

MINUTES OF XVII MEETING OF THE
STATE GEOLOGICAL PROGRAMMING BOARD
HELD ON
31st AUGUST, 2017

Minutes of the 17th meeting of State Geological Programming Board 31st August, 2017, Raipur

- 17.1** 17th meeting of SGPB Chhattisgarh was held at New Circuit House, Raipur on 31st August, 2017 under the Chairmanship of Shri Subodh Singh, Secretary, Govt of Chhattisgarh Mineral Resource Department. Member secretary & Director Geology and Mining, Chhattisgarh Shrimati Alarmelmangai D. was present at the meeting. Members and dignitaries of SGPB, present at this meeting include Dr. Shabbir Hussain, Deputy Director General, Geological Survey of India, Chhattisgarh unit. Representatives of Geological Survey of India, Chhattisgarh unit, Indian Bureau of Mines, National Mineral Development Corporation, Chhattisgarh Mineral Development Corporation, Central Mine Planning and Design Institute, Mineral Exploration Corporation Ltd, Chhattisgarh Council of Science and Technology, and Directorate of Geology and Mining, Chhattisgarh participated in the meeting. List of Participants is enclosed.
- 17.2** Shri Jayant Pashine, Additional Director, Geology and Mining, Chhattisgarh offered a warm welcome to all the dignitaries from various departments.

In inaugural address, chairman of the forum said that this meeting provides an opportunity to the state agencies as well as central agencies to exchange information about their activities, achievements and future mineral exploration activities. He said that technical discussions in these programming board meetings are productive but we still need to reorient our work as per the need of current times and also as per the requirement of National Mineral Policy. Chhattisgarh is a mineral rich state and its contribution to the national economy is considerable. We do need a aggressive plan for massive scale of exploration and it should be time bound work for 2-3 years. We need to prepare a dedicated exploration plan so that more and more auctionable blocks are brought out for the state. It will take us to a totally different level. He suggested to all exploration agencies to plan exploration work in such a way that 5 to 6 blocks be prepared for auction every year.

Directorate of Geology and Mining, Chhattisgarh is ready for auction of 4 blocks (02 of limestone blocks and 02 of bauxite blocks) in Stage-II.

The basic idea of this meeting is to exchange ideas of various agencies working in the state and avoid duplicating of work being carried out by them. Director gave a brief account of the investigation work carried out during the last field season and also the work proposed during the coming field season.

17.3 Shri Jayant Pashine, Additional Director, Geology and Mining, Chhattisgarh, thanked chairman Shri Subodh Singh and member secretary for their valuable guidance and assured them of compliance of all the guidelines. He presented the minutes of the 16th meeting of the SGPB held on 20th September, 2016 before the house for approval and the same was unanimously approved by the members without any modifications.

17.4 Shri Jayant Pashine, Additional Director, asked for presentations of various departments working in the state.

17.5 Geological Survey of India, Chhattisgarh Unit, Raipur

Dr. Shabbir Hussain, Dy Director General, informed the house that GSI has completed the almost 98% of the area of the country under Thematic mapping programme. GSI is doing Geochemical mapping on national level under NGCM programme in view of vision 2020 to locate potential and prospective area for mineral exploration. The aim of NGCM programme is to prepare potential maps for different elements at national level.

Shri Subodh Singh Chairman of the board suggested that GSI should focus on mineral exploration work in Chhattisgarh in a more aggressive manner. He suggested to Dy. Director General GSI to explore more blocks under G-II level in coming field seasons with respect to New Mineral Auction Policy.

Dr. Shabbir Hussain, Dy. Director General, GSI informed the house that GSI has taken up different projects under five missions in Chhattisgarh during the period. GSI is concentrating on Mission-I & Mission –II, i.e. mapping and exploration. He informed the Chairman that previously GSI has been working only for G-IV level exploration. GSI has started detailed exploration work only 2 to 3 years back.

17.5.1 Mission 1: Project STM:- Dr. I.D. Ashiya, Director(G) informed the house that in this project of Specialized Thematic Mapping carried out for classification of the unclassified rocks of Chhota Nagpur Gneissic complex in Murka-Shankargarh- Dipadih kalan area of Balrampur district, Chhattisgarh- 350 sq km area was mapped on 1:25,000 scale in Toposheet no. 64 M/11. This area is formed western flanks of Chhotanagpur Gneissic Complex. In the mapped area comprise Garnet quartzite mica schist, calc silicates and gneiss. Finding of this project is identified of sulphide zone wherein the value of Molybdenum and Tungsten is much higher than upper continental crust.

17.5.2 Mission 1: Project NGCM:- The main purpose of this project to prepare geochemical data base that can be used in different purpose viz. mineral exploration, forestry, agriculture, health hazard etc. Dr. I. D. Ashiya, Director, GSI Raipur informed the house that under this project one sample collected per sq km and one composite sample have to be taken at 2x2 sq km grid and analyzed for 64 elements. In this project of NGCM a total of 12 projects have been taken in different part of Chhattisgarh State.

I. Geochemical mapping is carried out in part of Kanker district of Chhattisgarh, on Toposheet no. 64 H/11, and H/12 (part) and covered 808 sq km area on 1:50,000 scale. (Item no. 006/GCM/CR/CG/2016/004)

II. Geochemical mapping carried out in Gariyaband, Kanker and Dhamtari districts of Chhattisgarh, on Toposheet no. 64 H/16, H/12 (part). A total of 808 sq km area was covered on 1:50,000 scale. (Item no.007/GCM/CR/CG/2016/05)

III. Geochemical mapping is carried out in part of Durg and Kanker district of Chhattisgarh, on Toposheet no. 64 H/2, and H/3 (part) and covered 800 sq km area on 1:50,000 scale. (Item no.007/GCM/CR/CG/2016/06)

IV. Geochemical mapping carried out in part of Kanker and Bastar districts of Chhattisgarh, on Toposheet no. 64 H/08 & H/12 (part). A total of 810 sq km area was covered on 1:50,000 scale. (Item no.007/GCM/CR/CG/2016/07)

V. Geochemical mapping is carried out in part of Surguja district of C.G., on Toposheet no. 64 I/15, and I/10 (part) and covered 808 sq km area on 1:50,000 scale. (item no.007/GCM/CR/CG/2016/08)

VI. Geochemical mapping is carried out in part of Koriya district of Chhattisgarh, on Toposheet no. 64 I/07, and I/10 (part) and covered 812 sq km area on 1:50,000 scale. (Item no.007/GCM/CR/CG/2016/09)

VII. Geochemical mapping carried out in parts of Koriya and Surguja districts of Chhattisgarh, on Toposheet no. 64 I/08, I/10 (part). A total of 808 sq km area was covered on 1:50,000 scale.

(item no.007/GCM/CR/CG/2016/10)

VIII. Geochemical mapping is carried out in part of Koriya and Surajpur district of Chhattisgarh, on part of Toposheet no. 64 I/12, and I/10 (part) and covered 808 sq km area on 1:50,000 scale. (Item no.007/GCM/CR/CG/2016/11)

IX. Geochemical mapping carried out in part of Koriya and Surajpur districts of Chhattisgarh, on Toposheet no. 64 I/12 & I/10. A total of 728 sq km area was covered on 1:50,000 scale. (Item no.007/GCM/CR/CG/2016/12)

X. Geochemical mapping carried out in Metamorphic Belt under Bilaspur-Raigarh & Surguja districts of Chhattisgarh, on Toposheet no. 64 M/02 & 64N/6(A1,A2 & A3 quadrants) A total of 728 sq km area was covered on 1:50,000 scale. (Item no.168/GCM/CR/CG/2016/93)

XI. Geochemical mapping carried out in Bilaspur-Raigarh-Surguja Metamorphic Belt under Surajpur & Balrampur districts of Chhattisgarh, on Toposheet no. 64 M/03. A total of 728 sq km area was covered on 1:50,000 scale. (Item no.169/GCM/CR/CG/2016/94)

XII. Geochemical mapping carried out in part of Jashpur districts of Chhattisgarh, on Toposheet no. 64 N/14. A total of 728 sq km area was covered on 1:50,000 scale. (Item no.170/GCM/CR/CG/2016/95)

17.5.3 MISSION II - NATURAL RESOURCE ASSESSMENT:-

I. PRECIOUS METAL & MINERAL: Search for kimberlite clan rocks in Mahasamund, Balodabazar and Janjgir Champa distt. (Economic Geology Project) Toposheet no. 64K/11:-A multidisciplinary studies in 700 sq. km area of Basna kimberlitic field was carried out on 1:50000 scale.

The area constitutes granites, gneiss/migmatite of Bengpal group, BIF, quartzite and hornblend schist of Tonidonger Group. (Stage-G4) (Item no.51/ME/CR/CG/2015/38)

II. Search for kimberlite clan rocks in Mahasamund distt. (Economic Geology Project)

Toposheet no.. 64 L/5 and K/15:-A PGRS study of 700 sq. km area was carried out on 1:50000 scale. A total of 180 no. stream sediments samples, 20 no's PCS samples,30 no. of PS and, 180 no. of HMS samples were collected. The area constitute Bundeli Granitoids intruded by mafic dykes of meso Proterozoic age are exposed in the area. Pegmatite and quartz veins are youngest intrusive of the area.

NON FERROUS MINERALS PROJECT:

III. General Exploration for Bauxite ore in Pakhritola north block of Jashpur district (Economic Geology Project) STAGE-G-2

The G-2 level bauxite exploration carried out in Pakhritola north block. Reconnaissance geological survey carried out in part of Toposheet no. 73 A/3 around Datunpani, Pakhritola, Ghordega and Kurkuria villages. Lying of grid lines and fixing of borehole points in 100m grid interval. Drilling work was started on 01st February 2017. A total of 255m drilling has been done with completion of 17 boreholes up to F.S. 2016-17. Till June 2017,a total of 1080.80m drilling progress has been done with completion of 71 boreholes.

The area mainly comprises of Precambrian meta-sediments and meta-basics, deccan trap rocks and laterite of recent age.

IV. General Exploration for Bauxite ore in Pakhritola south block of Jashpur district (Economic Geology Project) STAGE: G-2

On the basis of previous work, field work has continued and restart with Detailed geological mapping in western side of the block. Total 0.15 Km² area covered. It is added with former area of the block. The G-2 level bauxite exploration carried out in Pakhritola south block. Laying of grid lines and fixing of borehole points in 100m grid interval. Drilling work was started on 08th February 2017. A total of 151m drilling has been done with completion of 12 boreholes up to F.S. 2016-17. Till June 2017, a total of 1222.80m drilling progress has been done with completion of 83 boreholes. Out of that, only 59 boreholes falls under bauxite bearing zone.

The area mainly comprises of Precambrian meta sediments and meta basics, deccan trap rocks and laterite of recent age.

V. General Exploration for Bauxite ore in Dantunpani block of Jashpur district (Economic Geology Project) STAGE: G-2

During the period, only Detailed geological mapping has been completed within the block. Laying of grid lines in 100m grid interval and borehole points were marking. A total of 180 boreholes were planned. In addition to these 09 extra borehole points were marked outer side of the block boundary for future extension of the block. Drilling activity could not be carried out due to agitation of villagers.

The area mainly comprises of Precambrian meta sediments and meta basics, deccan trap rocks and laterite of recent age.

VI. General Exploration for Bauxite ore in Rajpur block of Jashpur district (Economic Geology Project) STAGE: G-2

Detailed Geological mapping of 02 sqkm area on 1:4000 scale carried out along with survey, laying of grid lines and planning of borehole points. A total of 180 boreholes were planned. A total 15 number of samples were collected during the course of detailed geological mapping for petrological, XRD and chemical analysis. Drilling work could not be started due to agitation of villagers.

The area mainly comprises of Precambrian meta sediments and meta basics, Deccan trap rocks and laterite of recent age.

VII. General Exploration for Bauxite ore in Ghardega-Kurkuria block of Jashpur district (Economic Geology Project) STAGE-G-3

During the period, 4.5 Km² area covered by detailed geological mapping on 1:5000 scale. The mapped area is bounded by latitude 23⁰05'28" to 23⁰06'55" and longitude 83⁰36'00" to 83⁰37'18" of part of toposheet no. 64 M/12. During the course of Detailed geological mapping, collected 15 numbers of BRS samples.

Till March 2017, A total of 134.80m drilled with completion of 11 boreholes at grid interval of 200x200m.

The area mainly comprises of Precambrian meta sediments and meta basics, Deccan trap rocks and laterite of recent age.

VIII. General Exploration for Bauxite ore in Ghardega-Kurkuria block of Jashpur district (Economic Geology Project) Toposheet no. 73 A/3 :-

Large scale mapping of 50 sq. km. is done on 1:12,500 scale. Detailed mapping of 02 sq.km. area on 1:5000 scale and pitting and trenching 159.462 Cu. M. is done. Collected a total of 25 no's of BRS samples, 10 no. each of PCS and SEM study samples. The area mainly comprises of Precambrian meta sediments and meta basics, deccan trap rocks and laterite of recent age.

17.5.4 PROJECT, INDUSTRIAL & FERTILIZER MINERALS:

I. General exploration for limestone in Jagmadwa-Hanaibandh-Mardkathera block, Rajnandgaon district of Chhattisgarh: (Economic Geology Project)

During the period, 2.80 sq km area covered by Detailed mapping on 1:4000 scale in part of Toposheet no. 64 G/2 followed by 1194m drilling with completion of 40 boreholes in 200m grid interval. A total of 628 nos of core samples and 05 bed rock samples (BRC) were collected. In addition to these, 20 numbers of PCS samples, 05 XRD samples and 05 water samples were also collected. Till 30th June 2017, 2000m drilling have been done with 69 boreholes.

II. General exploration for limestone in Birutola-Nawapara-Sohagpur block, Kabirdham district of Chhattisgarh: (Economic Geology Project) STAGE: G-2

During the period, 2.7 Km² area covered by detailed geological mapping on scale 1:4000 In the study area, the limestone is stromatolitic, hard and compact, massive with pink to purple in colour belongs to Chandi Formation of Chhattisgarh Super Group. The general strike is NNE-SSW, horizontally bedded. A total of 69 boreholes were planned in 200m grid interval. Out of these, 09 boreholes were drilled up to March 2017. Till 30th June 2017, 950m drilling progress done with completion of 31 boreholes.

A total of 225 nos of core samples, 05 no.of BRC samples, 20 numbers of PCS, and 05 nos of XRD samples were collected.

III. Reconnaissance survey for Glauconite and associated mineralization around Saraipali-Bhalukona and Arjunda area, Mahasamund district of Chhattisgarh:

(Economic Geology Project) STAGE:G-3

During the course of investigation, 100 Km² covered by areal reconnaissance survey and geologically mapped on 1: 12,500 scale. The mapped area bounded by latitude 21°15'00" to 21°20'00" and longitude 83°00'00" to 83°07'02" in parts of Toposheet no. 64 O/3. Geologically, the study area encountered Saraipali and Bhalukona formation of rocks. Glauconites in this area is associated with quartz arenites, arkose to sub arkose sandstone of Bhalukona formation. During the course of mapping, a total of 50 numbers of BRS samples were collected, representing Glauconitic bands.

17.5.5 PROJECT-STRATEGIC MINERALS (RRE & RM)

Reconnaissance for tungsten and associated mineralization in Chikupani, Mayurnacha area, Jashpur district of Chhattisgarh:

Large scale mapping of 101 sq km area on 1:12,500 scale in around Chiknipani, Mayurnacha villages. A total of 107 no. of BRS samples and, 26 no. of PS, 05 nos of XRD and 03 no of PTS samples were collected.

The mapped area consists of quartz chlorite schist, amphibolites, pyroxinites within the biotite granite gneiss of CGC. The granite gneiss and schists are intruded by later phase of quartz veins. Scheelite is the source of tungsten in this area. Scheelite occur as discriminated inclusion in quartz veins and they appears as bright blue colour grains.

17.5.6 MISSION-III Project GEO-INFORMATICS:-

I. Compilation of 09 numbers of new series (Second edition) of Geological Quadrangle Maps on 1:250000 scale.

II. A copy of investigation report of Baradih Kimberlite, Mainpur Kimberlite field was received for incorporating detailed maps and co-ordinates in Kimberlite mineral belt maps.

III. Compilation and digitization of Geological maps of Sonakhan Belt covered by STM 1:25,000 scale on Arc GIS platform.

IV. Maintenance of LAN/WAN and uploading of unpublished reports onto GSI portal. LAN/WAN of GSI, CG. Unit Raipur is working properly for transmission and retrieving of data and remote printing from one end to different user ends and vice versa.

Chairman of the house Shri Subodh Singh, Secretary MRD C.G. Govt. discussed with DDG of GSI and said that exploration work should be planned as per new MMDR 2015 and given special attention to complete the G-2 level exploration for preparation of auction block. Planning of exploration work should be reoriented and share the data with DGM.

(Action DGM and GSI)

Chairman also asked MECL and NMDC if they can do exploration for minerals other than coal and Iron ore in the state. MECL peoples replied that they can take-up the work on payment basis while NMDC peoples said they will reply after consultation with their higher officers.

17.6 Indian Bureau of Mines:-

Mr. B.L. Gurjar, R.C/M, IBM, Raipur, informed that 107 mines were inspected in Chhattisgarh for implementation of MCDR 2017 and for approval of Mining plan and scheme of mining. 41 mines inspected for the disposals of mining plan/scheme of mining in state. 05 mining lease has taken for immediate updating of national mineral inventory in respect of bauxite, iron, and Tin. Out of 191 mining lease of major mineral of Chhattisgarh based on khasra map and satellite imaginary, 06 illegal mining triggers were generated and sent to state government for verification. 01 case of illegal mining is confirmed.

During the year 2016-17, Geological studies has been done for establishing the average percentage of Lump and Fine in the ROM for Iron ore in Chhattisgarh state. IBM also carried out Regional Mineral Development Study (RMDS) and resource up-gradation work mineral wise.

First Mines Environmental and Mineral Conservation Week was organized under the jurisdiction of Raipur Regional Office. During 2016-17 total 44 mines of Chhattisgarh state were participated.

During discussion Chairman Shri Subodh Singh said that one who is registered as RQP with IBM will be given permission to work as RQP in Chhattisgarh state also.

17.7 Central Mine Planning and Design Institute-RI-V Bilaspur

Shri J. Ghosh, Deputy Manager, CMPDIL, RI-V- Bilaspur informed the house about the activities of Coal Exploration in Korba, Mand-Raigarh, Bistrampur, Hasdeo-Arand, Sonhat and Ramkola-Tatapani Coalfields. The work carried out through departmental resources and outsourcing and a total of 4,25,672.82 m drilling was completed in 23 coal blocks. Prospecting report of 02 blocks, Tulsi Block, and Shivsagar, Bistrampur Coalfield are finalized by CMPDI and 01 Geological Report of Bhalumuda block of Mand-Raigarh coalfield are finalized by MECL during 2016-17. Coal resources estimated in this block are 896.19 million tonne. During coming Field Season 2017-18 proposed drilling for coal by CMPDI is 1,08,500m in Chhattisgarh State. Three Geological Reports will be completed during the coming field season. .

17.8 National Mineral Development Corporation Ltd.

Shri Jaydeep Sen, Deputy Manager, NMDC informed the house that exploratory drilling work carried out in the existing mining leases of Bailadila area for quality control and additional reserve proving. Total 7405m drilling is done.

NMDC proposes to drill 4800m for Iron ore during coming F.S. 2017-18.

17.9 Mineral Exploration Corporation Ltd.

Shri P. Ravindran, MECL informed the house that exploratory drilling work carried out in coal and non coal mineral commodity. Exploratory drilling in coal, as per MoU with CMPDIL done in various coalfield of Chhattisgarh state and a total of 2,68,529m drilling target achieved. In other commodity, MECL also carried out exploration work for Bauxite and Limestone. During the year 2016-17, MECL has taken 02 project of Bauxite and 02 project of Limestone through NMET fund.

17.10 Chhattisgarh Council of Science & Technology

Shri Prashant Kavishwar, Sr. Resource Scientist, given presentation on their field of activities which include use of remote sensing in geology, mining, ground water, forestry, and agriculture. He represented the scope of remote sensing techniques in mapping and exploration for minerals in difficult and inaccessible areas. CGCOST has conducted DGPS survey for auction block of Bauxite and limestone. CGCOST is using high resolution satellite images and land schedule in preparation of auctionable block reports.

He informed about the services CGCOST provide on demand includes DGPS survey, terrain modelling and other related work.

17.11 Chhattisgarh Mineral Development Corporation

CMDC elaborated the mineral exploration activities of CMDC. In the year 2016-17 CMDC carried out investigation for Bauxite, through outsourcing. Altogether 04 project of Bauxite have been taken for G-2 level exploration. Out of these, 03 projects (Bhursipakri, Pendripani & Mukam) are in Kabirdham district and 01 project (Urenga) in Surguja district. For ensuing field season, total 6 projects are proposed for exploration. Out of these, 04 are bauxite exploration projects in Mainpat, Distt. Surguja(Kudaridih, Narmadapur, Rupakhar and South-west Kamleshwarpur), 01in Kabirdham (Sukhjar) and 01 coal project in Korba District (Kerwa Coal Project). Coordinates of all these blocks are appended in Annexure -2.

17.12 Directorate of Geology and Mining, Chhattisgarh

17.12.1 Regional Office Jagdalpur:- Shri D.Sai, Regional Head, Jagdalpur informed the house that survey and investigation for limestone in Chapka-Ichapur block in Bastar

district was done. During the period 190 sq km Reconnaissance survey (1:50,000 scale), 2.34 sq km detailed geological mapping (1 : 4000 scale) and 724.90 m drilling completed. Around 67.87 million tonnes of limestone resources estimated in this block. Work will be continued in this block in next field season.

17.12.2 Regional Office Bilaspur:- Shri Kailash Dongre, Regional Head, Bilaspur elaborated the mineral exploration activities of Regional office Bilaspur. He informed that exploration work for Bauxite continued in Sarbhanja area during the period. Total 1463.60m drilling completed and approximately 1.089 million tonnes of bauxite deposits are estimated in the area.

During the period exploration for limestone carried out in Dhabadih-II block of Janjgir-Champa district. Reconnaissance survey over 280 sq km and detailed geological mapping over 2.81 sq km area and 1242.50m drilling work done. Total 50 million tonne limestone resources are estimated in this block. The work is completed in this block.

Exploration for bauxite in Sarbhanja block, Distt Surguja is proposed to be continued during the field season 2017-18. Similarly, exploration for limestone in Ghutia area (notified block) of Janjgir Champa district will be done during the field season 2017-18.

17.12.3 Regional Office Raipur:- Shri S.K. Tiwari, Regional Head Raipur informed the house that Exploration for limestone in Kukurdih-II area distt. Raipur was continued during the period under review. During the period, total of 1323.35m drilling work done and 113.54 million tonnes resources of limestone estimated. Exploration work is completed.

Exploration for limestone in Guma-II area of Balodabazar-Bhatapara distt. was continued during the period under review. During the period, total 610.90m drilling work done and 65.70 million tonnes resources of limestone estimated. Exploration work is completed.

Exploration for bauxite in Salgi area, Distt. Kabirdham was continued. Total 1075.20 m drilling done and 15 lakh tonnes of resources of bauxite are estimated in this block. Exploration work completed.

Exploration for limestone in Sarseni block, distt Balodabazar-Bhatapara and exploration for limestone in Kathia-Pachari-Bharwadiah area of tahsil Tilda, Raipur district is proposed for the Field Season 2017-18.

17.13 Shri Anurag Diwan, Joint Director, DGM, CG suggested that in exploration work for limestone by various agencies adopt a unique guidelines like drilling space/grid intervals, depth of boreholes, exploration boundary etc. The house agreed to this suggestion.

17.14 The proposed field programmes for 2017-18 has been approved by all the member of unanimously. As there was no overlapping or duplication found in the field program.

The meeting concluded with vote of thanks presented by Shri Mahesh Babu, Joint Director, DGM to Chairman and members of Board.

**Director
Geology and Mining,
Chhattisgarh**

Annexure-2

Bauxite Exploration projects of CMDC with their co-ordinates

(1) **Title of Projects :- Exploration for Bauxite in North-East Kudaridih,
Distt.-Surguja (C.G.)**

Location :- Village - Kudaridih
Tehsil - Mainpat
District - Surguja

Proposed Area and Toposheet No. - 406.565 Ha. And 64N/5

Co-ordinates - (1) 83⁰ 17'42.505''E to 22⁰ 47'26.739''N
(2) 83⁰ 18'53.049''E to 22⁰ 47'21.435''N
(3) 83⁰ 17'53.872''E to 22⁰ 48'28.580''N
(4) 83⁰ 18'21.450''E to 22⁰ 48'56.244''N

(2) **Title of Projects :- Exploration for Bauxite in North-West Narmadapur,
Distt.-Surguja (C.G.)**

Location :- Village - Narmadapur
Tehsil - Mainpat
District - Surguja

Proposed Area and Toposheet No. - 285.555 Ha. And 64N/5

Co-ordinates - (1) 83⁰ 20'22.474''E to 22⁰ 47'43.993''N
(2) 83⁰ 20'34.712''E to 22⁰ 47'44.525''N
(3) 83⁰ 20'46.286''E to 22⁰ 49'35.681''N
(4) 83⁰ 20'56.387''E to 22⁰ 49'35.382''N

(3) **Title of Projects :- Exploration for Bauxite in North-West Rupakhar,
Distt.-Surguja (C.G.)**

Location :- Village - Rupakhar
Tehsil - Mainpat
District - Surguja

Proposed Area and Toposheet No. - 186.201 Ha. And 64N/5

Co-ordinates - (1) 83⁰ 17'43.917'' to 83⁰ 18'32.309''
(2) 22⁰ 49'49.571'' to 22⁰ 50'57.33''

(4) **Title of Projects :- Exploration for Bauxite in South -West Kamleshwarpur, Distt.-Surguja (C.G.)**

Location :- Village - Kamleshwarpur
Tehsil - Mainpat
District - Surguja

Proposed Area and Toposheet No. - 138.1201 Ha. And 64N/5

Co-ordinates - (1) $83^{\circ} 16' 0.321''$ to $83^{\circ} 16' 13.573''$
(2) $22^{\circ} 49' 16.22''$ to $22^{\circ} 49' 17.96''$

(5) **Title of Projects :- Exploration for Bauxite in Sukhjar Distt. - Kabirdham (C.G.)**

Location :- Village - **Sukhjar**
Tehsil - Bodla
District - Kabirdham

Proposed Area and Toposheet No. - 294.00 Ha. And 64F/3

Co-ordinates - (1) $81^{\circ} 09' 11.944''$ to $22^{\circ} 25' 22.421''$
(2) $81^{\circ} 09' 8.575''$ to $22^{\circ} 23' 1.508''$
(3) $81^{\circ} 08' 48.758''$ to $22^{\circ} 23' 7.622''$
(4) $81^{\circ} 08' 43.687''$ to $22^{\circ} 24' 54.224''$