

**Critical and Strategic Minerals
Exploration Opportunities in Rajasthan:
Blocks Offer for NPEAS and PEAS**

1. NOSAR RARE EARTH ELEMENTS (REE) MINERALS BLOCK

General Information about Mineral Block

FEATURES

1. **Minerals** :- Rare Earth Elements (REE)

Area :- 11.50 Sq.Km

Exploration Level :- G4 (Level)

Exploration Agency :- Department of Mines & Geology, Rajasthan

Morphology of the area :- the study area is a part of Thar desert and is represented by plain land topography

RESOURCES SUMMARY-

Resources & Grade :- Resources not assessed (G-4 Level)

One sample has been analyzed for REE n/v Nosar and Meghwalo ki Dhani, tehsil Baytu, district Balotara. It shows total value of LREE 32100 ppm(La, Ce, Pr and Nd). This project area is being proposed for further exploration on the basis of earlier work carried out during the year 2020-21. The proposed area has favorable litho units and REE value may be occur in the proposed area.

LOCATION DETAILS

Location :- Near Village Nosar, Tehsil- Baytu, District-Balotra, State- Rajasthan

Toposheet No. :- 40 O/13 & 40 O/14

Connectivity

Rail :- The nearest Railway Station is Baytu which is 37km North and Barmer about 44 km west from the proposed block.

Road :- Phalsund Barmer road (NH-16), passes through the proposed block.

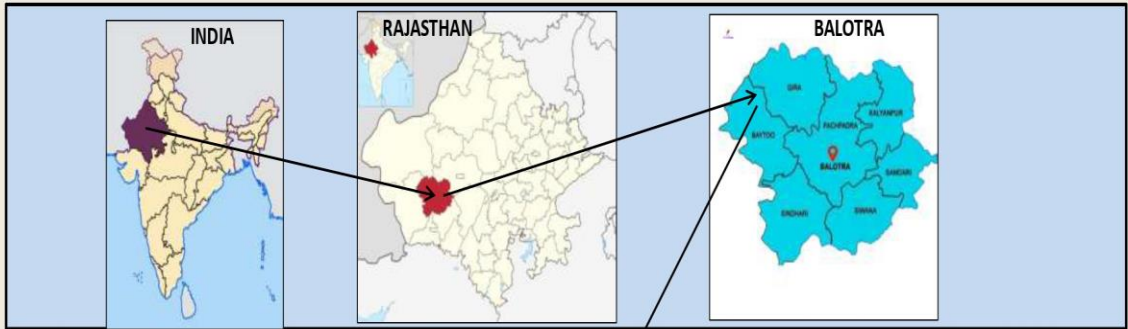
Airport :- Jodhpur Domestic Airport is 190km North East from the proposed block.

MINERALISATION & EXPLORATION DETAILS

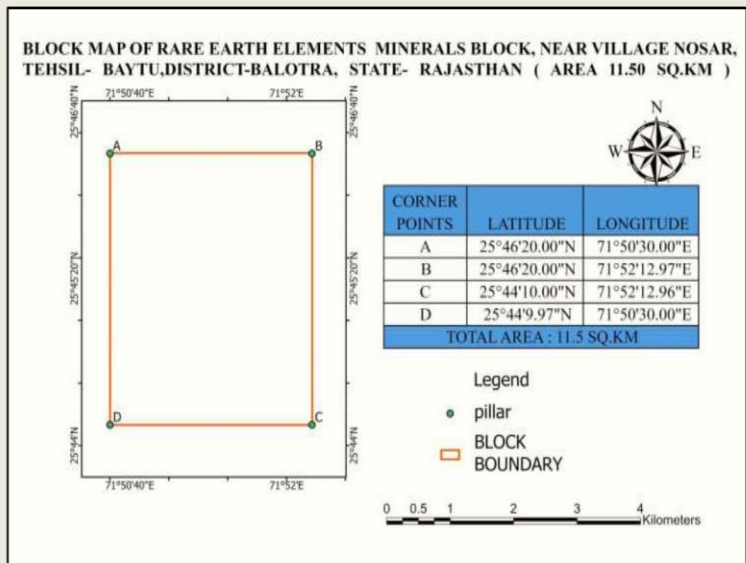
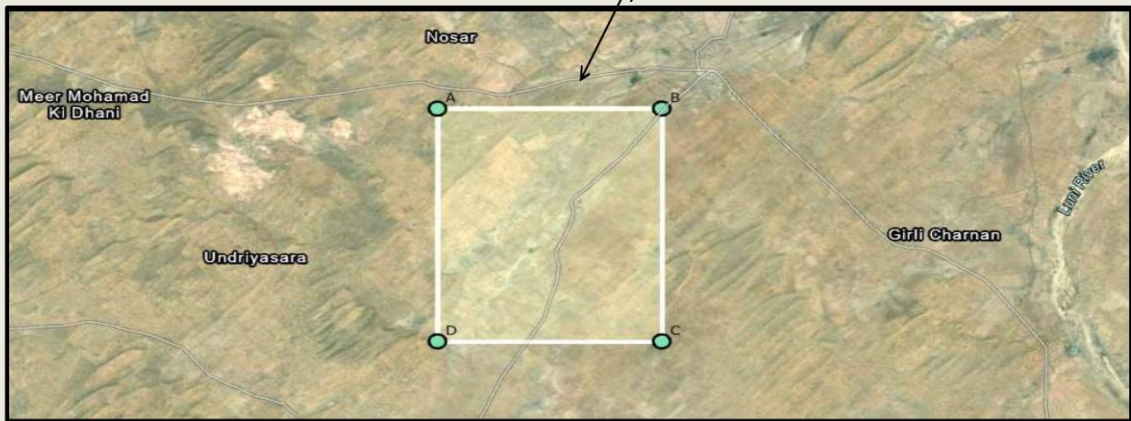
Mineralization : During the year 2020-2021, a total 10 sq km and 2.0 sq km area mapped under regional Geological mapping and under detail geological mapping respectively n/v Nosar and Meghwalo ki Dhani, tehsil Baytu, district Balotara.

Thickness :- A vein of carbonatite rock was observed and mapped, Length of the Carbonatite vein has about 40m length and about 0.15 to 0.20m width. Litho trend of the carbonatite vein is almost 318°. Dimension of the exposed pit was about 200-250 m x 50-60 m.

Conclusion and recommendations:- On the basis of earlier project work carried out by DMGR during the year 2020-21. Analysis results of above mapped area showing total value of LREE 32100 ppm(La, Ce, Pr and Nd). Proposed block area may be potential as per good valve of LREE. So proposed block area is required detailed exploration by drilling, geochemical sampling and geophysical survey as per UNFC parameters/ classification.



NOSAR REE MINERALS BLOCK, RAJASTHAN



2. BORANA RARE EARTH ELEMENTS (REE) MINERALS BLOCK

GENERAL INFORMATION ABOUT BLOCK

- **Location** – N/v Borana & Borana Ka Khera, Tehsil – Raipur, District – Bhilwara
- **Mineral** - REE
- **Part of Toposheet** – 45K/03
- **Area** – 6.197 Sq. km. or 619.7855 Hectare
- **Proposed for** – G3 Level of Exploration
- **Geology of the area** – Mainly composed of rocks of Mangalwar complex of Bhilwara Supergroup.

DETAILS OF PREVIOUS EXPLORATION

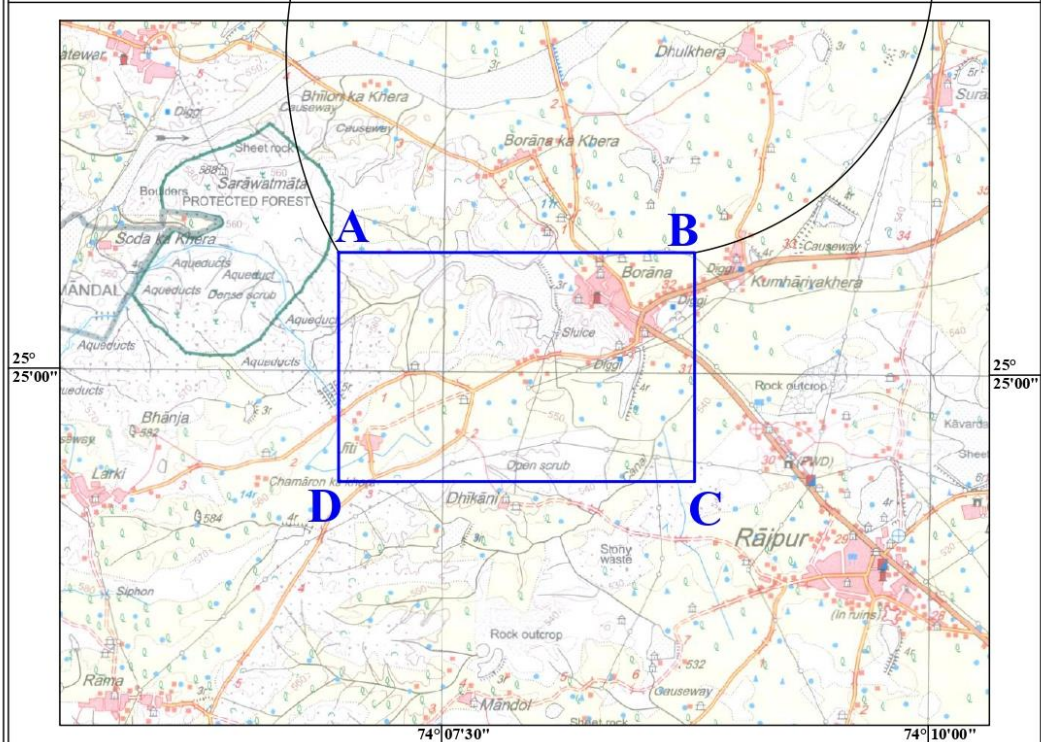
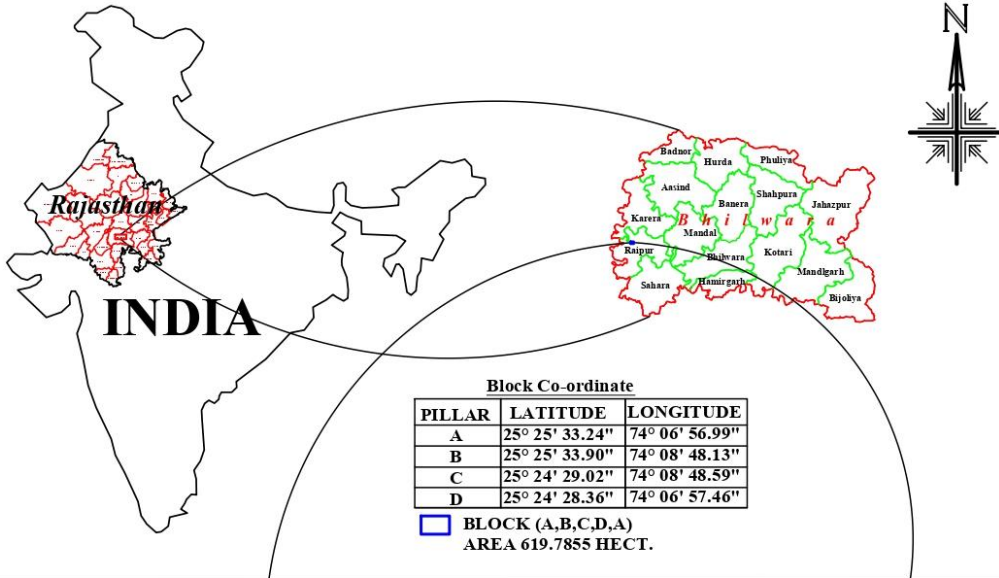
- **Level of Exploration** – G4
- **Name of Agency** – Geological Survey of India.
- **Work Done** - An area of 100 sq km. has been mapped under large scale mapping (LSM) on 1:12,500 scale. A total of 401 numbers of bed rock samples, 50 numbers of petrochemical samples, 25 numbers of pitting/trenching samples, 10 numbers of stream sediment samples has been collected and analysed to evaluate the REE potentiality.
- **Findings** - The analytical results pertaining to 401 bed rock samples shows that the total REE values in Migmatite Gneisses vary from 29.60 to 3434.93 ppm, whereas it varies from 83.03 to 2336.27 ppm in Alkali syenite/Syenite.
- **Recommendations** - GSI recommended that the detailed mapping in higher level of investigation, may be taken up within Migmatite Gneiss and Syenite of Mangalwar Complex near Chatrawan Mata temple, Borana area and south of Kemuniya village over Migmatite Gneiss for identification and delineation of possible REE mineralized zone.

DRG.NO.- Suptd.Geo/BHL/DRG/6-2024/

Revised Key Plan Of Proposed Block For G-3 Level Exploration Through NPEA For Mineral REE Near Village Borana, Tehsil Raipur. District Bhilwara, (RAJ.)

SCALE:- 1cm = 500 m (RF:-1:50000)

PART OF TOPO SHEET NO.- G43O3 (45K/3)



3. BABERI BASEMETAL BLOCK

General Information About Mineral Block

FEATURES

Mineral :- Basemetal

Area :- 3.00 Sq. Km

Exploration Level :- G 4 (Level)

Exploration Agency :- Department of Mines & Geology, Rajasthan

Morphology of the area: -Geomorphologically the study area is a part of linear elongated hill and rest is concealed.

RESOURCES SUMMARY

Resources & Grade: -Resources not assessed (G-4 Level)

The entire part of the hill contains grey in coloured crenulated garnet bearing schist. Staining of copper, probably malachite, boronite or azurite is seen in the schist. Copper staining is again seen in the nalla and its nearby area. 12 Samples have been collected from the area for chemical analysis. The analysis results show Pb ranging from 45.5 ppm to 2090 ppm, Cu ranging from 11.50 to 66.0 ppm and Ag ranging from 0.4 to 4.2 ppm. The proposed area has favourable litho units for Basemetal mineralization.

LOCATION DETAILS

Location :- Baberi, Tehsil- Bansur, District-Kotputli-Bahrur, State- Rajasthan

Toposheet No. :- 54 A/5

Connectivity

Rail :- The nearest Railway Station is Khairthal which is 39 km East to SE and Alwar is about 56 km SE from the proposed block.

Road :- Area can be approached by Delhi-Jaipur N.H. 8 and also can be approached from Alwar by Alwar-Bahrur S.H. No.25.

Airport :- Indira Gandhi international airport is 134 km North East from the proposed block.

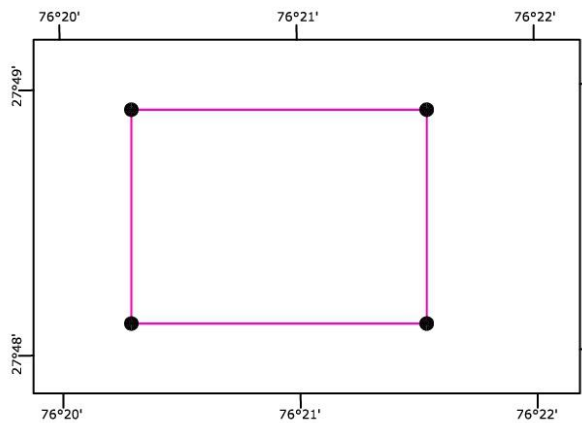
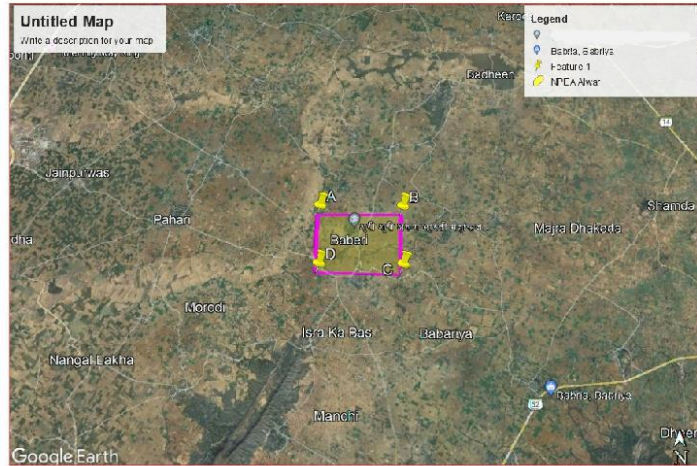
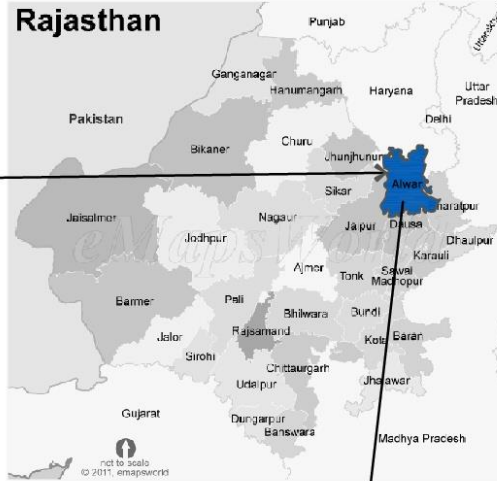
MINERALISATION & EXPLORATION DETAILS

Mineralization: During the year 2007-08 & 2008-09, a total 315sq km was covered under regional mineral survey and 20.00 sq km area mapped under regional Geological mapping and 2.00 sq.km. was covered under detail geological mapping respectively n/v Mirapur, Isra Ka Bas, Baberi and Badhin tehsil Bansur & Bahrur, district Alwar.

Thickness: - No details work has been carried out in this area so thickness cannot be measured.

Recommendation:-DMGR has been carried out G-4 level exploration work in this area during the year 2007-08 & 2008-09. On the basis of detailed mapping and chemical analysis results this area is suitable further detailed exploration.

PROPOSED NPEA BLOCK MAP FOR BASEMATEL NEAR VILLAGE BABERI DISTRICT ALWAR



| CO-ORDINATES OF BLOCK | | |
|-----------------------|----------------|----------------|
| CORNER POINTS | LATITUDE | LONGITUDE |
| A | N 27°48'54.24" | E 76°20'17.98" |
| B | N 27°48'53.51" | E 76°21'32.72" |
| C | N 27°48'05.39" | E 76°21'32.13" |
| D | N 27°48'06.12" | E 76°20'17.39" |

LEGEND
 ● BLOCK BOUNDARY POINTS
 □ BLOCL BOUNDARY (AREA 3.00sqkm)

4. Achalpura, Barkhera and Bhimpura block, Tehsil & District Chittorgarh Glauconite (Potash) Bearing shale & Sandstone block

Mineral :- Glauconite (Potash)

Area :- Approx. 185 hectare

Exploration level :- G-4

Exploration Agency :- Department Of Mines & Geology, Rajasthan

Morphology of the area :- The area is hilly terrain, the sandstone forming high hills while shale is exposed in low lying area. The maximum height at one place in the west of Abapur is 621 m above mean sea-level.

Reserve: - Tentative reserve could not be calculated as these were found only indication of Glauconite.

Location Details :-

Location :- It is located 20 KM towards East from District head quarter Chittorgarh..

Latitude: $24^{\circ} 51'07''$ to $24^{\circ} 53'38''$ Longitude: $74^{\circ} 43'42''$ to $74^{\circ} 44'48''$

Topo sheet number :- 45 L/9

Connectivity :-

Rail :- Broad gauge railway line passes through Chittorgarh and connects Udaipur, Delhi, Agra, Kota, Nimach etc.

Road :- Nearby passing highways are NH-79 and NH-76.

Airport :- Nearest airport is Maharana Pratap Airport Udaipur which is 115 km away .

Mineralization and Exploration details :-

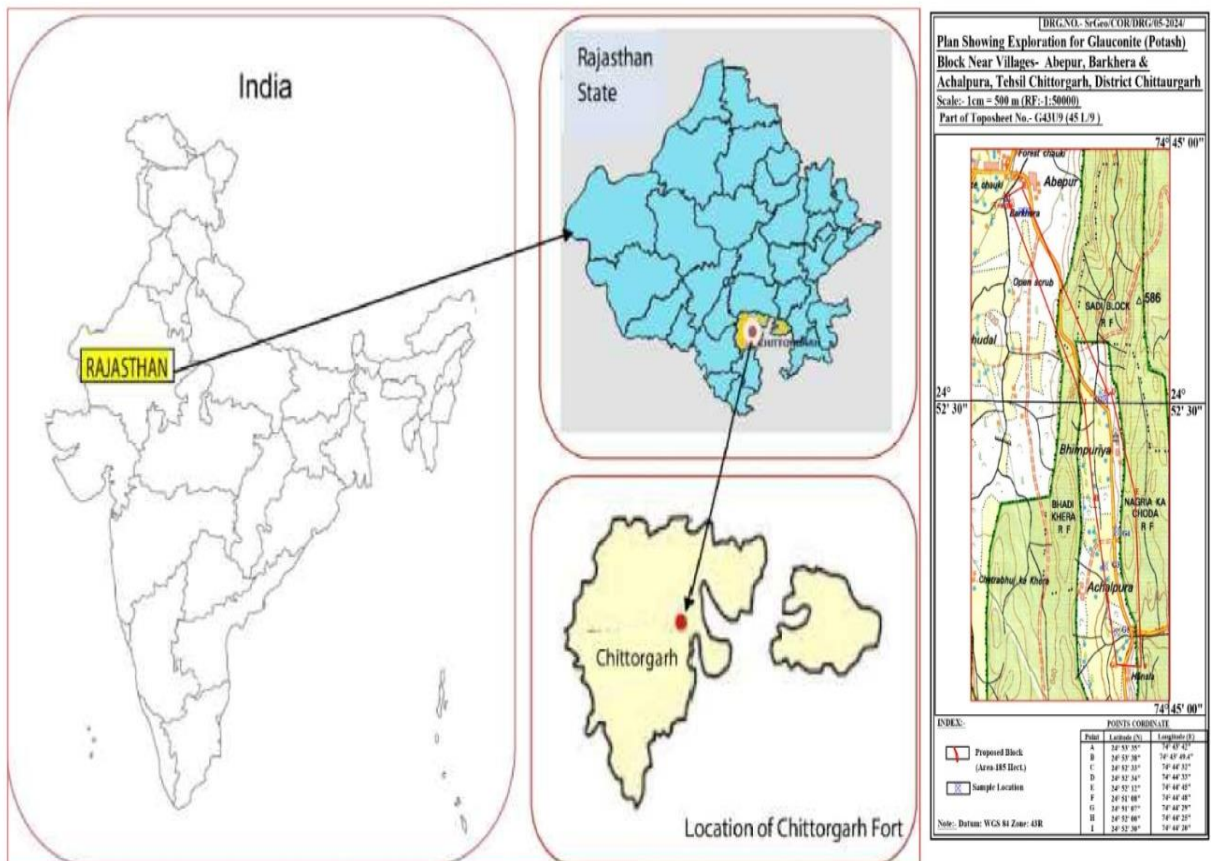
Geology :- Geologically the area comprises Shales of Rewa, Khorip group and sandstone of Kaimur group of Vindhyan Super Group Panna shale rests conformably over the Kaimur sandstone and Kaimur sandstone is underlain by the Suket shale. The general trend of the shale and sandstone is almost north-south with 5° to 8° dips due easterly and 30° to 40° due east, respectively.

Mineralization :- The Glauconite minerals are mostly marine originated, they also found in terrestrial rock. They form either as cement or by the diagenetic alteration of quartz, feldspar, calcite and micaceous minerals. The glauconitic shales are parrot green colour potash bearing rocks. Which are occurs in greenish grey to blackish grey color shale as peloids that are granular to subgranular, rounded to subrounded and moderately sorted.

Details of exploration: - Around village Barkhera (Panna) to Achalpura (Suket) glauconitic shales (Panna) were mapped, observed in well muck. It is greenish grey to blackish grey in color, fragile, jointed and thinly bedded in nature. In the north of village Bhimpuriya, shale mapped in the area at places pyrite is also observed in well muck with shale. This sandstone is generally thickly bedded, hard & compact, massive in nature. The Glauconitic shale is observed from Barkhera to Achalpura over strike length of about 4250 m.

Sampling: - A total of 5 nos. samples collected from the area. The Glauconitic shale around this area has low potash value (in which K_2O 2.13% to 2.49% and Na_2O 0.80% to 2.79%).

Recommendation: - DMGR carried out G-4 level exploration in F.S.2013-14. The Glauconitic shale around this area shows K_2O 2.13% to 2.49% and Na_2O 0.80% to 2.79%. Hence, the area seems to be suitable for further exploration.



5. Bamrada Block for Basemetal, Critical and Strategic Minerals n/v Bamarda tehsil- Shrimadhopur distt- Sikar

Features-

Mineral-Basemetal, Critical and Strategic Minerals

Area- 4.54 Sq.Km.

Exploration level- Preliminary G4

Exploration agency- DMGR

Geomorphology of area- Area has almost flat topography with mostly agriculture land and seasonal nalas.

Location details-

Location-Bamrara in tehsil- Srimadhopur, district- Sikar

Toposheet no- 45M10

Connectivity-

Rail: Bhagega Railway station 18 Km from this block

Road: Connected by road and kachha rasta. And 60Km from Sikar district headquarter.

Airport:Jaipur

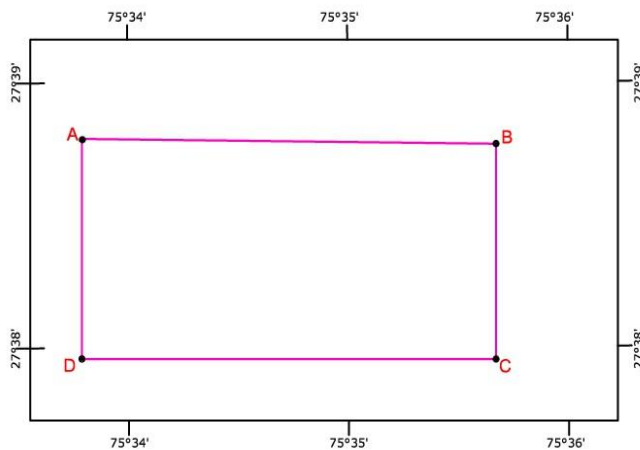
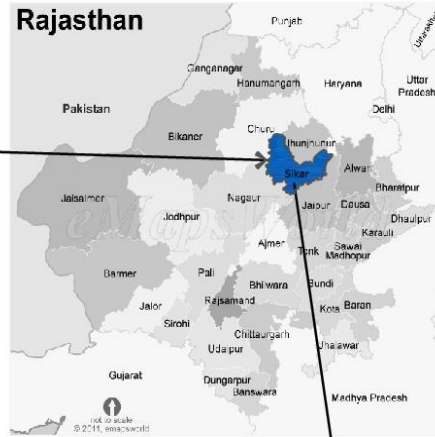
Mineralization-

This area has been covered under Regional Geological Mapping on scale 1:10000. Geologically, the rock types of the area are represented by quartzite, limestone, calc-silicate, mica- schist, amphibole gneisses, phyllite etc. of Saladipura Group of Archean age, intruded by albetites, pegmatites and quartz veins The general strike of the rocks varies from N30° -50° E to S30° 50°W with 50° -60° dips due SE. Most of the area is soil covered and lime kankar is noted at places at ground level and in nalla cuttings. Basemetal indications are noted in the well debris of three wells near village Bamrara in tehsil- Srimadhopur, district- Sikar.

Geochemical sampling was carried out near villages Sewali and Gowariyan in Tehsil- Srimadhopur, district- Sikar. For preparing anomalous zone, values for Ag is upto 4.27ppm, Pb upto 509 ppm, Cu upto 640 ppm, & Zn upto 155, Co 109.5ppm Ni 53 ppm and Fe upto 23.5% considered anomalous in soil samples.

Recommendations:-Based on the evaluation of previous DMGR reconnaissance survey (G4) for Basemetal in the area.

PROPOSED NPEA BLOCK FOR BASEMETAL NEAR VILLAGE BAMARARA TEHSIL SRIMADHOPUR DISTRICT SIKAR



| CO-ORDINATES OF BLOCK | | |
|-----------------------|----------------|----------------|
| CORNER POINTS | LATITUDE | LONGITUDE |
| A | N 27°38'47.10" | E 75°33'40.59" |
| B | N 27°38'45.61" | E 75°35'30.06" |
| C | N 27°37'56.86" | E 75°35'29.80" |
| D | N 27°37'57.32" | E 75°33'40.33" |

LEGEND

- BLOCK BOUNDARY POINTS
- BLOCK BOUNDARY (AREA 4.54sqkm)

6. Basemetal block n/b Chiriyawasa tehsil & district Banswara

Commodity-Zinc

Location- N/v Chiriyawasa, Tehsil& District-Banswara

ToposheetNo. : 46I/6

Area of block- :3.60 Sqkm

Block coordinates-

| Coordinates Pillar | Latitude | Longitude |
|--------------------|----------------|----------------|
| A | 23°37'30.154'' | 74°23'34.061'' |
| B | 23°37'29.956'' | 74°24'39.983'' |
| C | 23°36'27.370'' | 74°24'39.728'' |
| D | 23°36'27.532'' | 74°23'33.562'' |

Objective:to carried out prospecting and Exploration in the area for Zn.

Background Information: Geologically, the area comprises lithounits of Mangalwar Complex of Bhilwara Supergroup, and Udaipur and Lunavada groups of Aravalli Supergroup. The basement rocks of Lasaria Formation of Mangalwar Complex are mainly exposed in the eastern part of the study area extending from Chiriyawasa to Bhandariya. The Mangalwar Complex mainly comprises gneisses, migmatite, meta-sedimentary enclaves of varying dimensions (quartzite, carbonates) and amphibolites.

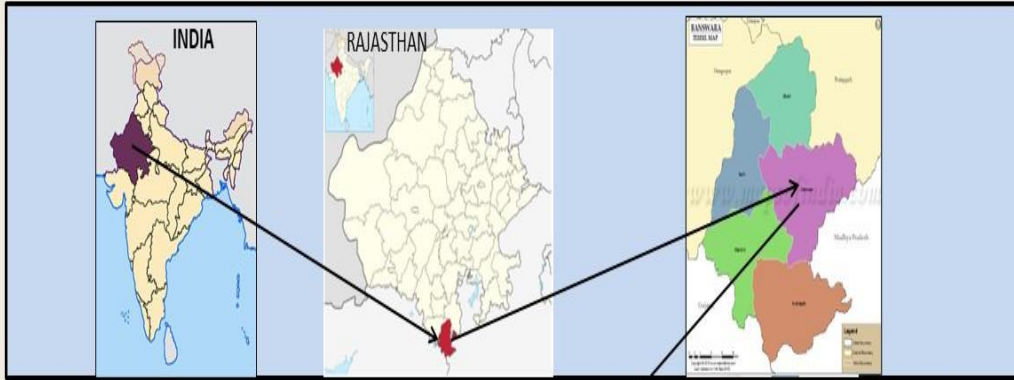
The area is part of area explored by GSI Report (FS 2020-21) “Specialized thematic mapping of the metasedimentary sequences of Proterozoic age in and around Talwara, Bhawanpur and Padla area of Banswara District of Rajasthan with special emphasis to establish tectono stratigraphic evolution”.

The extensive sampling has been carried out in the area. One of the samples from this area has also shown Zn value of 3470 ppm. This litho unit may be studied further and sampled at strategic places for potential occurrence of zinc mineralization. The higher concentration of Zn 4470 ppm (In further south east in calc silicate lithounit) and 3470 ppm(in block) is obtained from calc-silicates of Lasaria Formation in east of Banswara and north- east of Chiriyawasa respectively. The calc-silicate body has a strike length of 2 km north of Banswara and 2 km near Chiriyawasa. The area can be studied in detail from the mineralization point of view.

Recommendation- This lithounit may be studied further and sampled at strategic places for potential occurrence of zinc mineralization. The higher concentration of Zn 4470 ppm and 3470 ppm is obtained from calc-silicates of Lasaria Formation in east of Banswara and north of Chiriyawasa respectively. The calc-silicate body has a strike length of 3 km near east of Banswara and 2 km near Chiriyawasa. The area can be studied in detail from the mineralization point of view.

Sample result-

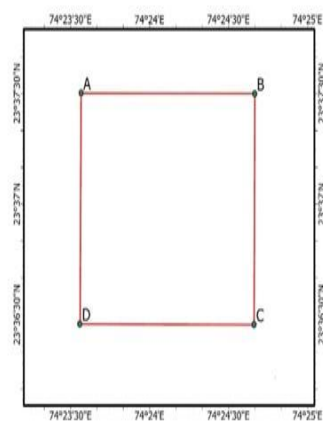
| Sample No. | Lithology | Pb (ppm) | Ni (ppm) | Cr (ppm) | Cu (ppm) | Zn (ppm) | Co (ppm) |
|------------|---------------|----------|----------|----------|----------|----------|----------|
| BRS-30 | Calc-silicate | <25 | 25 | -- | 50 | 185 | 25 |
| BRS-31 | Calc-silicate | <25 | 30 | -- | 70 | 460 | 25 |
| BRS-32 | Calc-silicate | <25 | 280 | -- | 45 | 3470 | 60 |



Proposed exploration block for NPEA for Zn Nv Chiriyawasa, Tahsil & District- Banswara



Proposed exploration block for Zn Nv Chiriyawasa, Tahsil & District- Banswara



| CORNER POINTS | LATITUDE | LONGITUDE |
|---------------|---------------|---------------|
| A | 23°37'30.15"N | 74°23'34.06"E |
| B | 23°37'29.95"N | 74°24'19.98"E |
| C | 23°36'27.37"N | 74°24'39.72"E |
| D | 23°36'27.53"N | 74°23'33.56"E |

• Pillar
 □ BLOCK BOUNDARY



7. Nasirabad- Mohanpura Basemetal and Nobelmetal Block, Teh. Nasirabad, Dist Ajmer

Features :-

Mineral :-Basemetal

Area :- 8.3185 sq.km.

Exploration level :- G-3

Exploration Agency :- Department Of Mines & Geology, Rajasthan

Morphology of the area :- The area occupied by the plane covered with alluvium having few small scanty exposures with maximum elevation around 475 MRL.

Resource Summary :-

Resource &Grade :- Approximately 1.12 MT , Cu with 0.31 % cut off having average 0.64 % . The grades of different element ranges as Cu 5 ppm to 1.62% , Zn 2.5 to 158 ppm, Ag from 0.012 to 45.10 ppm , Au from 0.10 to 2.0 ppm, Pb 12.52 to 275 ppm,.

Location Details :-

Location :-Nasirabad –Mohanpura is around 22 kms from Ajmer & well approachable by Ajmer-Kishangarh NH - 8 and tar road.

ToposheetNumber :- 45 J/15

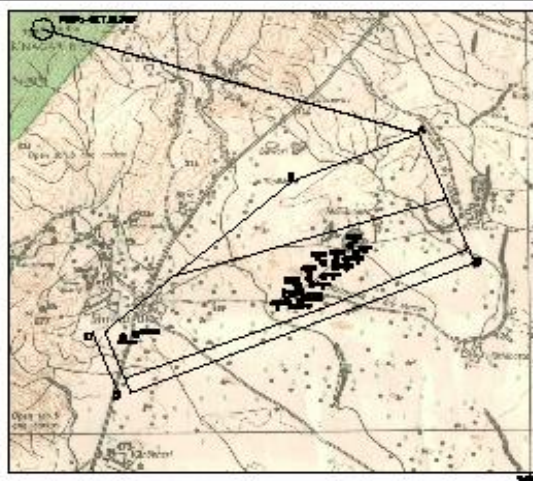
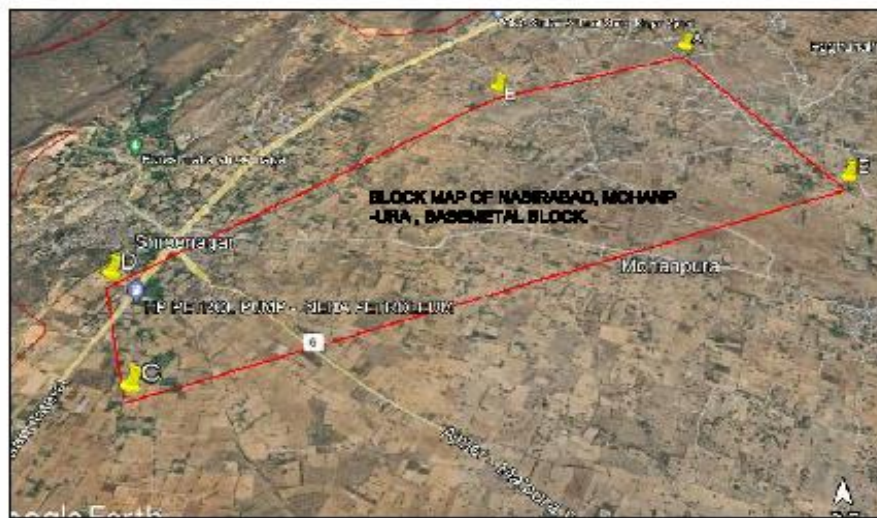
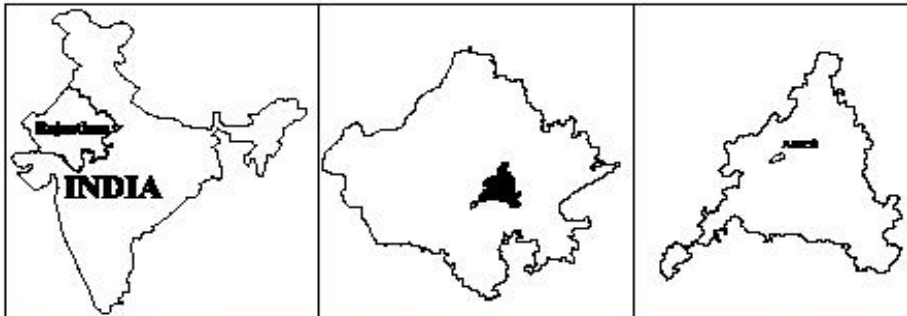
Connectivity :-

Rail :- Nearest Railway station is at Nasirabad of district Ajmer.

Road:-Nearby passinghighways are NH- 8.

Airport:-Nearest airport is at Kishangarh which is 13 kms away .

**MAP OF NASIRABAD, MOHANPURA, BASEMETAL BLOCK (D.3165 SQ.KM)
 N/V- MOHANPURA ,PHARKIYA TEHSIL-NASIRABAD, DISTRICT-AJMER
 GT. SHEET NO. 45 J/15**



**BLOCK MAP OF NASIRABAD,
 MOHANPURA, BASEMETAL BLOCK.**

LEGEND

**BLOCK MAP OF NASIRABAD,
 MOHANPURA, BASEMETAL BLOCK.
 BLOCK COORDINATES**

| PRP- 675 737 74°46'06.8117" E . 27°28'11.1689" N | | | |
|--|----|----------------|----------------|
| SLNO | TO | LATITUDE | LONGITUDE |
| 1. | A | 28°28'23.9489" | 74°46'06.8117" |
| 2. | B | 28°28'21.8869" | 74°46'07.0289" |
| 3. | C | 28°28'21.1089" | 74°46'08.7081" |
| 4. | D | 28°28'48.4229" | 74°46'08.8817" |
| 5. | E | 28°28'08.8892" | 74°46'08.8147" |
| TOTAL AREA- 8.3165 SQ.KM. | | | |

8. Dumara-Amba etc., Tehsil Kishangarh, District Ajmer Graphite block

Features :-

License Type :- Exploration license (EL)

Mineral :- Graphite

Area :-45.88 sq.km.

Exploration level:- G-4 (Preliminary Exploration)

Exploration Agency :- Department Of Mines & Geology, Rajasthan

Morphology of the area:- Geomorphologically the area mostly covers high hill ranges of Aravalli fold belt with maximum elevation around 733 MRL.

Resource Summary :-

Resource &Grade :-Approximately 339,600 Tons. at average 15 % fixed Carbon.

Location Details :-

Location :-Dumara is around 12 kms from Ajmer & well approachable by Ajmer-Dumara tar road.

Topsheetnumber :- 45 J/11

Connectivity :-

Rail:-Nearest Railway station is at Dowariand Hatundi of district Ajmer.

Road:-Nearby passinghighways are NH-58, NH-448.

Airport:-Nearest airport is at Kishangarh which is 38 kms away .

Mineralization and Exploration Details :-

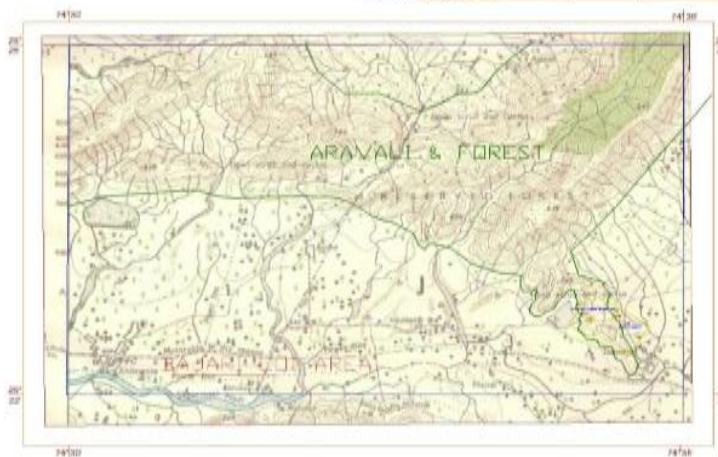
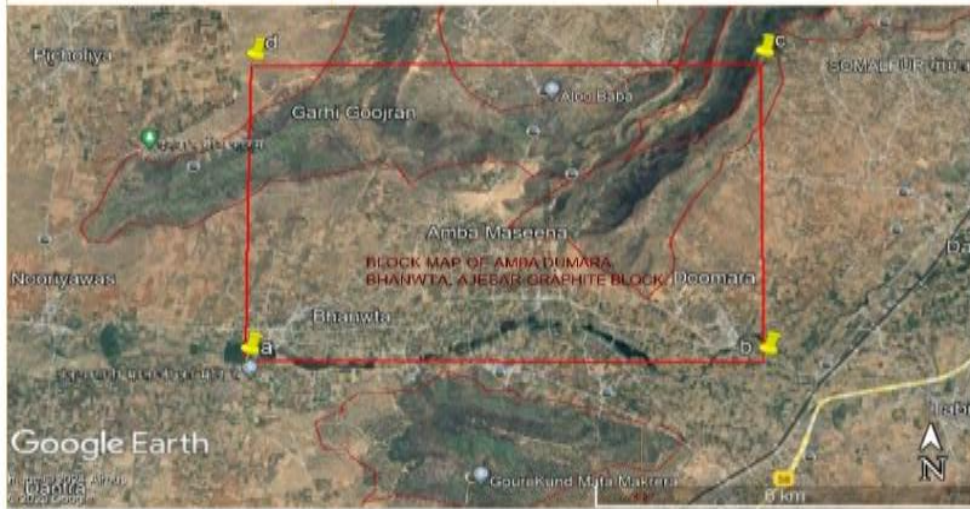
Geology:-Area comprises with Quartzite, Schist, Dolomitic Ferruginous limestone and Cal-silicate rocks of Delhi Super Group of Precambrian age, intruded by pegmatites, quartz-veins and Erinpura granite and basic amphibolite and epidiorite bodies of Post-Delhi age. The general trend of rocks is NE-SW,dip 40⁰ to 70⁰ due NW.

Mineralization :-Quartz Biotite schist is the lithological guide for the presence of graphite veins.

Thickness:-Thickness of Graphite varies from traces to few inches to width as much as more than 6.0 mts. It has got metallic submetallic to partly dull lusture, texturally at places it is flaky or amorphous.

Details of exploration:-110 test pits and 27 trenches were put in Dumara -Amba area respectively out of which nearly 80 trenches have proved the graphite at depth.During the course of Geological mapping the occurrence of graphite has been met with in an area of about 4.8 km length wise and about 0.81 km in width. The information regarding Aravalli, held leases, Legal issues, ADA periphery etc, have been sought from concerned ME office.

**MAP OF GRAPHITE BLOCK (45.889516 SQ.KM) N/V-AMBA,DUMARA,
BHAONTA ,AJESAR TEHSIL-AJMER DISTRICT-AJMER**



1. BLOCK MAP OF AMBA DUMARA, BHANWTA, AJESAR GRAPHITE BLOCK.

| LEGEND | | |
|--|-----------|-----------|
| BLOCK MAP OF AMBA DUMARA, BHANWTA, AJESAR BLOCK. | | |
| BLOCK COORDINATES | | |
| PILLAR | LATITUDE | LONGITUDE |
| A | 26°22'00" | 74°30'00" |
| B | 26°22'00" | 74°35'00" |
| C | 26°25'00" | 74°35'00" |
| D | 26°25'00" | 74°30'00" |
| TOTAL AREA:- 45.889516 SQ KM | | |

- 2. CANCEL LEASE BLOCK AREA
- 3. SANCTION (LOI) BAJRI
- 4. ARAVALI & FOREST

9. MAHAULI-GOPALGARH-ALAMPURA POTASH BLOCK, (GLUONITIC SHALE & SANDSTONE) BLOCK

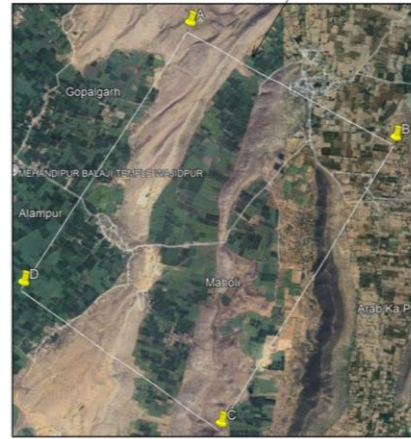
General Information about Mineral Block

FEATURES

| | | |
|------------------------------|---|---|
| Location | - | n/v Mahauli, Gopalgarh, Alampura etc., District-Karauli |
| Part of Toposheet No. | - | 54B/15 |
| Mineral | - | Potash (Gluconite Shale & Sandstone) |
| Area | - | 9.277 sq.km |
| Conflicting Area | - | 0.05379 sq. km. |
| Exploration Level | - | G-4 (Level) |

Mineralization: - The glauconite mineralization is mainly associated with olive green shale of Panna and Jhiri Formations and Taragarh sandstone and shale is also glauconitic with low concentration. There are very limited outcrops of shale in the area, as shale occurs in valley portion and mostly concealed under alluvium or along escarp side of hill, where it covered under the scree material. The block is being proposed in the NE extension of strike direction in search of the Glauconitic mineralization by further exploration work.

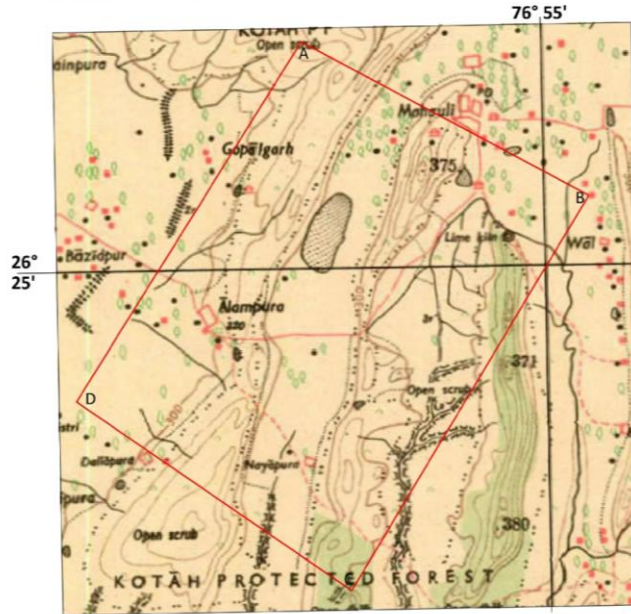
Resources & Grade: - The proposed block is the NE extension of Composite License Block namely Bapoti, in district Karauli explored by GSI, WR on UNFC G-4 level during field season 2015-16. In Bapoti Block preliminary exploration along with 300 m. drilling work spread over 09 BH were completed and 57.54 M.T. reconnaissance resources (334) with 5.30% average grade of K₂O were estimated.



MAP SHOWING PROPOSALS OF MAHAULI, GOPALGARH, ALAMPURA POTASH (GLUCONITIC SHALE-SANDSTONE) EXPLORATION BLOCK on UNFC G-4 Level CARRIED OUT BY NPEA

PART OF TOPOSHEET - 54B/15

SCALE- NOT TO SCALE



LEGEND

-----BLOCK BOUNDARY

BLOCK AREA- 9.277 SQKM
 CONFLICTING AREA - 0.05379 sq. km.
 REMAINING AREA - 9.22321 sq. km.

COORDINATES OF BLOCK

| PILLER | LATITUDE | LONGITUDE |
|--------|---------------|--------------|
| A | N26°25'59.0" | E76°53'49.4" |
| B | N26°25'18.2" | E76°55'11.5" |
| C | N26°23'36.56" | E76°54'01.6" |
| D | N26°24'26.4" | E76°52'43.2" |

10. Ni-Co-PGE Mineral Block n/v Dewal, District Dungarpur

Features:-

Mineral:- Ni-Co-PGE Mineral

Area:- 99.24 Hect.

Exploration level:- G-4

Exploration Agency:-

DMGR, GSI

Location Details:- Toposheet no. 46E/9, N/V Dewal tehsil & District Dungarpur.

Co-ordinate:-

| Sr.no. | Longitude | Latitude |
|--------|--------------------------|--------------------------|
| A | 23 ⁰ -55'-43" | 73 ⁰ -37'-10" |
| B | 23 ⁰ -55'-38" | 73 ⁰ -38'-12" |
| C | 23 ⁰ -55'-19" | 73 ⁰ -38'-11" |
| D | 23 ⁰ -55'-24" | 73 ⁰ -37'-10" |

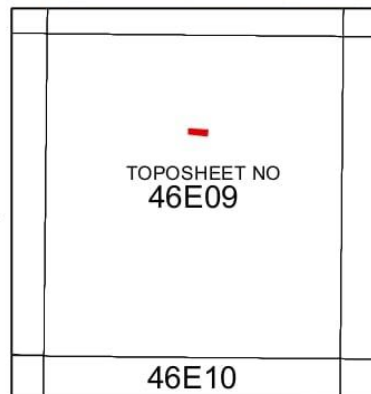
Geology and mineralisation :-

Regional Geology:-

- The area has occurrence of ultramafic rocks (serpentinite and talc-chlorite-schist). Ultramafic rocks are known to be host rock for mineralization of Ni,Cr,Co and PGE minerals.
- GSI based on sampling, assay value analysed 0.11 to 1.16% Cr with 0.10 to 1.30% Ni in bed rock samples, Six possible/probable mineralized zones delineated in area namely as Kherwara (north), Depur, Khemaroo (west), Khemaru, matugamra(east) and Gara Moraya (east), out of these four block has been proposed for composite licence for auction.

Recommendation:-

- Proposed block n/v Dewal falls in same rock horizon and same strike direction of GSI proposed CL block.



11. ROCK PHOSPHATE MINERALS BLOCK n/v LALMADRI, MATKESHWAR TEHSIL-NATHDWARA, DISTRICT-RAJSAMAND

General Information About Mineral Block

FEATURES

Minerals :-Rock Phosphate

Area:- 1.50 Sq. Km

Exploration Level :- G4 (Level)

Exploration Agency :- Department of Mines & Geology, Rajasthan

Morphology of the area :-The study area is a part of undulating land topography

RESOURCES SUMMARY

Resources & Grade :- Resources not assessed (G-4 Level)

Total 51 spot samples were collected and sent for analysis and indicates presence of P₂O₅ from 1.11% to 30.60% with very high SiO₂ and CaO n/v Matkeshwar and Karolikidhani Tehsil Nathdwara, District Rajsamand. Other than these 56 samples were also drawn in grid pattern and on the basis of results 3 zones have been demarcated.

LOCATION DETAILS

Location : - Near Village Lalmadri, Matkeshwar, Tehsil-Nathdwara, District-Rajsamand

Toposheet No. :-45H/9, 45H/13

Connectivity

Rail: Nearest broad-Gauge Railway station is Udaipur which is about 65 Km from the area.

Road services are available up to village Lalmadri, Matkeshwar from Tehsil Headquarter Nathdwara. Village Lalmadri, Matkeshwar is situated about 15 kms from Tehsil headquarter Nathdwara towards Rajsamand on NH-8.

Airport: Dabok, the nearest airport is about 60 km away from the area

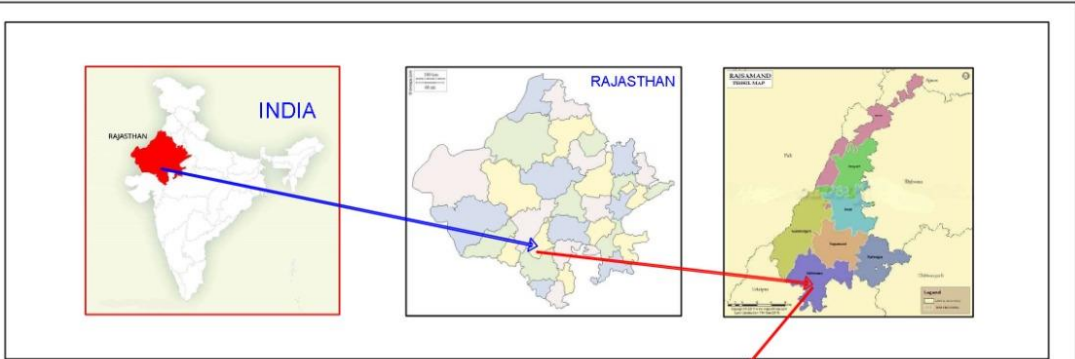
MINERALISATION & EXPLORATION DETAILS

Mineralization: The Phosphate occurrence are situated in the west part of Dolomite along the contact of chert and falls approximately in the same strike. The chert is brecciated and ferruginous and the contact is sheared which carries Phosphate mineralization.

In general the Phosphate is secondary in nature which resulted uneven concentration of P₂O₅ from 1.11% to 30.60% with very high SiO₂ and CaO. Under microscope it is found that apatite occurs as inclusions in Quartz and as colloform texture. The phosphate bearing zones found near Matkeshwar and having strike length of about 150 meter and width up to 10 meter.

Thickness: -3 zones of rock phosphate bearing is follows:-

1. 25 meter X 5 meter with average 10% P₂O₅
2. 100 meter X 8 meter with average 11.50% P₂O₅
3. 100 meter X 5-10 meter with average 8% P₂O₅

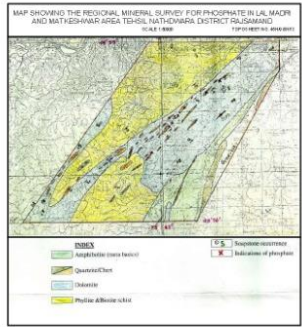


LAL MADRI-MATKESHWAR ROCK PHOSPHATE BLOCK, RAJASTHAN



LAL MADRI-MATKESHWAR ROCK PHOSPHATE BLOCK, TEHSIL - NATHDWARA, DISTRICT-RAJSAMAND, STATE -RAJASTHAN

| LOCATION OF THE BLOCK | | |
|---------------------------|---------------|---------------|
| CORNER POINTS | LATITUDE | LONGITUDE |
| A | 24°53'22.88"N | 73°45'32.83"E |
| B | 24°53'10.41"N | 73°45'49.24"E |
| C | 24°52'8.33"N | 73°44'51.71"E |
| D | 24°52'21.05"N | 73°44'35.05"E |
| TOTAL AREA - 1.50 SQ. KM. | | |



SURATSINGH JI KA KHERA BASEMETAL & ASSOCIATED MINERALS, CHITTORGARH

GENERAL FEATURES

Mineral:- Basemetal & Associated Minerals

Area:- 9.95 sq. km.

Location:- Suratsingh Ji Ka Khera, Tehsil Gangrar, District Chittorgarh

Exploration Agency:- GSI

Exploration Level:- G-4

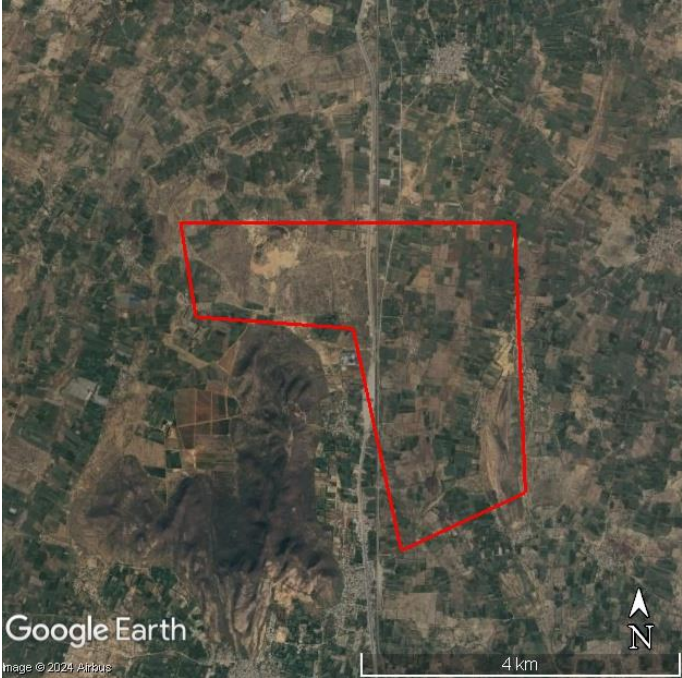
Resources & Grade:- Not Assessed

Toposheet No.:- 44K/12

MINERALISATION & EXPLORATION DETAILS

Surface evidence of base metal mineralization have been observed in the form of malachite stains, lionization and ferruginous encrustation, specks of primary sulphides like chalcopyrite, pyrite, and bornite in the quartzite of the Lasaria Formation.

**LOCATION OF EXPLORATION BLOCK OF MINERAL BASEMETAL
& ASSOCIATED MINERALS INVESTIGATION**



| Coordinate of Block | |
|----------------------------|------------------|
| A -74°36'00.96"E | A -25°06'09.15"N |
| B -74°38'34.45"E | B -25°06'09.01"N |
| C -74°38'37.86"E | C -25°04'17.98"N |
| D -74°37'41.82"E | D -25°03'54.65"N |
| E -74°37'20.19"E | E -25°05'25.12"N |
| F -74°36'08.53"E | F -25°05'29.85"N |