 सत्यमेव जयते	राजस्थान राजपत्र विशेषांक	RAJASTHAN GAZETTE Extraordinary
	साधिकार प्रकाशित	Published by Authority
	फाल्गुन 15, मंगलवार, शाके 1945-मार्च 05, 2024 <i>Phalguna 15, Tuesday, Saka 1945- March 05, 2024</i>	

भाग 4 (ग)

उप-खण्ड (I)

राज्य सरकार तथा अन्य राज्य-प्राधिकारियों द्वारा जारी किये गये (सामान्य आदेशों, उप-विधियों आदि को सम्मिलित करते हुए) सामान्य कानूनी नियम।

Mines and Petroleum (Gr-II) Department

Notification

Jaipur, March 04, 2024

G.S.R.188 .-In exercise of power conferred under Section 10BA(4) of Mines and Mineral (Development and Regulation) Act, 1957 (as amended from time to time), the State Government hereby notifies the following mineral blocks for the grant of Exploration Licence as per the provisions of the Mineral Auction Rules, 2015 (as amended from time to time).

1- Sarasar-Pallu-Dhandhusar Hardaswali Block in District-Hanumangarh, Shri Ganganagar, Churu & Bikaner, for Potash Mineralization

Total Area of the Block-935.53 Sq.Km

Area free for grant of exploration licence - 906.5510 Sq.Km

Pillar no.	Latitude	Longitude
A	29°09'4.84"	74°07'18.22"
B	29°05'55.41"	74°21'17.70"
C	28°45'9.36"	74°14'20.04"
D	28°49'00.12"	74°00'11.52"
Total Block area- 935.53 Sq. Km.		

The above exploration license block also includes Jaitpur block whose details are as follows:-

Pillar no.	Latitude	Longitude
A	28°56'23.6709"	74°03'36.1596"
B	28°55'25.0293"	74°05' 22.5410"
C	28°53'49.5818"	74°04' 43.0473"
D	28°52'18.3181"	74°04' 14.0713"
E	28°51'59.5923"	74°03' 12.5862"
F	28°52'29.5578"	74°02' 06.2997"
G	28°54'58.3192"	74°02' 08.6908"
Total Jaitpur Block area- 29.115 Sq. Km.		

The area of Jaitpur block which is conflicting with the exploration licence block – 28.9490 Sq.km

The exploration licence of this block shall be granted excluding the area overlapping with Jaitpur block i.e. 28.9490 Sq.Km. Therefore, the area free for grant of exploration licence is 906.5510 Sq.Km

2- Chaba-Nawatala-Patodi Block District – Barmer & Jodhpur (Raj), for REE Mineralization, Area – 574 Sq.Km

Pillar no.	Latitude	Longitude
A	26°18'37.86"	72°03'42.87"
B	26°24'05.54"	72°10'4.20"
C	26°10'48.89"	72°25'28.93"
D	26°04'12.96"	72°17'45.13"

3- Renwal-Raithal-Kaladera Block District – Jaipur, Sikar & Nagaur, for REE & RM Mineralization

Total Area of the Block- 795.088 Sq.Km

Area free for grant of exploration licence - 789.4044 Sq.Km

Pillar no.	Latitude	Longitude
A	27°18'15.27"	75°25'36.31"
B	27°07'45.65"	75°41'47.57"
C	26°57'27.63"	75°32'52.19"
D	27°08'43.25"	75°16'22.57"
Total Block Area – 795.088 Sq.Km		

The above exploration license block also includes area falling in Aravalli whose details are as follows:-

Pillar no.	Latitude	Longitude
I	27°01'07.31758"	75°36'02.25676"
II	27°00'41.38333"	75°35'39.80485"
III	27°59'41.70322"	75°33'23.31573"
IV	27°00'03.68064"	75°33'08.22064"
V	27°01'09.20121"	75°35'07.96238"
VI	27°01'07.31758"	75°36'02.25676"
Area falls in Aravalli – 4.5652 sq. km.		

The above exploration license block also includes three areas (Block 1, Block 2 and Block 3) of minor mineral leases whose details are as follows:-

Block-1 (near village Dadar-Naradpura)

Pillar no.	Latitude	Longitude
I	27°04'41.18958"	75°38'58.44281"
II	27°04'07.49053"	75°38'13.69691"
III	27°04'13.52992"	75°38'08.02056"
IV	27°04'48.60612"	75°38'50.25801"
V	27°04'41.18958"	75°38'58.44281"
Block-1 area – 0.4499 sq. km.		

Block-2 (near village Dungri)

Pillar no.	Latitude	Longitude
I	27°10'21.99110"	75°28'52.90748"
II	27°10'01.76214"	75°29'13.19253"
III	27°09'55.03694"	75°29'04.12049"
IV	27°10'15.81362"	75°28'44.16236"
V	27°10'21.99110"	75°28'52.90748"
Block-2 area – 0.2645 sq. km.		

Block-3 (near village Kalwad)

Pillar no.	Latitude	Longitude
I	26°59'04.89260"	75°34'16.30581"
II	26°59'0.83507"	75°34'12.79575"
III	26°59'09.57209"	75°33'57.54204"
IV	26°58'57.71687"	75°33'25.41866"
V	26°59'02.13083"	75°33'23.67418"
VI	26°59'15.63830"	75°33'52.01627"
VII	26°59'04.89260"	75°34'16.30581"
Block-3 area – 0.2500 sq. km.		

The above exploration license block also includes Area of minor mineral leases under court case whose details are as follows:-

ML Area under Court Case (near village Badi Dungri)

Pillar no.	Latitude	Longitude
I	27°08'56.36958"	75°27'44.11066"
II	27°08'34.98839"	75°27'44.35457"
III	27°08'35.08998"	75°27'35.63251"
IV	27°08'56.16107"	75°27'35.69654"
V	27°08'56.36958"	75°27'44.11066"
Block area under court case – 0.1540 sq. km.		

The total overlapping area – 5.6836 Sq.Km

The exploration licence of this block shall be granted excluding the area overlapping i.e. 5.6836 Sq.Km. Therefore, the area free for grant of exploration licence is 789.4044 Sq.Km

**[No.F.3(31)Mines/Group-2/2015-Part5]
By Order of the Governor,**

Ashu Chaudhary,
Joint Secretary to Government.

Government Central Press, Jaipur.

Proposal for Exploration License (EL) for REE, Rb, Cs & V

I. Introduction

A reconnaissance survey for search of deep seated critical minerals (REE, Rb, Cs and V) in and around Renwal – Raithal – Kaladera area in Jaipur, Sikar and Nagaur districts of Rajasthan having an area of 800 Sq km is being proposed under the Exploration License. Renwal – Raithal – Kaladera block is located 5 km west of Chamu City of Jaipur district. In the proposed block most of the area is penneplained under cultivation land with 4m to 25m thick soil cover. In the study area scanty outcrops are recorded. The rock of the study area belongs to the Bhilwara Supergroup and the Delhi Supergroup. The NGPM, NGCM, aerogeophysical and hydrogeochemical samples analysis from the proposed area make it potential for search of critical minerals.

II. Block Name: Renwal – Raithal – Kaladera Block

III. Mineral Commodity of the block: Rare Earth Element (REE), Rubidium (Rb), Cesium (Cs) and Vanadium (V)

IV. State: Rajasthan

V. District: Jaipur, Sikar, Nagaur

VI. SOI Toposheet (s) No.: 45M/07, 45M/08, 45M/11, 45M/12, 45N/05, 45N/09

VII. Accessibility:

The block is well connected by rail and roads. State highway 19 passes through the northern part of the area. Block is located 5km from Chomu city and 50 km from Jaipur. Phulera – Reengas railway line passes through the northern part of the area. From this line the study area is connected with Jaipur and Delhi. Nearest major railway station is Reengas.

VIII. Area (Sq. km): 800 Sq. Km

IX. Boundary coordinates of the block (in DMS):

A: 27°18'15.27" N/ 75°25'36.31" E

B: 27°07'45.65" N/ 75°41'47.57" E

C: 26°57'27.63" N/ 75°32'52.19" E

D: 27°08'43.25" N/ 75°16'22.57" E

X. Regional Geology of the Block

In this area, Geological mapping was carried out by Hacket (1880 and 1881) and Heron (1923, 1953). After that S.N. Gupta, (1960-61) carried out systematic geological mapping in parts of TS No 45M/12. He opined that the Aravalli, Pre-Aravalli rocks are composed of mica-schist, conglomerate, augen-gneiss and quartzites and the rocks of the Delhi System consist of quartzite's which are of two main types one is highly ferruginous and the other gritty, micaceous, felspathic, conglomeratic and massive with intercalations of mica-chlorite-schist. Rasik Ravindra (1976-77) has classified the metamorphites and associated migmatic rocks under Pre-Aravalli Group. During the project Regional Mineral Targeting (RMT), Ghosh et al. (2022) carried out field traverses in the area. In this area rocks of the Delhi Supergroup and the Bhilwara Supergroup are exposed (Fig. 2). Granite gneiss, different types of schist of the Bhilwara Supergroup is exposed in the area. In the area quartzite, schist, phyllite and carbonate rocks are exposed as a part of the Delhi Supergroup. In the southern part of the study area Albitite line in passes from NE to SW direction (Fig. 3).

XI. Lithostratigraphy

	Thar Desert			Fine Aeolian sand and silt with occasional kankar
	Post Delhi intrusives			
Delhi Supergroup	Ajabgarh Group	Ajmer Formation		Phyllite, garnet-staurolite-quartz-sericite-schist, magnetite-sillimanite-quartzite, arkose grit, conglomerate and quartzite, quartzite, calc-gneiss, schist, marble, limestone
	Alwar Group	Naulakha Formation	Kankwarhi Formation	Talc-serpentine schist, calc gneiss, quartzite, biotite schist
		Srinagar Formation	Rajgarh Formation	Grit, conglomerate, quartzite, phyllite, quartzite and schist
	Gyangarh-Asind Acidic Rocks			Pegmatite, amphibolite garnet gneiss, charnockite with norite, migmatite and gneisses, granite
Bhilwara Supergroup	Mangalwar Complex (BGC)			Granite and granite gneiss (Basement to DSG)
	Sandmata	Badnor Formation		Amphibolite, hornblende

	Group		schist, calc- gneiss, granite gneiss, biotite schist, gneiss, quartzite
		Sambhugarh Formation	Migmatite and gneiss

XII. Structural Details

In the study area contact between basement and cover sequence is observed. The general strike of the area is NNE-SSW trending with moderately dipping towards south. Near Dungri Kalan area angular unconformity between the Bhilwara Supergroup and the Delhi Supergroup is observed.

XIII. Baseline Dataset available (NGCM/NGPM/NAGMP):

Ground geophysical survey (NGPM) has been carried out in the study area. The Bouguer gravity data of the block suggest high gravity in the northern part and the shallow gravity in the southern part (Fig. 4). Gravity gradient is observed in the central part of the area. In the gravity data, steep gravity gradient is observed in the western part of the area. Gravity nosing and break in gravity also observed in the central part of the area. Saurabh Ray and S.K. Awasthi (1985-86) carried out ground evaluation of aerogeophysical (electromagnetic and magnetic) anomalies in O.H.R. flown overlay sheets No. RA-4, 5 and 6 covering parts of toposheets No. 45I/15, 16 and 45 M/3, 4, 7 and 8 (Sikar, Nagaur and Jaipur districts, Rajasthan). Gouda et al (2018) carried out aerogeophysical survey in the area in FS 2016-18. In the aero magnetic data of the block shows moderate to high magnetic anomaly in the central part. TMI map and RTP – TMI map shows high magnetic zone in the central part of the area. This high magnetic zone is also trending NE-SW direction. In the southern part of the area linear magnetic high zones also observed. In the northern part circular pattern magnetic high is observed (Fig. 5). Tilt derivative of RTP- TMI maps indicate that magnetic anomaly near Raithal, Dungri Kalan sets on gravity gradient zones. These locals are favorable for the mineralization. Geochemical Survey (NGCM) also completed in the study area. NGCM work was carried out in the area by Tiwana and Kumar in FS 2019-20. REE concentration is more in the central part near Raithal area. High Rb concentration (up to 93.83 ppm) is observed in the central and southern part of the area. As concentration is more in the NE of Hingonia (Fig. 6). As is the one major pathfinder element for gold mineralization. Vanadium concentration (up to 81.49 ppm) is also observed in the southern part of the study area.

XIV. Exploration details available in EL Block

Hydrogeological sampling was carried out in the central part of the study area during project RMT (Ghosh et al 2022, FS 2018-22) (Fig. 7). The groundwater trace element data shows encouraging values of rare metals and critical elements. The groundwater sampling was carried out along the high magnetic and gravity gradient zones. SO_4/Cl ratio in groundwater samples >2 indicates the presence of sulphide in the area. In the Raithal area, SO_4/Cl ratio in groundwater samples is greater than 2. Cesium (Cs) value in groundwater sample varies from 0.02ppb to 0.12 ppb. Y value varies from 0.01ppb to 0.58ppb. La and Ce values upto 0.12ppb and 0.18 ppb respectively. Immobile element such as Cs, Y, La, Ce indicate the presence of REE bearing mineral in the area. Bi values vary from 0.02 ppb to 0.81 ppb and As values vary from 3 ppb to 13 ppb. The values of these two elements in groundwater samples indicate the gold mineralization in the area. Tin (Sn) values also vary from 0.30 ppb to 0.50ppb in the study area. The geophysical, geochemical and hydrogeological data indicate that the area is favorable for the deep seated critical mineral deposits.

XV. Proposed Potentiality of EL block:

The geophysical, geochemical and hydrogeological data indicate that the area is favorable for the deep seated critical mineral deposits. High magnetic zones sat on gravity gradient zone are the favorable local for the mineralization. These locals are well corroborated with the NGCM data and hydrogeochemical data. On the basis of these data sets, study area has good potentiality for the REE, Rubidium, Cesium and Vanadium.

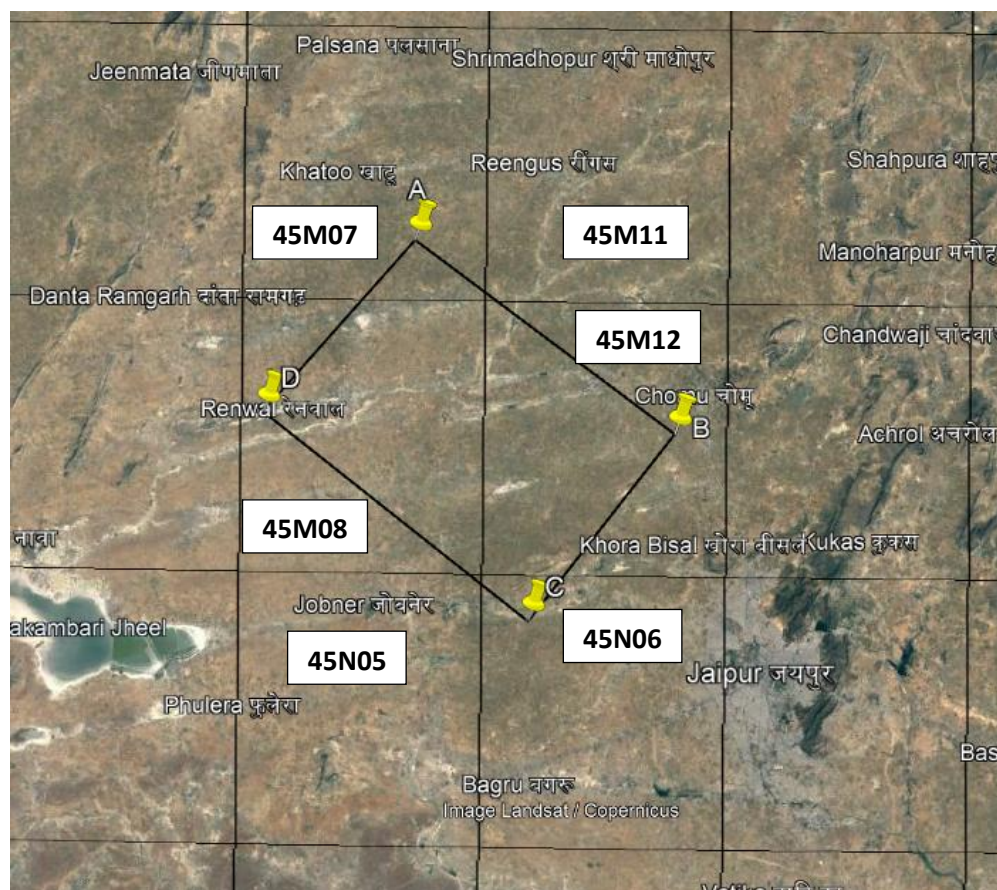
XVI. Bibliography

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4. Ghosh et al (FS: 2018-21) Regional Mineral Targeting for basemetals and associated precious metals along 'Albitite zone' Khandela-Kishangarh sectors, Sikar, Jhunjhunu and Ajmer districts, Northern Rajasthan (Final Report for FS 2018-21)
5. Ghosh et al (FS 2021-22) Regional Mineral Targeting (Phase -II) for Basemetals and associated precious metals along Albitite zone Khandela-Kishangarh sectors, Sikar, Nagaur, Ajmer and Jaipur districts, Northern Rajasthan. (Final Report for FS 2021-22)
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9. Ray, S. and Awasthi, S.K., 1986. Report on Airborne Electro Magnetic and Magnetic Features in overlay sheet Nos. RA 4 & 5 and a part of RA - 6 (Operation Hard Rock) in Sikar, Nagaur and Jaipur Districts, Rajasthan, as the Final Phase of the First Stage Ground Evaluation. Progress Report for the Field Season 1985-86.
10. Tiwana and Kumar (2021), Geochemical mapping in toposheet no. 45m/8 and 45m/12 covering parts of Jaipur, Sikar and Nagaur district of Rajasthan. Unpublished Final Report, G.S.I (F.S 2019-20).

Fig.1: Location of proposed G4 block on Google Earth Image, Jaipur – Sikar - Nagaur District, Rajasthan.



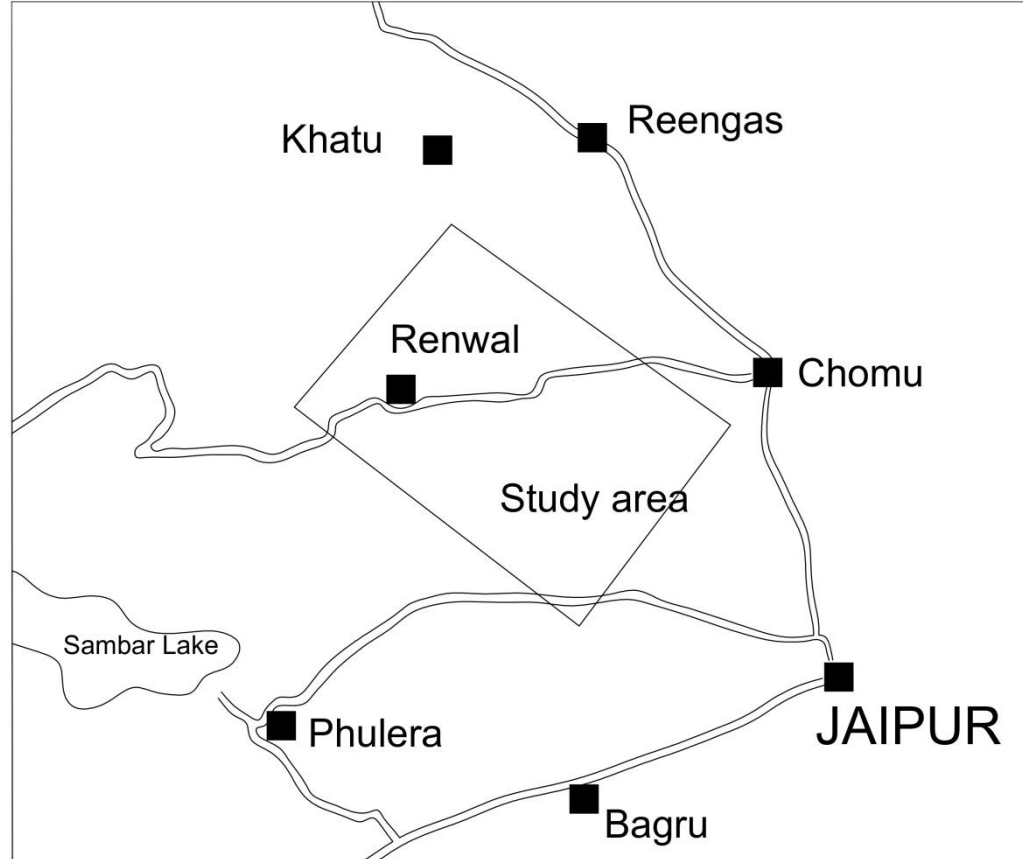


Fig.2: Location of proposed G4 block on 50K Geological Map of the are, Jaipur – Sikar - Nagaur District, Rajasthan.

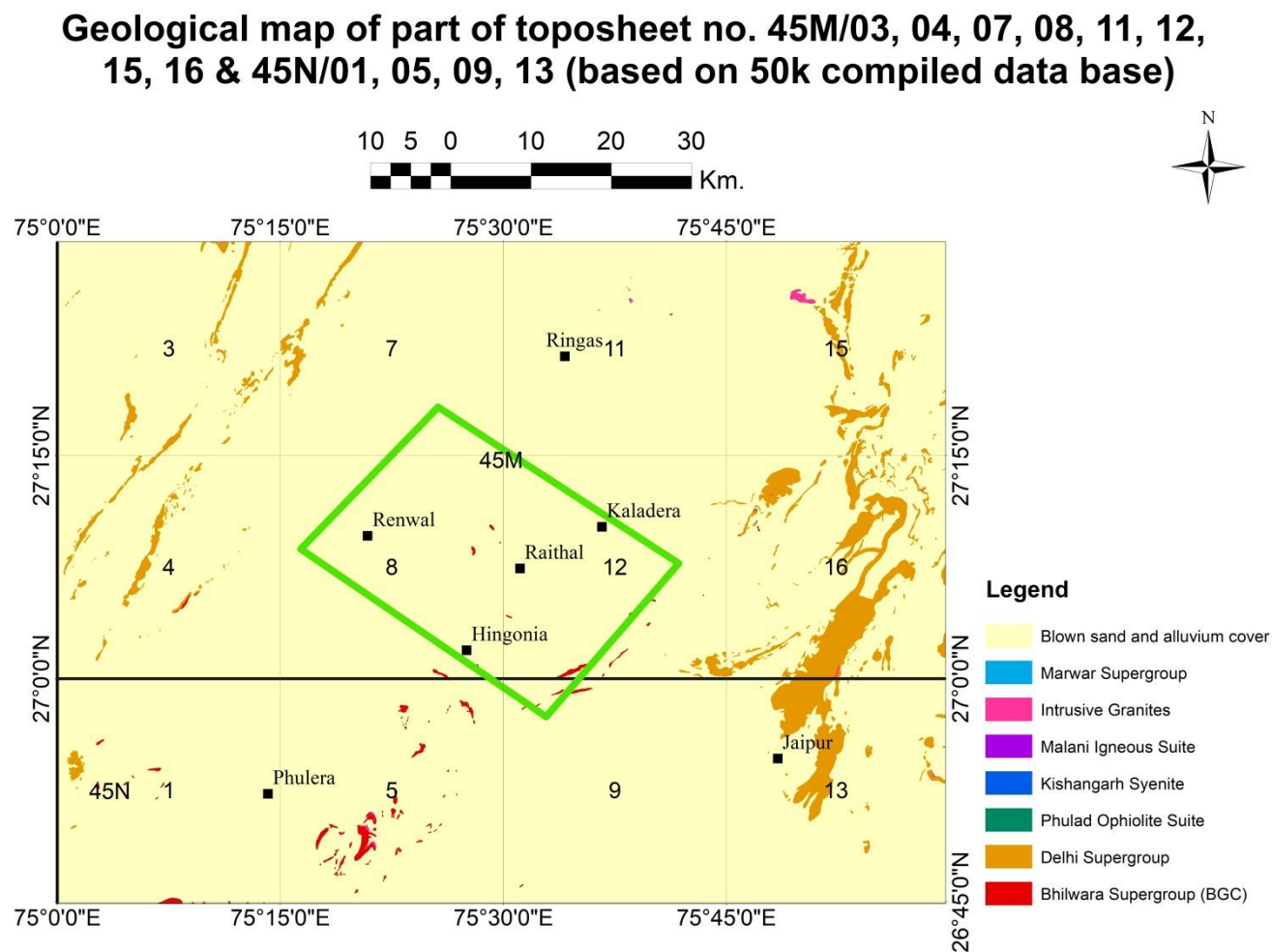


Fig.3: Location of proposed G4 block and albitite line on Google earth imagery, Jaipur – Sikar - Nagaur District, Rajasthan.

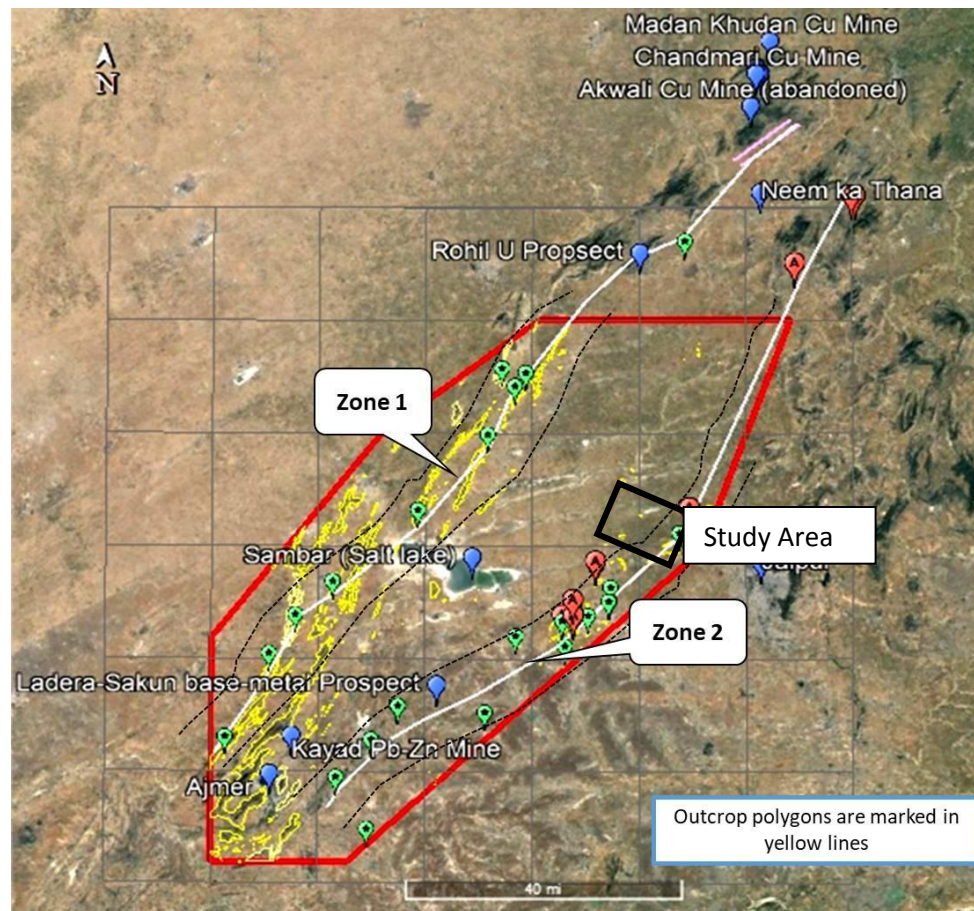
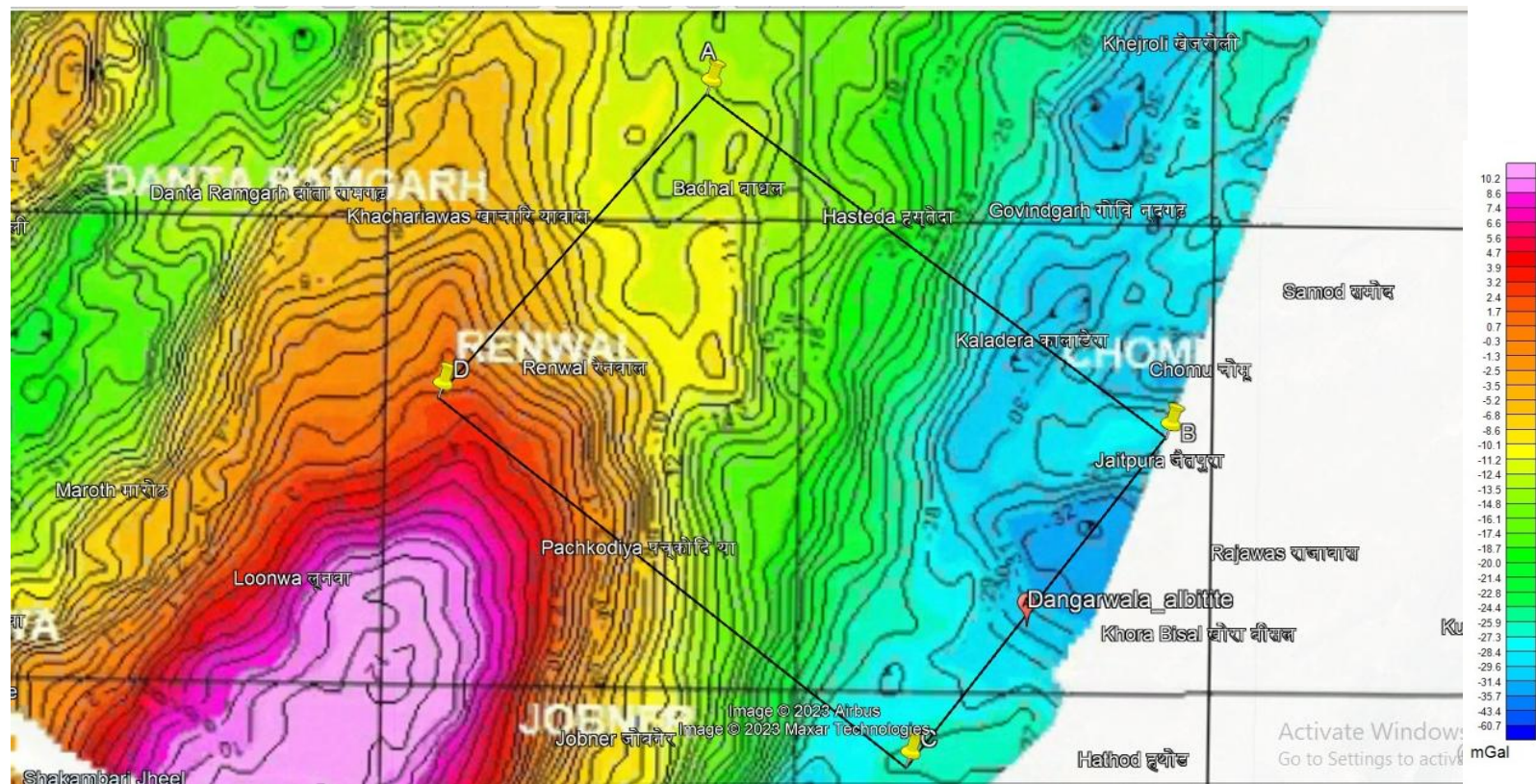


Fig.4: Location of proposed G4 block on Gravity anomaly map, Jaipur – Sikar - Nagaur District, Rajasthan.



Bouguer Gravity Anomaly of the Block

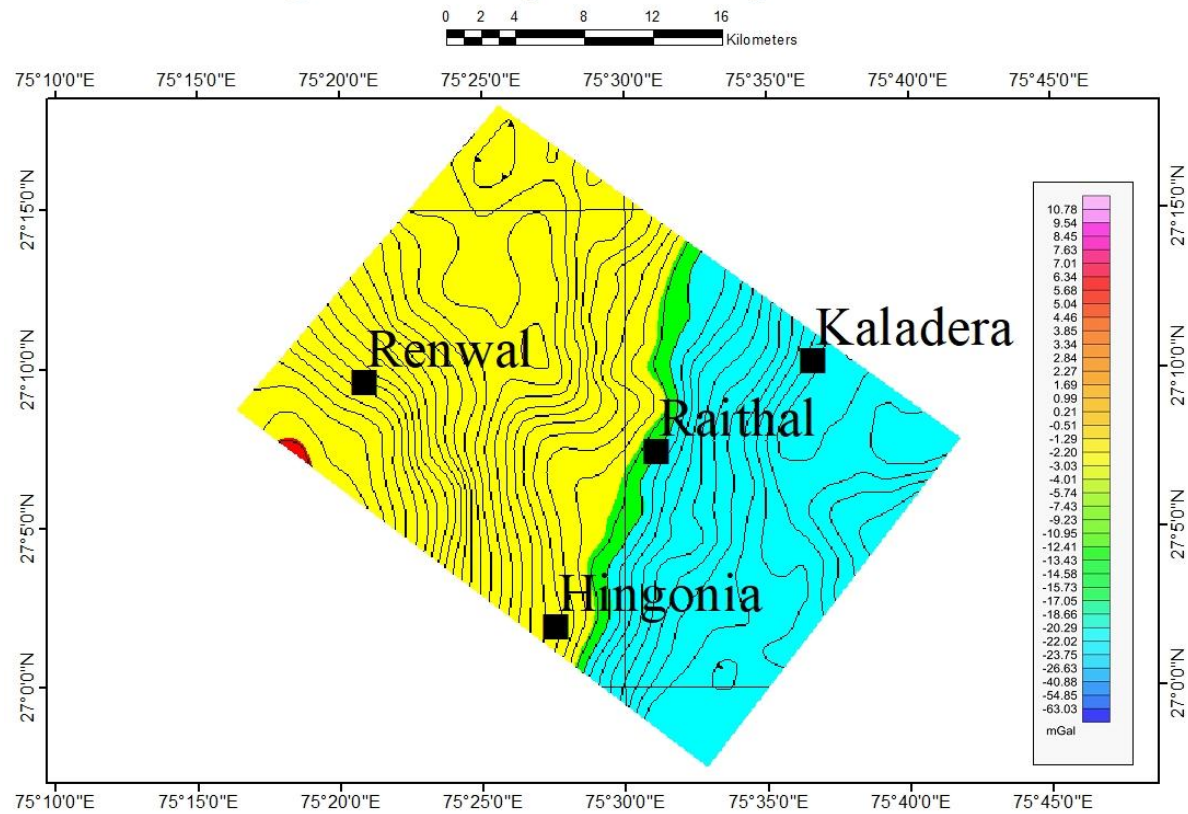
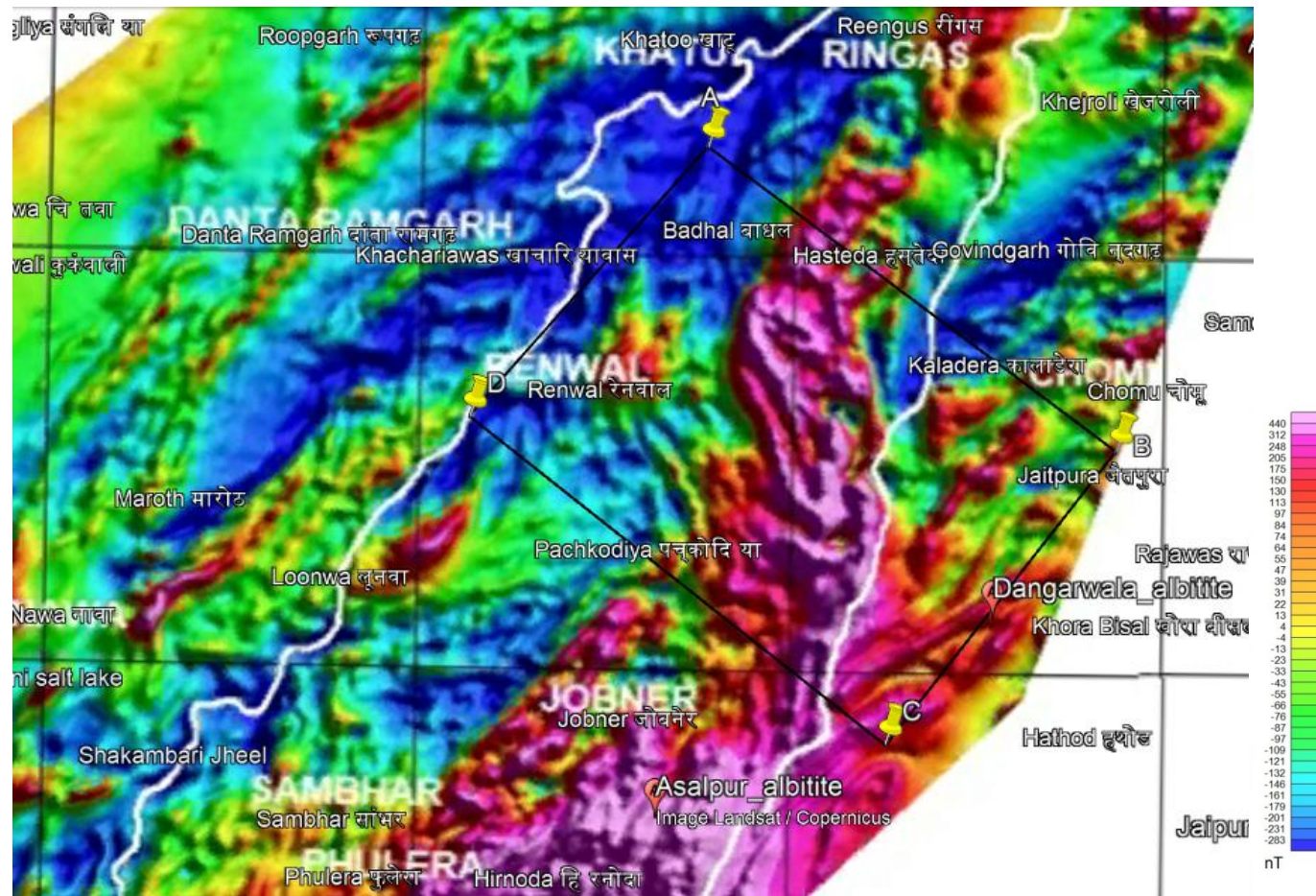
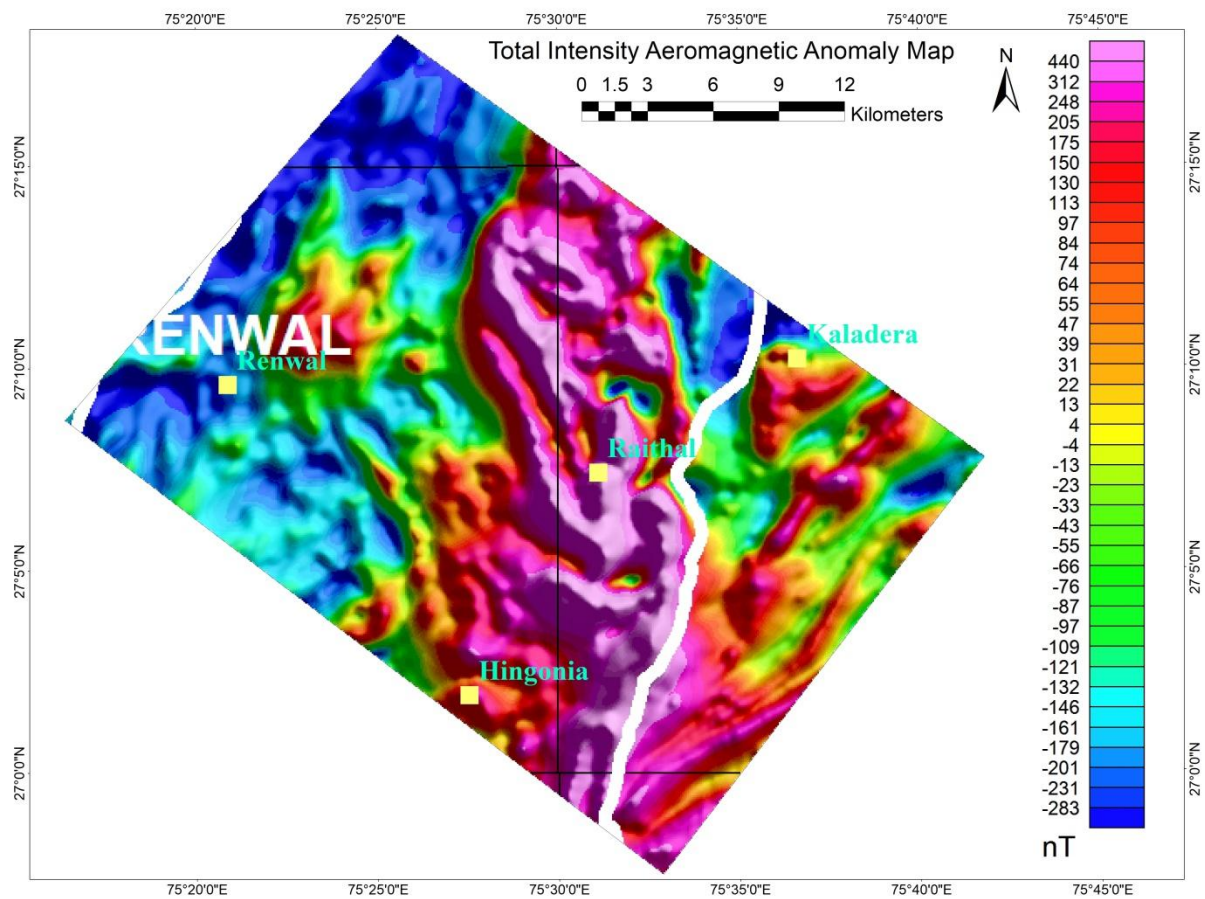


Fig.5: Location of proposed G4 block on magnetic anomaly map, Jaipur – Sikar - Nagaur District, Rajasthan.





Reduced to Pole Anomaly Map of the Block

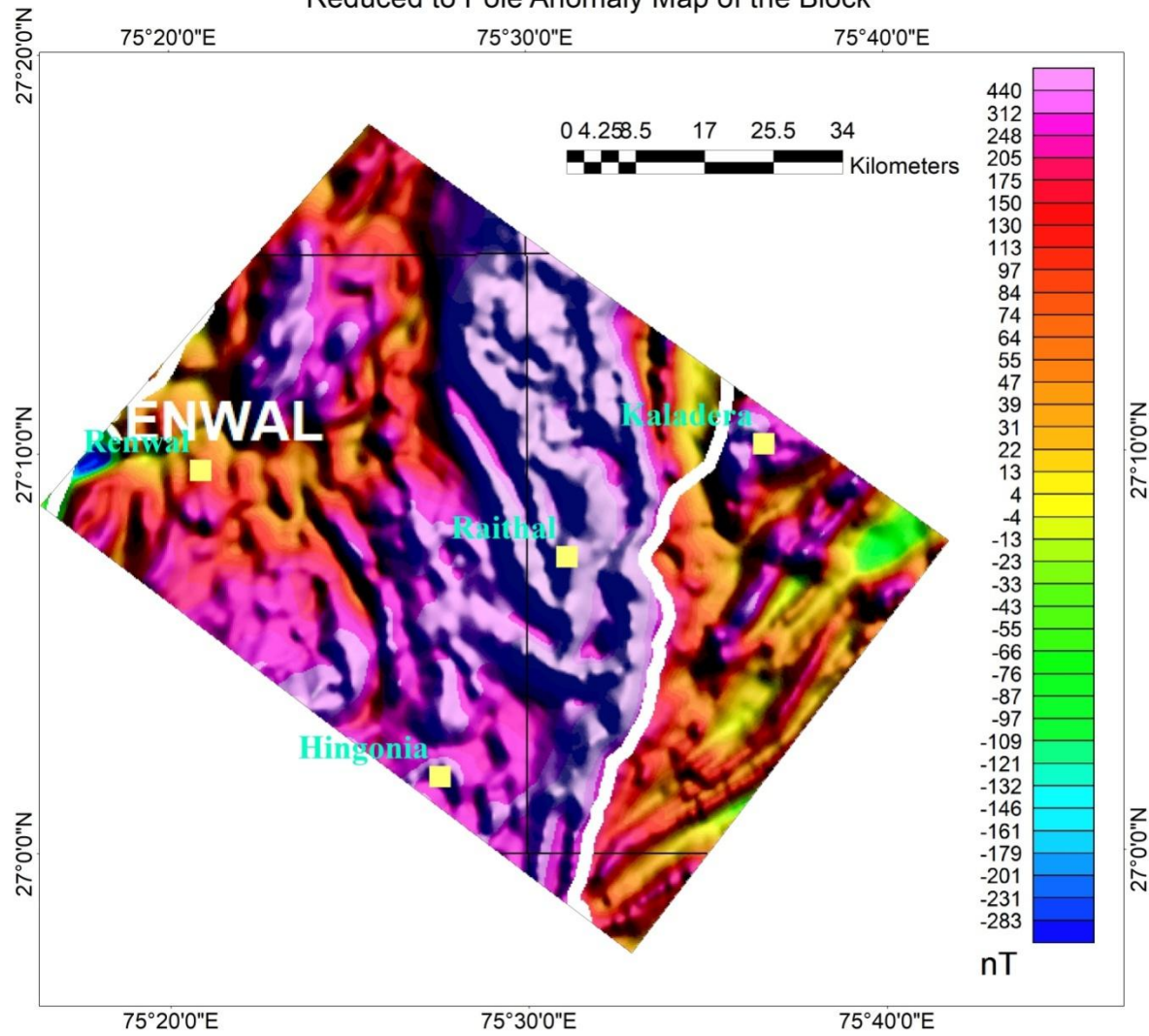
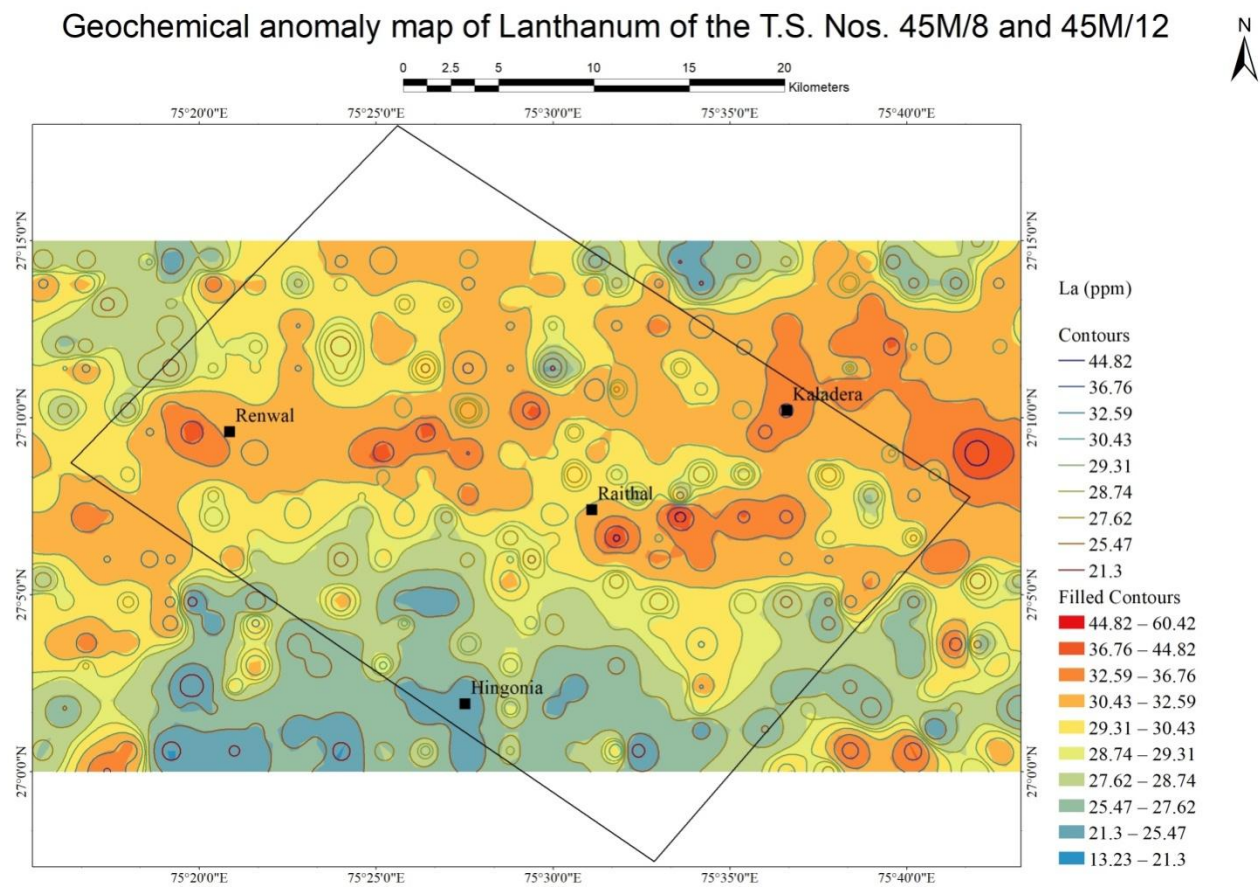
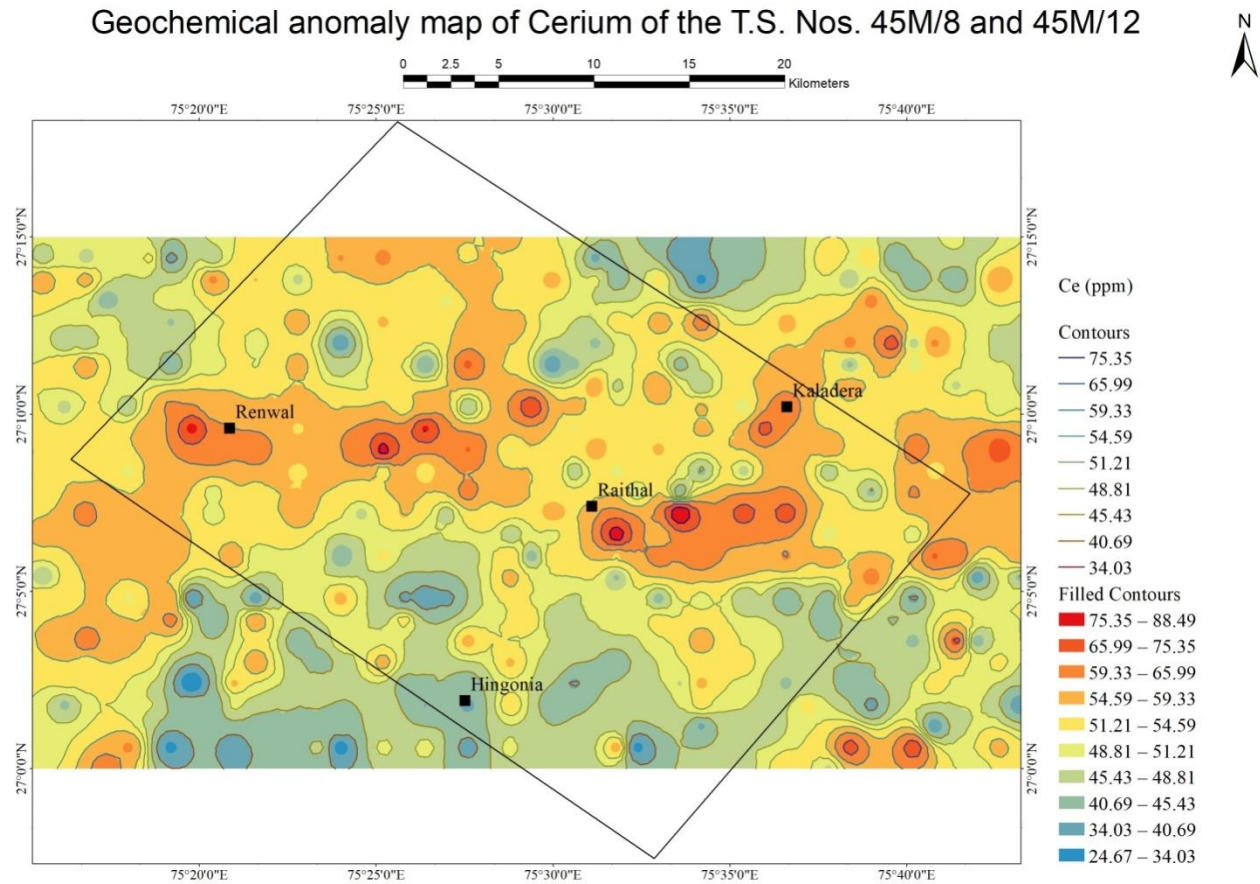


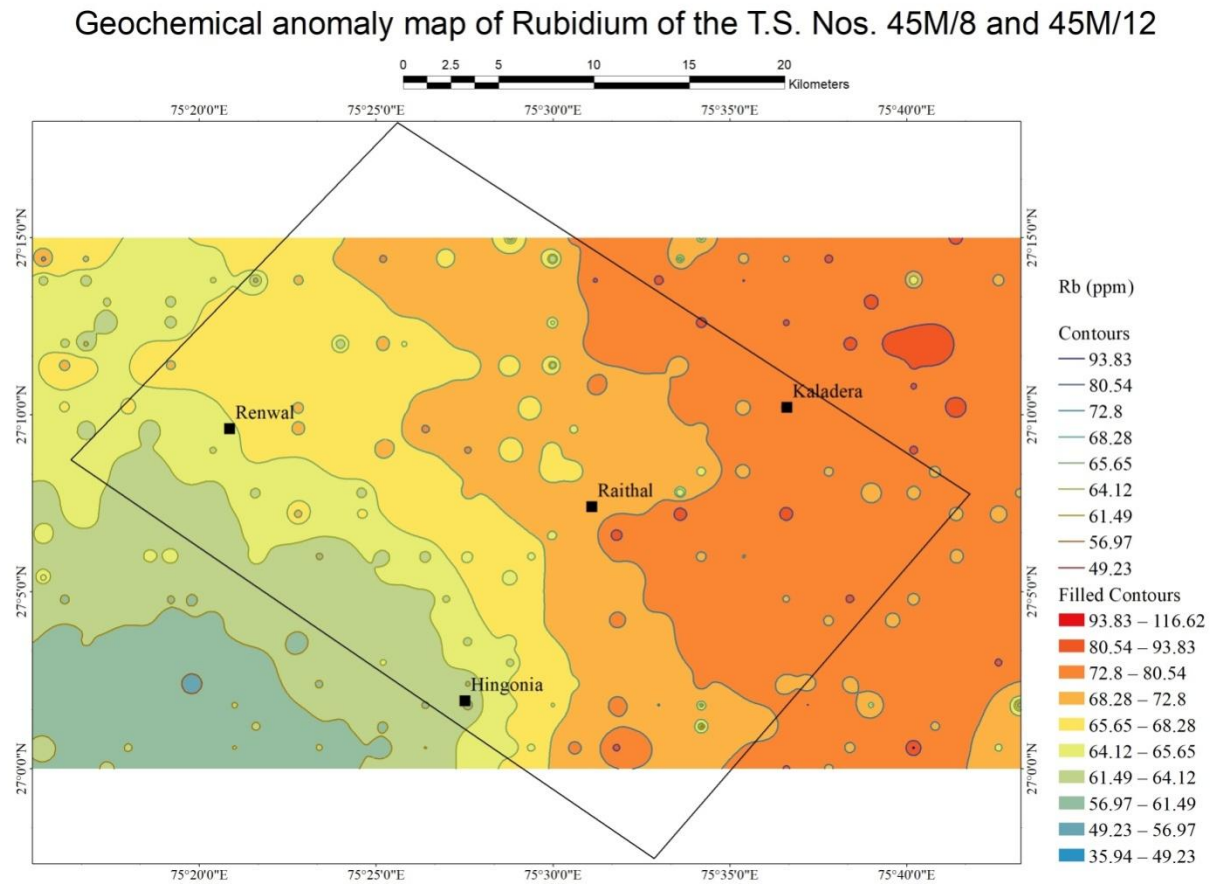
Fig.6: Location of proposed G4 block on geochemical anomaly map (La, Ce, Rb, V and As), Jaipur – Sikar - Nagaur District, Rajasthan.



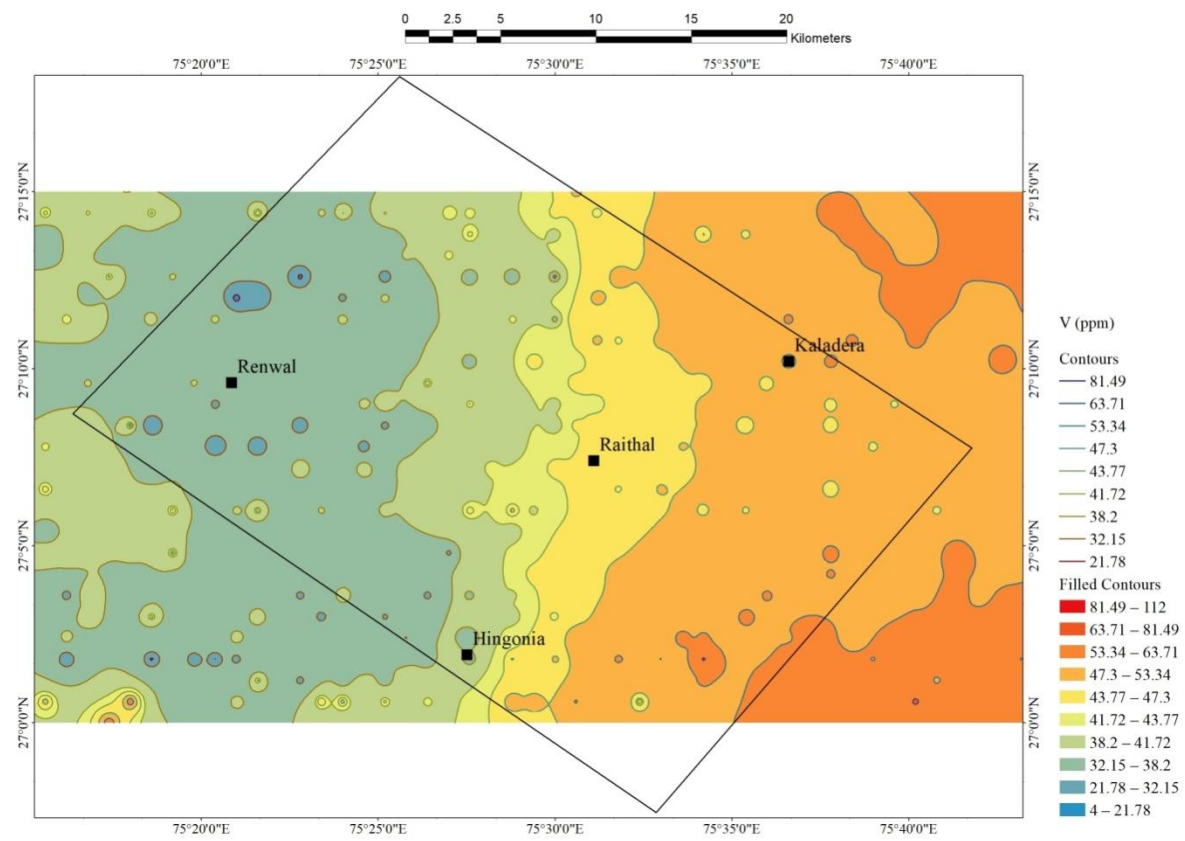
Geochemical anomaly map of Cerium of the T.S. Nos. 45M/8 and 45M/12



Geochemical anomaly map of Rubidium of the T.S. Nos. 45M/8 and 45M/12



Geochemical anomaly map of Vanadium of the T.S. Nos. 45M/8 and 45M/12



Geochemical anomaly map of Arsenic of the T.S. Nos. 45M/8 and 45M/12

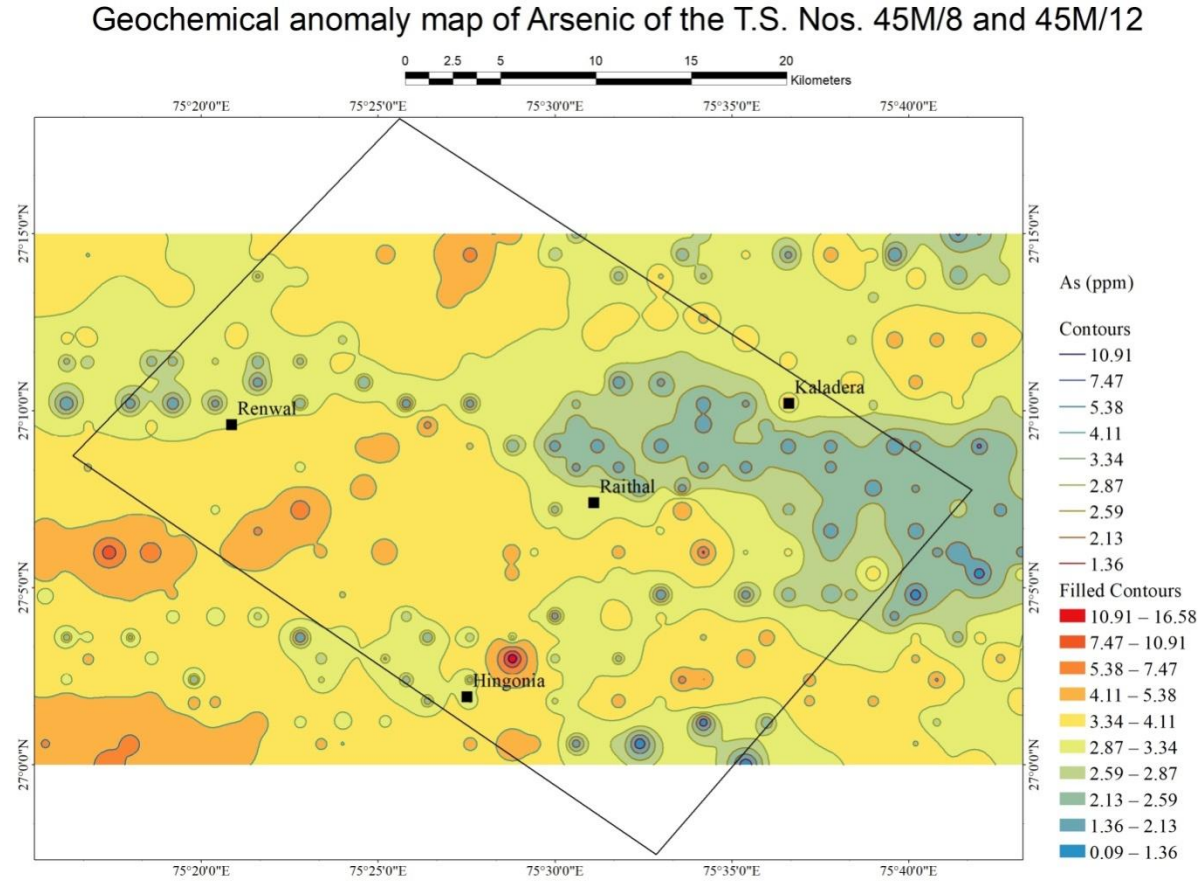
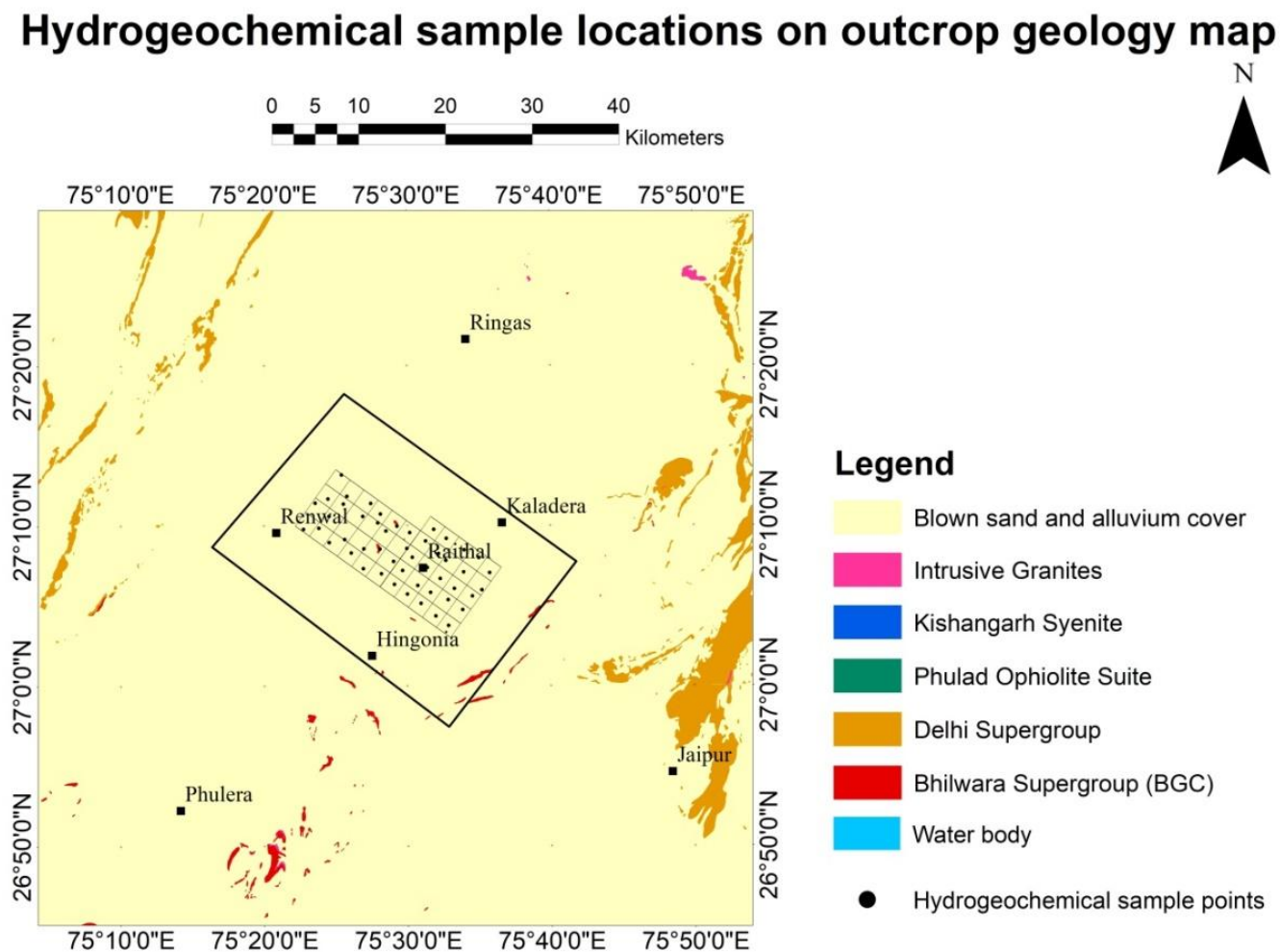


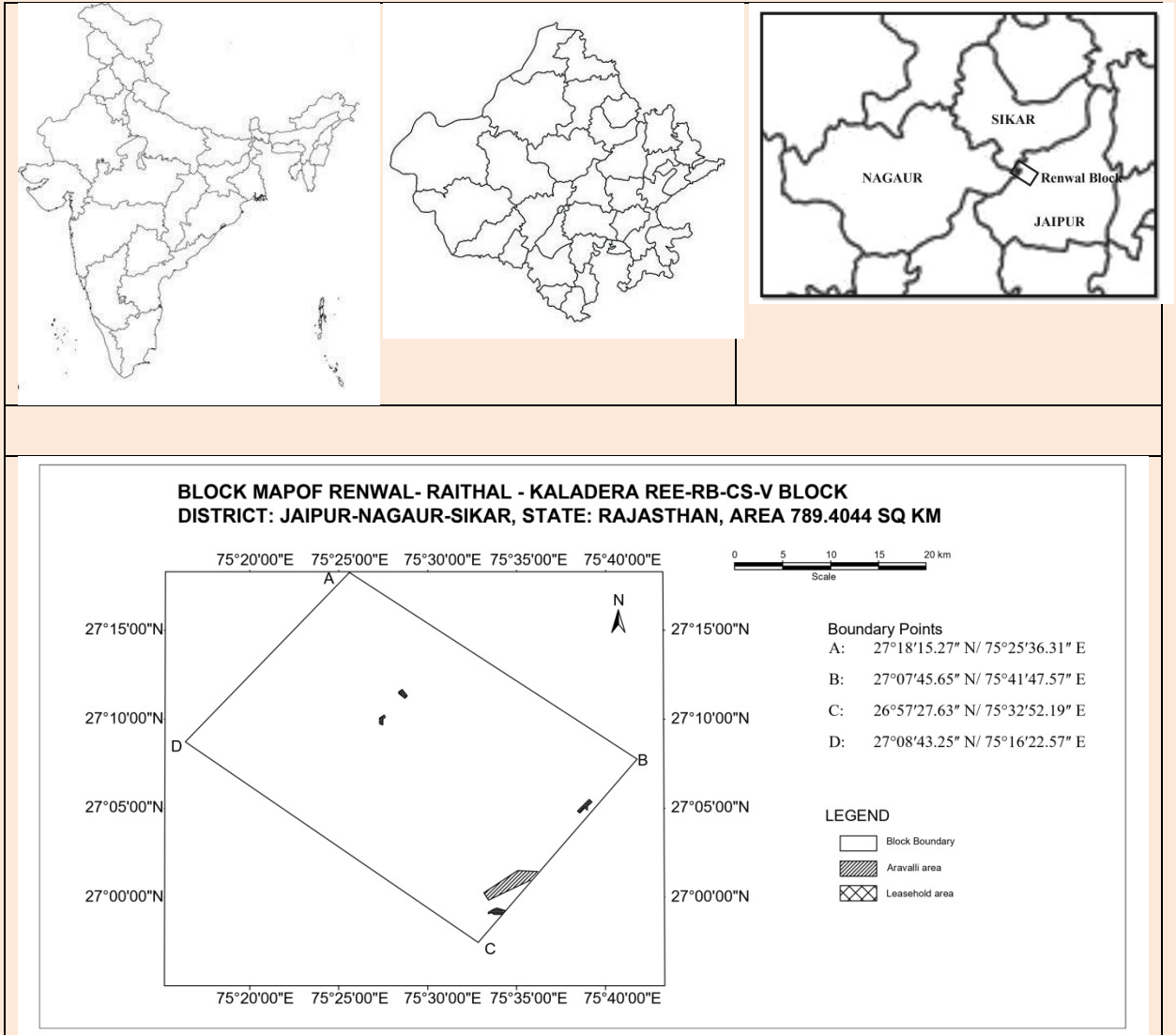
Fig.7: Location of proposed G4 block and hydrogeochemical sample points on 50K geological map, Jaipur – Sikar - Nagaur District, Rajasthan.



Renwal – Raithal – Kaladera Rare Earth Element (REE), Rubidium (Rb), Cesium (Cs) and Vanadium (V) Block – Exploration Licence (EL)

General Information About Mineral Block

FEATURES	
Licence Type	Exploration Licence (EL)
Mineral	Rare Earth Element (REE), Rubidium (Rb), Cesium (Cs) and Vanadium (V)
Areas	789.4044 Sq Km
Exploration Level	G-4 (Reconnaissance Survey)
Exploration agency	Geological Survey of India, State Unit: Rajasthan, Western Region, Jaipur
Morphology of the area	The study area is a part of Aravalli Hill range, most of the part is covered by aeolian transported regolith.
LOCATION DETAILS	
Location	Renwal, Raithal, Kaladera (Vill), Chomu and Phulera (Teh), Jaipur, Sikar, Nagaur (Dist.), Rajasthan
Toposheet Nos.	45M/07, 45M/08, 45M/11, 45M/12, 45N/05, 45N/09
Connectivity	
Rail	The nearest rail head is Renwal
Road	The study area is approximately 60 km from the State Capital Jaipur. Regular RSRTC buses and private service are available to commute.
Airport	Airport at Jaipur, Rajasthan (Jaipur International Airport)
MINERALISATION AND EXPLORATION DETAILS	
Exploration Details	Regional Exploration, NGPM, NGCM and aero-geophysical mapping was carried out by Geological Survey of India.



A. Particulars of Statutory Licenses, Permits, Permissions, Concessions, Approvals and Consents Related to Mining Operations

- All clearances, consents, approvals, permit, no objection certificates and the like as may be required under applicable laws for commencement of reconnaissance or prospecting operations or both are to be obtained by the preferred bidder.

B. Particulars of Land

- As per annexed notification