto 20ppm** in few BRS

		samples have been reported**.** iv. Pb values have been reported around Sulkhan and Gulhariya village ranging from **1200 ppm** and **1.05% respectively.** Cu, value of **0.25%** around Parariya village is recorded. A **small patch of scorodite** is exposed near village Dala with a dimension of 5cm width across the variegated phyllitic unit. v. The RMT conducted during FS 2018-20, indicated surface manifestation of mineralisation is in the form of visible sulphide grains mainly pyrite, arsenopyrite, chalcopyrite, galena, covellite and scorodite. Gold values in quartz veins and mafic and ultramafic rocks ranging from **0.3 ppm to 1.75 ppm** in the area. In parts of 63L/07 near Thapna, Sherwa and South of Khurmucha the extension of these basic bodies has been further traced and they also show disseminated sulphide mineralisation. Values of Cu (566 ppm) and Mn (3226 ppm) near Garda-Charam area, Mn (1358ppm) near Magardaha area and Pb (668 ppm) near South of Gulaldih area have been recorded. vi. Three new locations have been reported with encouraging results during FS-2019. In Nawanagar area, Scorodite with **2ppm & 300ppm** gold values have been reported. Similarly, Gold values are reported near Chitrangi Nawgai Road **(Au ~3.4 ppm)** in BIF and near Singrauli Railway station (Au~150 ppb). 5. Overall, the rock formations in the proposed area exhibit similarities to those found near Thapna and Karhiya. Previous studies by the GSI have identified these formations as ultramafic-mafic, which are considered promising for gold and nickel, along with grey phyllite and BIF, which are significant for gold exploration. 6. Two auction blocks, namely **Gulhariya and Parihasi** (Basemetal) have been notified on the eastern and Southern part of the proposed area respectively. In Gulhariya, Cu and Pb in BRS have been reported at **0.25% and 0.53%** respectively. Whereas in Parihasi the value of Cu ranging from **0.12%, to 0.70%,** Pb value of **1.17%** and Ag ranging from **3 to 20 ppm.** The proposed area is adjacent to auction block and exhibits **similar geological settings**.

		Based on the findings mentioned above, MTCS has earmarked an area of **37.0 sq.km**. and proposed for reconnaissance survey (G4) in Pidariya-Nawanagar areas, Singrauli District, Madhya Pradesh. **Recommendation TCC** *The committee recommends the proposal for approval of EC for* *"Reconnaissance Survey (G4) for Gold, Base Metal & Associated Minerals in Pidariya - Nawanagar areas, Singrauli District, Madhya Pradesh" with an estimated cost of ₹235 Lakh (including GST) within the time schedule of 10 Months and submission of the report as per Annexures 8A & 8B. The item will be reviewed after 4 months & 8 months. Total 500 meterage of drilling will be done in 5 boreholes, with average depth of 100m.*