REPLY TO PRE BID QUERIES

OF

Joga -I Block (JO-I), Tehsil Ramgarh & District Jaisalmer

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/272/Udaipur/24-25/51580

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease for Joga-I Block (JO-I). Geological Report of Joga-I Block (JO-I): ANNEXURE-I: Summarized Lithologs Lithologs of Boreholes are provided in Geological Report but Co-ordinates & RLs of Boreholes are not provided. The Borehole Co-ordinates & RLs may be provided Co-ordinates & RLs are required for preparation of Geological Sections and estimation of reserves.	Borehole coordinates generated by software Annexed The area is flat terrain, so that assumed RL of surface area is considered as 100m. X-X' section and Y-Y' section is enclosed with G.R. (plate no-6)
2	Tender Document For E-Auction of Mining Lease for Joga-I Block (JO-I). Geological Report of Joga-I Block (JO-I): Annexure- III & IV: Statement showing bore hole wise SMS Grade, Cement Grade Limestone Zones drill indicated resources and over Burden calculated by included area method. The Resources of SMS & Cement Grade Limestone are calculated by included area method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in nearby GSI explored blocks is around 80 to 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

Joga -III Block (JO-III), Tehsil Ramgarh & District Jaisalmer

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/273/Udaipur/24-25/51581

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease for Joga-IIII Block (JO-III). Geological Report of Joga-III Block (JO-III): ANNEXURE-I: Summarized Lithologs Lithologs of Boreholes are provided in Geological Report but Co-ordinates & RLs of Boreholes are not provided. The Borehole Co-ordinates & RLs may be provided Co-ordinates & RLs are required for preparation of Geological Sections and estimation of reserves.	Borehole coordinates generated by software Annexed The area is flat terrain, so that assumed RL of surface area is considered as 100m. X-X' section and Y-Y' section is enclosed with G.R. (plate no-6)
2	Tender Document For E-Auction of Mining Lease for Joga-IIII Block (JO-III). Geological Report of Joga-III Block (JO-III): Annexure- III: Statement showing bore hole wise Cement Grade Limestone Zones drill indicated resources and over Burden calculated by included area method. The Resources of Cement Grade Limestone are calculated by included area method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in nearby GSI explored blocks is around 80 to 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

Joga -IV Block (JO-IV), Tehsil Ramgarh & District Jaisalmer

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/274/Udaipur/24-25/51582

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease for Joga-IV Block (JO-IV). Geological Report of Joga-IV Block (JO-IV): ANNEXURE-I: Summarized Lithologs. Lithologs of Boreholes are provided in Geological Report but Co-ordinates & RLs of Boreholes are not provided. Lihtologs of Boroles JO-105, JO-113 & JO-119 not provided along with Geological Report The Borehole Co-ordinates & RLs may be provided. Lihtologs of JO-105, JO-113 & JO-119 may be provided. Co-ordinates & RLs along with missing Borehole Logs are required for preparation of Geological Sections and estimation of reserves.	The lithology of B.H. no- JO-105 is enclosed with G.R. The B.H. no-JO-113 & JO-119 are not falling within the block area, therefore lithology is not mentioned. These B.H. are not falling within the block area. Borehole coordinates generated by software Annexed The area is flat terrain, so that assumed RL of surface area is considered as 100m. X-X' section and Y-Y' section is enclosed with G.R. (plate no-6)
2	Tender Document For E-Auction of Mining Lease for Joga-IV Block (JO-IV). Geological Report of Joga-IV Block (JO-IV): Annexure- IV: Statement showing bore hole wise Cement Grade Limestone Zones drill indicated resources and over Burden calculated by included area method. The Resources of Cement Grade Limestone are calculated by included area method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in nearby GSI explored blocks is around 80 to 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

Nimana Duniya Extension Block, Tehsil Ramganjmandi & Chechat District Kota

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/295/Udaipur/24-25/53771

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease for Nimana Duniya Extension Block Geological Report of Nimana Duniya Extension Block **Chapter-6: Resources**: The Resources of Limestone calculated by Polygon method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The average core recovery in the boreholes is 78%. The core recovery may be less due to mechanical reasons within the department drilling machines. Further, the Vindhyan strata are horizontal and devoid of any structural deformation. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

Parewar (SN-I) Block, Tehsil & District Jaisalmer

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/290/Udaipur/24-25/53766

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease For Parewar- (SN-I) Block Geological Report of Parewar- (SN-I) Block: Summarized Lithologs Lithologs of Boreholes are provided in Geological Report but Co-ordinates & RLs of Boreholes are not provided. The Borehole Co-ordinates & RLs may be provided Co-ordinates & RLs are required for preparation of Geological Sections and estimation of reserves.	Borehole coordinates generated by software Annexed The area is flat terrain, so that assumed RL of surface area is considered as 100m. X-X' section and Y-Y' section is enclosed with G.R. (plate no-6)
2	Tender Document For E-Auction Of Mining Lease For Parewar- (SN-I) Block Geological Report of Parewar- (SN-I) Block: Annexure- III & IV: Statement showing bore hole wise SMS Grade, Cement Grade Limestone Zones drill indicated resources and over Burden calculated by included area method. The Resources of SMS & Cement Grade Limestone are calculated by included area method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in nearby GSI explored blocks is around 80 to 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

3	**Availability of Land required in vicinity of auction blocks for establishment of green field Cement Plant** The area is a prominent widespread continuous mineralized zone in the area. In this scenario to identify, suitable location for set up a Cement Plant in vicinity of Block area is difficult. Therefore, we seek strong support from DMG to provide us the all-available option to set up cement plant nearby to the railway line. Please share all nearest possible options. Similarly, NOC from DMG is also required. We seek support from DMG for the same. Tentatively how much time it would take for approval from DMG. Kindly elaborate. Possible options along with NOC at the earliest will be required from DMG.	Cement plant may be set up in the southern and northern side of the east-west trending limestone belt around this block. DMG Rajasthan will help to the extent possible.
4	**Right of Way for transportation/connecting way from Limestone Blocks to proposed Cement Plant location/ Railway Line** The maximum Limestone Blocks are adjoining to each other or having common block boundary so there is issue of right of way for transportation of limestone by road from limestone blocks to railway line / proposed plant location nearby. In this case approval from DMG will be required. Kindly share policy and detailed procedure with time limit to provide the access for the same.	When mineral blocks are situated adjacent to each other and share a common boundary, the leaseholder of one block is required to facilitate access for the transportation of minerals or equipment to the neighbouring leaseholders. This obligation ensures that adjoining leaseholders can efficiently carry out their mining operations without hindrance or obstruction due to the shared boundary. Further, Mokal to Sultana national highway is passing near by the block.
5	**Section 6(1)(b)** For sake of eligibility under section 6 (1)(b) of the MMDR Act 1957, areas of all Mining Lease of a Company as well as its affiliates will be considered in combined way or it will be considered separately.	Mining Lease of a Company as well as its affiliates will be considered in combined way

REPLY TO PRE BID QUERIES

OF

Parewar (SN-III) Block, Tehsil Ramgarh & Jaisalmer & District Jaisalmer

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/291/Udaipur/24-25/53767

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction Of Mining Lease For Parewar- (SN-III) Block Geological Report of Parewar- (SN-III) Block: Summarized Lithologs Lithologs of Boreholes are provided in Geological Report but Co-ordinates & RLs of Boreholes are not provided. The Borehole Co-ordinates & RLs may be provided Co-ordinates & RLs are required for preparation of Geological Sections and estimation of reserves.	Borehole coordinates generated by software Annexed The area is flat terrain, so that assumed RL of surface area is considered as 100m. X-X' section and Y-Y' section is enclosed with G.R. (plate no-6)
2	Tender Document For E-Auction Of Mining Lease For Parewar- (SN-III) Block Geological Report of Parewar- (SN-III) Block: Annexure- III & IV: Statement showing bore hole wise SMS Grade, Cement Grade Limestone Zones drill indicated resources and over Burden calculated by included area method. The Resources of SMS & Cement Grade Limestone are calculated by included area method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in nearby GSI explored blocks is around 80 to 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

Parewar-A Block, Tehsil & District Jaisalmer

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/289/Udaipur/24-25/53765

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction Of Mining Lease For Parewar-A Block Land Schedule of Revenue Village Parewar Tehsil & District Jaisalmer In Land Schedule of Revenue Village Parewar Khasra No- 1541 with an area of 1.893 Hectare Marked as Panchayat Vibhag and on Revenue Khasra Map it is Marked as Other Allotted Land (Gram Panchayat/ School/Play Ground/Abhadi/Education Department). Mining Activities in Panchayat Vibhag Land is permitted or the Preferred Bidder required to get necessary approval from concerned authorities for Mining and allied activities. Clarification is required for carrying out Mining & allied activities in Panchayat Vibhag Land. Clarification is required for carrying out Mining & allied activities in Panchayat Vibhag Land.	NoC from panchayat is required for carrying out mining and allied activities.
2	Geological Report of Parewar-A Block Geological Report of Parewar-A Block: Summarized Lithologs Lithologs of Boreholes are provided in Geological Report but Co-ordinates & RLs of Boreholes are not provided. The Borehole Co-ordinates & RLs may be provided Co-ordinates & RLs are required for preparation of Geological Sections and estimation of reserves.	Borehole coordinates generated by software Annexed The area is flat terrain, so that assumed RL of surface area is considered as 100m. X-X' section and Y-Y' section is enclosed with G.R. (plate no-6)

3	Geological Report of Parewar-A Block Geological Report of Parewar-A Block: Annexure- III & IV: Statement showing bore hole wise SMS Grade, Cement Grade Limestone Zones drill indicated resources and over Burden calculated by included area method. The Resources of SMS & Cement Grade Limestone are calculated by included area method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in nearby GSI explored blocks is around 80 to 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES
OF
Tadas Block-I, Tehsil Kheenvsar & District Nagaur
Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/1/Udaipur/25-26/2595

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease for Tadas Block –I Geological Report of Tadas Block -I **19.6**: **Detailed description of the method used, and the assumptions made to estimate tonnages and grades**: The Resources of Limestone calculated by Polygon method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in drilling carried out through outsourcing in nearby block is around 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

Tadas Block-II, Tehsil Kheenvsar & District Nagaur

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/1/Udaipur/25-26/2596

Sl. No.	Bidders Queries	Reply
1	Tender Document For E-Auction of Mining Lease for Tadas Block –II Geological Report of Tadas Block -II **19.6**: **Detailed description of the method used, and the assumptions made to estimate tonnages and grades**: The Resources of Limestone calculated by Polygon method without considering core recovery which is a major modifying factor with respect to estimation of resources. The Resources may be provided by considering core recovery factor as core recovery 100% not achieved in Boreholes. The Revised Resources of Limestone may be provided by considering Recovery factor. All Statutory Payments are based on Quantity of Resources.	The geological resources have been calculated considering 100 % core recovery. The core recovery may be less due to mechanical reasons within the department drilling machines. The core recovery in drilling carried out through outsourcing in nearby block is around 90%. Poor core recovery cannot be tantamount to reduction in quantity of mineral resources.

REPLY TO PRE BID QUERIES

OF

West of Samodi Block, Tehsil & District Bhilwara

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/282/Udaipur/24-25/52025

Sl. No.	Bidders Queries	Reply
1	Block Location Upon Site visit it is understood that the West of Samodi Copper-Lead-Zinc block comes under earlier granted Reconnaissance Permit (RP) area of Hindustan Zinc Limited (HZL) and some boreholes were also drilled in and around the block area. Please clarify as follows: 1. Whether, West of Samodi Copper-Lead-Zinc block comes under earlier granted Reconnaissance Permit (RP) area of HZL? 2. Kindly provide data on borehole drilled (if any) by erstwhile RP Holder. 3. Kindly provide copy of any earlier Exploration report made by RP holder on West of Samodi Copper-Lead-Zinc block This clarification and reports will help bidders to know about area prospects.	West of Samodi GM block was prepared based on Reconnaissance survey (G-4 stage) work of Geological Survey of India, Western region, Jaipur. 1. The area is free for grant. 2. The same is annexed.
2	Tender Document **Schedule-I** **B (1) (d) (iii)** **Turnover** and net worth certificate issued by: (a) statutory auditors of the Bidder (which is a company); or (b) a chartered accountant or a merchant banker registered with the Securities and Exchange Board of India – in case Bidder is an individual.] OR Certificate regarding the total amount as closing cash balance issued by a chartered accountant or a merchant banker registered with the Securities and Exchange Board of India.	Tender document condition prevails.

	Please clarify as follows: Under which provision of the law, a turnover Certificate issued by Statutory Auditor is being asked as documents to evidence compliance with the eligibility conditions? No other State is asking turnover certificate issued by Statutory Auditors. This clarification is needed to bidders so as to know the statutory provision for submitting turnover certificate.	
3	Tender Document **12 Timetable** **Stage I – E-auction process for selection of Preferred Bidder** Serial No.16. Issuance of letter of intent for composite license by State Government: T1+15=**T2** **Stage III – Process for grant of mining lease** Serial No. 2: Submission of mining lease application and first installment of upfront payment (20%) after completion of prospecting as per timeline mentioned in the act and rules-**T2** Please clarify as follows: 1. Timeline as T2 is mentioned at serial no.16 of Stage I i.e. issuance of letter of intent for composite license. How the same timelines can be for performing activity mentioned at serial no.1 of State-III 2. Kindly clarify and provide correct timeline accordingly. This clarification is needed to bidders so as to know the correct timeline for each event.	**Stage III – Process for grant of mining lease** Serial No. 2: Submission of mining lease application and first installment of upfront payment (20%) after completion of prospecting as per timeline mentioned in the act and rules is T_2, **not T2**
4	Tender Document **12 Timetable** **Stage III – Process for grant of mining lease** Serial No. 3: Submission of enhanced performance security and approved mining plan along with second installment of upfront payment by the holder of composite license: **T3 + 6 months** **Reference: Rule 18(8) of Mineral Auction Rule 2015;** A Mine Development and Production Agreement shall be executed between the State Government and the holder of Composite License if the holder of a Composite License-	1. Yes 2. At T3+6 months, Submission of enhanced performance security and approved mining plan along with second instalment of upfront payment by the holder of composite license is required. 3. Bidder has to comply conditions mentioned in the tender document. Please refer to reply mentioned above.

	a) continues to comply with the terms and conditions of eligibility; b) pays the second instalment being 1[twenty per cent.] of the upfront payment; c) furnishes the enhanced performance security as specified in sub-rule (2) of rule 19; d) satisfies the conditions specified in clause (b) of sub-section (2) of section 5 with respect to a mining plan; e) obtains all consents, approvals, permits, no-objections and the like as may be required under applicable laws for commencement of mining operations; and f) satisfies such other conditions as may be specified by the State Government with the prior approval of the Central Government. **Please clarify as follows:** 1. Whether timeline mentioned as T3+6 Months is correct for event of submission of performance security and first instalment of upfront payment? 2. Rule 18(8) of Mineral Auction Rule, 2015 says that A Mine Development and Production Agreement shall be executed between the State Government and the holder of Composite License if the holder of a Composite License after obtaining all consent/approvals/permit along with mining plan make payment of enhanced performance security and second installment of upfront payment. Certainly, this event will not take place within 6 months of issuance of LoI for Mining Lease. 3. Kindly refer timelines mentioned in the tender document of auction conducted by Ministry of Mines for composite license, where timeline is mentioned as per Rule 18 (8) of Mineral Auction Rule for performing activity of payment of 2nd instalment of upfront and enhanced performance security as 2 years and 6 months from date of issuance of Letter of Intent. 4. As per Rule 18(8) of Mineral Auction Rule 2015, it should be corrected as T3+ 2 years and 6 months. Meaning thereby 2 years and 6 months from date of issuancé of Letter of Intent This clarification is needed to bidders so as to know the correct timeline for each event as per Mineral Action Rule 2015.	

5	Tender Document **12 Timetable** **Stage III – Process for grant of mining lease** Events mentioned at serial No. 3 and below that events mentioned at serial no. 1 & 2 reproduced as follows: **3** Submission of enhanced performance security and approved mining plan along with second installment of upfront payment by the holder of composite license: T3 + 6 months **1** Submission of all necessary clearances /approvals from various government agencies/departments by Successful Bidder: T4 **2** Execution of Mine Development & Production Agreement (MDPA) between State Government & Successful Bidder: T4+20 Events mentioned at serial No. 3 and below that events mentioned at serial no. 1 & 2 are not separate activities. It is not in compliance with Clause 10.6 of the Tender Document as well as Rule 18(8) of Mineral Auction Rule 2015. These all three activities should be clubbed and timelines should be 2 years and 6 months from the date of issuance of LoI. Please clarify This clarification is necessary as timelines mentioned in Clause 12 Stage-III is not in consonance with clause 10.6 of the tender document and Mineral Auction Rule 2015.	Please refer to reply mentioned at serial no. 4
6	Letter of Mining Officer, Beawar District dated 24.05.2024 Point No. 5 of Letter of Mining Officer, Bhilwara District dated 20.02.2024 says as: Aravalli Status- As per marking made on G.T. Sheet 45K/11 upper contour 460 meter and lower contour 440-meter area does not come under the purview of Aravalli Hills. Please clarify the content mentioned at point no. 5 of the said letter This clarification is needed for block location with respect to Aravalli Hills	As per 100 metre definition of Aravalli defined by Directorate circular dated 09-01-2006, the block is out of Aravalli. The mineral concession of the blocks will be granted in accordance with the Honourable Supreme Court's order dated May 9, 2024, in Writ Petition (Civil) No. 4677/1985, M.C Mehta vs Union of India & ORS with writ petition (s) (civil) no. 202/1985, T N Godaverman v/s Union of India & ORS or any subsequent order issued in these petitions, if applicable.

7	Notice Inviting Tender dated 16th April 2025 NIT dated 16th April 2025 says that the mineral concession of the blocks will be granted in accordance with the Honorable Supreme Court's order dated May 9, 2024, in Writ Petition (Civil) No. 4677/1985, M.C Mehta vs Union of India & ORS with writ petition (s) (civil) no. 202/1985, T N Godaverman v/s Union of India & ORS or any subsequent order issued in these petitions, if applicable. Operative Para of Order dated May 9, 2024 is as follows: *"Until further orders, though all the States in which Aravalli Ranges and Hills are situated would be at liberty to consider and process the applications for grant of mining leases and also for renewal thereof including obtaining statutory clearances from the various authorities, no final permission shall be granted for mining in the Aravalli Hills/Ranges, as defined in the FSI Report dated 25.08.2010, without permission from this Court."* Please clarify as follows: Whether, for mining operation after execution of ML deed, successful bidder has to seek permission from Hon'ble Supreme Court or Government of Rajasthan? This will clarify bidders regarding Order of Hon'ble Supreme Court	Please refer to reply mentioned at serial no. 6
8	Tender Document **Clause 5 (g)** The Bidder must comply with Section 6 of Mines and Minerals (Development and Regulation) Act, 1957 Please clarify whether Government of India has increased the area limit with respect of Copper-Lead-Zinc in the State of Rajasthan beyond limits provided in Section 6 (1) (a) & (b) of MMDR Act? Bidder wanted to know about any enhancement in area for copper in the State of Rajasthan by the Central Government than prescribed in Section 6 of the MMDR Act.	No, area limit is as per MMDR, Act.

9	Mine Development and Production Agreement (MDPA) As per Clause **4.3.1**, for failure of the Successful Bidder to comply with the Minimum Production Requirement as required under Clause 8, an amount equal to shortfall in Minimum Production as per Schedule E x highest IBM price of that particular year x Final Price offer will be appropriated from Performance Security. Apart from appropriation of performance security, is there any other cost/penalty for non-compliance of Schedule E? This clarification needed to bidder to know the consequences for non-compliance of Schedule E.	It will be as per MDPA.
10	Mine Development and Production Agreement (MDPA) **7.2 Other payments**: The Successful Bidder shall also be required to make payments as required under Applicable Law, including the Act and the rules framed thereunder. What is the other payment to be made in the State of Rajasthan? Please elaborate. These details needed for bidder to know about investment to be made and financial implication involved for this block	Please, refer to Clause 9.2 of tender document.
11	Block Summary Particulars of land: It is not mandatory for the State Government to categorise lands as Forest, Private, and Government for blocks put up for auction under composite license. During mining lease if lands fall under the category of Private, Government, then please Clarify as follows: 1. Procedure for acquisition of private land at the time of mining lease. 2. Charges payable for acquisition of these private land on Hectare basis. 3. Procedure for transfer/acquisition of Government Land at the stage of Mining Lease.	The onus of getting consent/purchase/acquisition/surface right of private land is on the Preferred Bidder. The transfer/acquisition of Govt. land will be as per notifications/circulars issued by Revenue Department, Govt. of Rajasthan.

	4. Charges payable for acquisition of Government land on Hectare basis. These details needed for bidder to know about investment to be made and financial implication involved for this block	
12	Tender Document **17.5 Charagah Land** (pasture land): if applicable Mining in Charagah land will be carried out as per notifications / circulars issued by Government from time to time. Please Clarify as follows: 1. Whether Charagah land can be diverted for the purpose of mining activities? 2. Whether Charagah land can be part of mining lease or not? 3. Procedure for transfer/acquisition of Charagah Land at the stage of Mining Lease. 4. Tentative charges payable for acquisition of Government land on Hectare basis. Kindly provide (upload) relevant circulars and Notification with respect to Charagah land coming in to mining lease area. These details needed for bidder to know about investment to be made and financial implication involved for this block	1. Yes 2. Yes, but after set apart. 3. It will be as per notifications/circulars issued by Revenue Department, Govt. of Rajasthan.
13	Tender Document **Clause 15.3** "Save and except as provided in this Tender Document, the Bid Security of unsuccessful Bidders will be returned by the State Government, without any interest, as promptly as possible." There should be some time schedule for return of Bid Security as many States stipulated in their tender document that Bid Security shall be returned within four weeks' time from the date of final auction (date of financial bid) or annulment of auction. This clarity is required as Bank Guarantees of the unsuccessful bidders cannot be hold for indefinite time.	Tender Document condition prevails.

14	Mine Development and Production Agreement **Clause No. 19.4.2;** The stamp duty payable for this Agreement shall be borne by the Successful Bidder 1. Kindly provide the percentage of **Stamp duty** and **Registration charges** applicable for execution of mining lease deed for 50 years. 2. Whether stamp duty is charged on the basis of on market value of the resources or on the basis of annual rent? 3. Also elaborate the methodology for arriving such charges. These details needed for bidder to know about investment to be made and financial implication involved for this block. These details also helpful in financial modelling for the block.	It will be as per Rajasthan Stamp Act.
15	Block Summary **Location of the block area** Any temple / structure of historical importance is located in the block area or nearby outside the block area? Bidders need to know about any sensitive structure within the block area.	Please refer to demarcation report annexed with tender document.
16	Reserve Price In Shahpura Copper and Associated Gold Mineral Block, the Reserve price mentioned as 3.5% where as in West of Samodi Copper-Lead-Zinc mineral Block the Reserve Price is 10%. What is the logic reason behind this difference of reserve price? Please Clarify.	As per Mineral Auction Rules, the determination and finalization of the reserve price for the auction shall lie at the discretion of the State Government
17	(Model Tender Document) Does the block coincide with any of the applied PL or ML of any company. Please confirm Please provide for assessment	Area is free for grant.

=18	(Model Tender Document) Particulars of Land- Part C The land classification of the blocks in not provided. Please provide the Land classification which will help for assessment of the blocks. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory
19	(Model Tender Document) Cadastral Maps are not provided along with tender data. How to get this block specific data. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory.
20	(Model Tender Document) - clause 9.1 Kindly clarify for reserve price as the blocks are at G-4 level and No drilling has been done. Please clarify	As per Mineral Auction Rules, the determination and finalization of the reserve price for the auction shall lie at the discretion of the State Government
21	(Model Tender Document) Clause 10.3 Support for another six months extension in case the execution delay was beyond the control of the bidder. Please clarify	Please refer to proviso of Rule 18 (3) of Mineral Auction Rule.
22	(Model Tender Document) What support will be provided for fast execution of blocks in case of winning Please clarify	A post auction facilitation cell has been established for facilitation of the bidder. Further, a committee under the Chairmanship of Chief Secretary, Govt. of Rajasthan has also been informed for the same.

REPLY TO PRE BID QUERIES

OF

Shahpura Block, Tehsil Raipur & District Beawar

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/283/Udaipur/24-25/52026

Sl. No.	Bidders Queries	Reply
1	Block Summary Area as per Block Summary: 3.16 Sq. Kms Area as per Co-ordinates: 3.19 Sq. Kms Please clarify about correct area of the block as there is difference in the extent of the block given in Summary and as plotted as per co-ordinates. This clarification is needed to bidders to know about correct extent of the block.	Please refer to Clause 4.3 of tender document.
2	Letter of Mining Officer, Beawar District dated 24.05.2024 Letter of Mining Officer, Beawar District dated 24.05.2024 says that Shahpura Blocks does not come in the purview of 500 meter from forest. As per Hon'ble Supreme Court, if any draft notification of Eco Sensitive Zone (ESZ) of any Wildlife Sanctuary or protected zone is notified then minimum one-kilometer distance has to be maintained for any project from boundary of ESZ of Wildlife Sanctuary. So, a clarification needs to be issued about location of block with respect to ESZ of any Wildlife Sanctuary. This clarification is needed to bidders to know about block location with respect to any Wildlife Sanctuary and its ESZ.	Please refer to letter no.-7491836 dated-24.05.2024 annexed with Tender document

3	Tender Document **4. The Concession Area** 4.1 The following information regarding the Concession Area is included in a separate "Information Memorandum" attached along with this Tender Document as Schedule V (i) Details of the Concession Area identified, demarcated using total station and differential global positioning system or global positioning system. (ii) The estimated mineral resources of minerals found in the identified Concession Area determined pursuant to the Minerals (Evidence of Mineral Content) Rules, 2015 and its subsequent amendments; Geological Study Report or Part IVA Reporting of Mineral Resources does not provide estimated mineral resources. So, Clause 4.1 (ii) needs to be corrected. Please clarify.	The block has been proposed for grant of composite license. The holder of composite license shall conduct geological exploration as per MEMC Rules, so as to ascertain mineral resource in the area.
4	Tender Document **Schedule-I** **B (1) (d) (iii)** **Turnover** and net worth certificate issued by: (a) statutory auditors of the Bidder (which is a company); or (b) a chartered accountant or a merchant banker registered with the Securities and Exchange Board of India – in case Bidder is an individual.] OR Certificate regarding the total amount as closing cash balance issued by a chartered accountant or a merchant banker registered with the Securities and Exchange Board of India. Please clarify as follows: Under which provision of the law, a turnover Certificate issued by Statutory Auditor is being asked as documents to evidence compliance with the eligibility conditions? No other State is asking turnover certificate issued by Statutory Auditors. Tender Document	Tender document condition prevails.

5	Tender Document **12 Timetable** **Stage I – E-auction process for selection of Preferred Bidder** Serial No.16. Issuance of letter of intent for composite license by State Government: T1+15=**T2** **Stage III – Process for grant of mining lease** Serial No. 2: Submission of mining lease application and first installment of upfront payment (20%) after completion of prospecting as per timeline mentioned in the act and rules-**T2** Please clarify as follows: 1. Timeline as T2 is mentioned at serial no.16 of Stage I i.e. issuance of letter of intent for composite license. How the same timelines can be for performing activity mentioned at serial no.1 of State-III 2. Kindly clarify and provide correct timeline accordingly. Tender Document	**Stage III – Process for grant of mining lease** Serial No. 2: Submission of mining lease application and first installment of upfront payment (20%) after completion of prospecting as per timeline mentioned in the act and rules is T_2, **not T2**
6	Tender Document **12 Timetable** **Stage III – Process for grant of mining lease** Serial No. 3: Submission of enhanced performance security and approved mining plan along with second installment of upfront payment by the holder of composite license: **T3 + 6 months** **Reference: Rule 18(8) of Mineral Auction Rule 2015;** A Mine Development and Production Agreement shall be executed between the State Government and the holder of Composite License if the holder of a Composite License— **a)** continues to comply with the terms and conditions of eligibility; **b)** pays the second instalment being 1[twenty per cent.] of the upfront payment; **c)** furnishes the enhanced performance security as specified in sub-rule (2) of rule 19; **d)** satisfies the conditions specified in clause (b) of sub-section (2) of section 5 with respect to a mining plan;	1. Yes 2. At T3+6 months, Submission of enhanced performance security and approved mining plan along with second instalment of upfront payment by the holder of composite license is required. 3. Bidder has to comply conditions mentioned in the tender document. 4. Please refer to reply mentioned above.

	e) obtains all consents, approvals, permits, no-objections and the like as may be required under applicable laws for commencement of mining operations; and f) satisfies such other conditions as may be specified by the State Government with the prior approval of the Central Government. Please clarify as follows: 1. Whether timeline mentioned as T3+6 Months is correct for event of submission of performance security and first instalment of upfront payment? 2. Rule 18(8) of Mineral Auction Rule, 2015 says that A Mine Development and Production Agreement shall be executed between the State Government and the holder of Composite License if the holder of a Composite License after obtaining all consent /approvals /permit along with mining plan make payment of enhanced performance security and second installment of upfront payment. Certainly, this event will not take place within 6 months of issuance of LoI for Mining Lease. 3. Kindly refer timelines mentioned in the tender document of auction conducted by Ministry of Mines for composite license, where timeline is mentioned as per Rule 18 (8) of Mineral Auction Rule for performing activity of payment of 2nd instalment of upfront and enhanced performance security as 2 years and 6 months from date of issuance of Letter of Intent. 4. As per Rule 18(8) of Mineral Auction Rule 2015, it should be corrected as T3+ 2 years and 6 months. Meaning thereby 2 years and 6 months from date of issuance of Letter of Intent Tender Document	

7	Tender Document **12 Timetable** **Stage III – Process for grant of mining lease** Events mentioned at serial No. 3 and below that events mentioned at serial no. 1 & 2 reproduced as follows: **3** Submission of enhanced performance security and approved mining plan along with second installment of upfront payment by the holder of composite license: T3 + 6 months **1** Submission of all necessary clearances /approvals from various government agencies/departments by Successful Bidder: T4 **2** Execution of Mine Development & Production Agreement (MDPA) between State Government & Successful Bidder: T4+20 Events mentioned at serial No. 3 and below that events mentioned at serial no. 1 & 2 are not separate activities. It is not in compliance with Clause 10.6 of the Tender Document as well as Rule 18(8) of Mineral Auction Rule 2015. These all three activities should be clubbed and timelines should be 2 years and 6 months from the date of issuance of LoI. Please clarify Tender Document	Please refer to reply mentioned at serial no. 6
8	Letter of Mining Officer, Beawar District dated 24.05.2024 Point No. 3 of Letter of Mining Officer, Beawar District dated 24.05.2024 says that as per G.T. Sheet Directorate Letter dated 09.01.2006, Shahpura Block does not come under ambit of Aravalli Hills. The said letter says about status as on 09.01.2006. Since then, more than 18 years is passed. Please clarify as follows: 1. What is the status of location of Shahpura Block with respect to Aravalli Hill Range after the date of **09.01.2006**? 2. Whether as on date it is out of ambit of Aravalli Hill Range? 3. Is there any change in status since last 18 years? Letter of Mining Officer, Beawar District dated 24.05.2024	As per 100 metre definition of Aravalli defined by Directorate circular dated 09-01-2006, the block is out of Aravalli. The mineral concession of the blocks will be granted in accordance with the Honourable Supreme Court's order dated May 9, 2024, in Writ Petition (Civil) No. 4677/1985, M.C Mehta vs Union of India & ORS with writ petition (s) (civil) no. 202/1985, T N Godaverman v/s Union of India & ORS or any subsequent order issued in these petitions, if applicable.

9	Notice Inviting Tender dated 16th April 2025 NIT dated 16th April 2025 says that the mineral concession of the blocks will be granted in accordance with the Honorable Supreme Court's order dated May 9, 2024, in Writ Petition (Civil) No. 4677/1985, M.C Mehta vs Union of India & ORS with writ petition (s) (civil) no. 202/1985, T N Godaverman v/s Union of India & ORS or any subsequent order issued in these petitions, if applicable. Operative Para of Order dated May 9, 2024 is as follows: *"Until further orders, though all the States in which Aravalli Ranges and Hills are situated would be at liberty to consider and process the applications for grant of mining leases and also for renewal thereof including obtaining statutory clearances from the various authorities, no final permission shall be granted for mining in the Aravalli Hills/Ranges, as defined in the FSI Report dated 25.08.2010, without permission from this Court."* Please clarify as follows: Whether, for mining operation after execution of ML deed, successful bidder has to seek permission from Hon'ble Supreme Court or Government of Rajasthan? This will clarify bidders regarding Order of Hon'ble Supreme Court	Please refer to reply mentioned at serial no. 8
10	Tender Document **Clause 5 (g)** The Bidder must comply with Section 6 of Mines and Minerals (Development and Regulation) Act, 1957 Please clarify whether Government of India has increased the area limit with respect of Copper in the State of Rajasthan beyond limits provided in Section 6 (1) (a) & (b) of MMDR Act? Bidder wanted to know about any enhancement in area for copper in the State of Rajasthan by the Central Government than prescribed in Section 6 of the MMDR Act.	No, area limit is as per MMDR, Act.

11	Mine Development and Production Agreement (MDPA) As per Clause **4.3.1**, for failure of the Successful Bidder to comply with the Minimum Production Requirement as required under Clause 8, an amount equal to shortfall in Minimum Production as per Schedule E x highest IBM price of that particular year x Final Price offer will be appropriated from Performance Security. Apart from appropriation of performance security, is there any other cost/penalty for non-compliance of Schedule E? This clarification needed to bidder to know the consequences for non-compliance of Schedule E.	It will be as per MDPA.
12	Mine Development and Production Agreement (MDPA) **7.2 Other payments**: The Successful Bidder shall also be required to make payments as required under Applicable Law, including the Act and the rules framed thereunder. What is the other payment to be made in the State of Rajasthan? Please elaborate. These details needed for bidder to know about investment to be made and financial implication involved for this block	Please, refer to Clause 9.2 of tender document.
13	Block Summary Particulars of land: It is not mandatory for the State Government to categorise lands as Forest, Private, and Government for blocks put up for auction under composite license. During mining lease if lands fall under the category of Private, Government, then please Clarify as follows: 1. Procedure for acquisition of private land at the time of mining lease. 2. Charges payable for acquisition of these private land on Hectare basis. 3. Procedure for transfer/acquisition of Government Land at the stage of Mining Lease. 4. Charges payable for acquisition of Government land on Hectare basis.	The onus of getting consent/purchase/acquisition/surface right of private land is on the Preferred Bidder. The transfer/acquisition of Govt. land will be as per notifications/circulars issued by Revenue Department, Govt. of Rajasthan.

	These details needed for bidder to know about investment to be made and financial implication involved for this block	
14	Tender Document **17.5 Charagah Land** (pasture land): if applicable Mining in Charagah land will be carried out as per notifications / circulars issued by Government from time to time. Please Clarify as follows: **1.** Whether Charagah land can be diverted for the purpose of mining activities? **2.** Whether Charagah land can be part of mining lease or not? **3.** Procedure for transfer/acquisition of Charagah Land at the stage of Mining Lease. **4.** Tentative charges payable for acquisition of Government land on Hectare basis. Kindly provide relevant circulars and Notification with respect to Charagah land coming in to mining lease area. These details needed for bidder to know about investment to be made and financial implication involved for this block	1. Yes 2. Yes, but after set apart. 3. It will be as per notifications/circulars issued by Revenue Department, Govt. of Rajasthan.
15	Tender Document **Clause 15.3** "Save and except as provided in this Tender Document, the Bid Security of unsuccessful Bidders will be returned by the State Government, without any interest, as promptly as possible." There should be some time schedule for return of Bid Security as many States stipulated in their tender document that Bid Security shall be returned within four weeks' time from the date of final auction (date of financial bid) or annulment of auction. This clarity is required as Bank Guarantees of the unsuccessful bidders cannot be hold for indefinite time.	Tender Document condition prevails.

16	Mine Development and Production Agreement Clause No. 19.4.2; The stamp duty payable for this Agreement shall be borne by the Successful Bidder **1.** Kindly provide the percentage of Stamp duty and Registration charges applicable for execution of mining lease deed for 50 years. **2.** Whether stamp duty is charged on the basis of on market value of the resources or on the basis of annual rent? **3.** Also elaborate the methodology for arriving such charges. These details needed for bidder to know about investment to be made and financial implication involved for this block. These details also helpful in financial modelling for the block.	It will be as per Rajasthan Stamp Act.
17	Block Summary Location of the block area Any temple / structure of historical importance is located in the block area or nearby outside the block area? Bidders need to know about any sensitive structure within the block area.	Please refer to demarcation report annexed with tender document.
18	(Model Tender Document) The land classification of the blocks in not provided. Please provide the Land classification which will help for assessment of the blocks. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory
19	(Model Tender Document) Particulars of Land- Part C Cadastral Maps are not provided along with tender data. How to get this block specific data. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory.

20	(Model Tender Document) - clause 9.1 Kindly clarify for reserve price as the blocks are at G-4 level and No drilling has been done. Please provide for assessment	As per Mineral Auction Rules, the determination and finalization of the reserve price for the auction shall lie at the discretion of the State Government
21	(Model Tender Document) Clause 10.3 Support for another six months extension in case the execution delay was beyond the control of the bidder. Please clarify	Please refer to proviso of Rule 18 (3) of Mineral Auction Rule.
22	(Model Tender Document) What support will be provided for fast execution of blocks in case of winning Please clarify	A post auction facilitation cell has been established for facilitation of the bidder. Further, a committee under the Chairmanship of Chief Secretary, Govt. of Rajasthan has also been informed for the same.

REPLY TO PRE BID QUERIES
OF
Gararіya Block, Tehsil Sajjangarh & District Banswara
Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/281/Udaipur/24-25/52024

Sl. No.	Bidders Queries	Reply
1	Geological Report Letter of ME Banswara Dated 21.03.2023 It stated that an area of 56.35-hectare forest land is situated within the block. Whether the said forest area falls under the Aravali range/ hills and will be affected from order of the Hon'ble Supreme Court in W.P.C No. 4677/1985, dated 09.05.2024 regarding mining in Aravali hill/ ranges in Rajasthan. Clarity is required for said forest land and the present auction block does not fall in Aravali hills / Ranges. Above clarity required for obtaining forest clearance for grant of composite license.	As per 100 metre definition, the block is out of Aravalli. The mineral concession of the blocks will be granted in accordance with the Honourable Supreme Court's order dated May 9, 2024, in Writ Petition (Civil) No. 4677/1985, M.C Mehta vs Union of India & ORS with writ petition (s) (civil) no. 202/1985, T N Godavarman v/s Union of India & ORS or any subsequent order issued in these petitions, if applicable.
2	Part VI A Clause 4.iii and 5.iii Population data (2011) shows that (99.56%) of population is of Scheduled tribes, and local people own the land and use it. for cultivation The Manual/ statute governing acquisition of private land owned by schedule tribes in the State of Rajasthan may be provided. As majority of land is owned by schedule tribes within the block, the statutory provision governing land acquisition of schedule tribes is vital for evaluation of the block.	The onus of getting consent/purchase/acquisition/surface right of private land is on the Preferred Bidder.

3	Tender Document Clause 4. 1(i) Details of the Concession Area identified, demarcated using total station and differential global positioning system (DGPS) The DGPS survey map and report in soft copy may be provided. As per Rule 16 of Auction Rule 2015	Demarcation of block and map is annexed in the tender document.
4	General Query Old workings Old excavation seen within the block area whether, any mining lease for any minor or major mineral had already been granted over the said area within the block. Detail of mining lease granted (major or minor mineral) may provided It required for proper evaluate the block	Area is free for grant.
5	General Query Stamp Duty Gazette notification regarding computation of stamp duty and registration for mining lease in the State of Rajasthan. Notification for stamp duty and registration charges for mining lease may be provided It required for financial evaluate the block.	It will be as per Rajasthan's Stamp Act.

REPLY TO PRE BID QUERIES

OF

Chauth Ka Barwara Block, Tehsil Chauth Ka Barwara & District Sawai Madhopur

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/5/Udaipur/25-26/3237

Sl. No.	Bidders Queries	Reply
1	(Model Tender Document) clause - 2.9 Concession area clarification is required. As per Mineral block summary it is **1026.8873 but as per Model tender document it is 984.5951 Ha** Please clarify	Some minor mineral concessions are falling in the block; composite license of the blocks will be granted excluding those areas. Please, refer to Clause 4.3 of tender document.
2	(Model Tender Document) Particulars of Land- Part C The land classification of the blocks in not provided. Please provide the Land classification which will help for assessment of the blocks. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory
3	(Model Tender Document)-PART-A-GENERAL INFORMATION ABOUT MINERAL BLOCK Area of approx. 4 Sq Km is under urban developed area. Land acquisition for the block	NoC for same is required for carrying out mining and allied activities.
4	(Model Tender Document) Cadastral Map is not provided along with tender data. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory.
5	(Model Tender Document) - clause 9.1 What is the basis for reserve price as the blocks are at G-4 level and No drilling has been done.	As per Mineral Auction Rules, the determination and finalization of the reserve price for the auction shall lie at the discretion of the State Government

6	(Model Tender Document) Clause 10.3 Support for another six months extension in case the execution delay was beyond the control of the bidder. Please clarify	Please refer to proviso of Rule 18 (3) of Mineral Auction Rule.
7	(Model Tender Document) What support will be provided for fast execution of blocks in case of winning Please clarify	A post auction facilitation cell has been established for facilitation of the bidder. Further, a committee under the Chairmanship of Chief Secretary, Govt. of Rajasthan has also been formed for the same.

REPLY TO PRE BID QUERIES

OF

Kuratiyan Block, Tehsil Raipur & District Beawar

Tender No.: MSTC/JPR/Directorate of Mines and Geology Rajasthan, Udaipur/284/Udaipur/24-25/52027

Sl. No.	Bidders Queries	Reply
1	(Model Tender Document) Clause 10.1(A) The area limit for CL in Rajasthan is 25 Sq Km as per model tender document. But the blocks are for commodities of copper which is a critical mineral & as per recent notification from the Ministry of Mines 22nd Feb 2024,the area limit for critical mineral is 100 Sq Km for CL. Please specify the area limits as per commodity. Please clarify	Copper doesn't fall in Part D of first schedule.
2	(Model Tender Document) Particulars of Land- Part C Railway track, Railway Land with old bridge as well as National highway is passing through the area. What support will be provided for this land	The Government will provide support to the extent possible.
3	(Model Tender Document) What support will be provided for fast execution of blocks in case of winning Please clarify	A post auction facilitation cell has been established for facilitation of the bidder. Further, a committee under the Chairmanship of Chief Secretary, Govt. of Rajasthan has also been formed for the same.

4	(Model Tender Document) Particulars of Land- Part C The land classification of the blocks in not provided. Please provide the Land classification which will help for assessment of the blocks. Please provide for assessment	As per Mineral Auction Rule, land classification for blocks proposed for auction under composite license is not mandatory.
5	(Model Tender Document) Cadastral Maps are not provided along with tender data. How to get this block specific data. Please provide for assessment	Please refer to reply mentioned at serial no. 4
6	(Model Tender Document) - clause 9.1 Kindly clarify for reserve price as the blocks are at G-4 level and No drilling has been done. Please clarify	As per Mineral Auction Rules, the determination and finalization of the reserve price for the auction shall lie at the discretion of the State Government
7	(Model Tender Document) Clause 10.3 Support for another six months extension in case the execution delay was beyond the control of the bidder. Please clarify	Please refer to proviso of Rule 18 (3) of Mineral Auction Rule.

Coordinates of Boreholes

LIMESTONE BLOCK JOGA-I, TEHSIL RAMGARH, DISTRICT JAISALMER

S.No.	BORE HOLES	COORDINATES	
		LATITUDE	LONGITUDE
1.	JO-08	27^{0}19'57.15203"	70^{0}35'30.83739"
2.	JO-09	27^{0}19'56.98601"	70^{0}35'45.38863"
3.	JO-16	27^{0}19'56.81952"	70^{0}35'59.93984"
4.	JO-17	27^{0}19'56.65271"	70^{0}36'14.49101"
5.	JO-24	27^{0}19'56.48543"	70^{0}36'29.04215"
6.	JO-28	27^{0}19'56.31772"	70^{0}36'43.59325"
7.	JO-07	27^{0}19'44.15652"	70^{0}35'30.65166"
8.	JO-10	27^{0}19'43.99052"	70^{0}35'45.20243"
9.	JO-15	27^{0}19'43.8241"	70^{0}35'59.75317"
10.	JO-18	27^{0}19'43.65726"	70^{0}36'14.30387"
11.	JO-23	27^{0}19'43.49"	70^{0}36'28.85454"
12.	JO-06	27^{0}19'31.161"	70^{0}35'30.46596"
13.	JO-11	27^{0}19'30.99503"	70^{0}35'45.01626"
14.	JO-14	27^{0}19'30.82864"	70^{0}35'59.56652"
15.	JO-19	27^{0}19'30.66183"	70^{0}36'14.11675"
16.	JO-22	27^{0}19'30.4946"	70^{0}36'28.66694"
17.	JO-05	27^{0}19'18.16548"	70^{0}35'30.2803"
18.	JO-12	27^{0}19'17.99953"	70^{0}35'44.83013"
19.	JO-13	27^{0}19'17.83316"	70^{0}35'59.37992"
20.	JO-20	27^{0}19'17.6637"	70^{0}36'13.92968"
21.	JO-21	27^{0}19'17.49916"	70^{0}36'28.4794"
22.	JO-31	27^{0}19'17.33153"	70^{0}36'43.02909"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

LIMESTONE BLOCK JOGA-III, TEHSIL RAMGARH, DISTRICT JAISALMER

S.No.	BORE HOLES	COORDINATES	
		LATITUDE	LONGITUDE
1.	JO-61	27°21'26.6094"	70°37'43.12824"
2.	JO-70	27°21'26.43941"	70°37'57.68246"
3.	JO-72	27°21'26.269"	70°38'12.23665"
4.	JO-77	27°21'26.09817"	70°38'26.7908"
5.	JO-86	27°21'25.92692"	70°38'41.34491"
6.	JO-94	27°21'25.75524"	70°38'55.89899"
7.	JO-76	27°21'39.09324"	70°38'26.98276"
8.	JO-87	27°21'38.92196"	70°38'41.53735"
9.	JO-93	27°21'38.75026"	70°38'56.0919"
10.	JO-62	27°21'13.61428"	70°38'42.93607"
11.	JO-69	27°21'13.44258"	70°37'57.4897"
12.	JO-73	27°21'13.27046"	70°38'12.04329"
13.	JO-78	27°21'13.09782"	70°38'26.59685"
14.	JO-85	27°21'12.92495"	70°39'41.15037"
15.	JO-95	27°21'12.75156"	70°39'55.70385"
16.	JO-63	27°21'00.61926"	70°39'42.74199"
17.	JO-68	27°21'00.44585"	70°39'57.29502"
18.	JO-74	27°21'00.27202"	70°40'11.84802"
19.	JO-79	27°21'00.09777"	70°40'26.40098"
20.	JO-84	27°20'59.92309"	70°40'40.9539"
21.	JO-96	27°20'59.74799"	70°40'55.50679"
22.	JO-64	27°20'47.62426"	70°39'42.54795"
23.	JO-67	27°20'47.45085"	70°39'57.10051"
24.	JO-75	27°20'47.27703"	70°40'11.65303"
25.	JO-80	27°20'47.1028"	70°40'26.20552"
26.	JO-83	27°20'46.92815"	70°40'40.75797"
27.	JO-97	27°20'46.75308"	70°40'55.31038"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

LIMESTONE BLOCK JOGA-IV, TEHSIL RAMGARH, DISTRICT JAISALMER

S.No.	BORE HOLES	COORDINATES	
		LATITUDE	LONGITUDE
1.	JO-65	27°20'34.62838"	70°37'42.36786"
2.	JO-66	27°20'34.45849"	70°37'56.9202"
3.	JO-81	27°20'34.11744"	70°38'26.02484"
4.	JO-82	27°20'33.94629"	70°38'40.57707"
5.	JO-98	27°20'33.77472"	70°38'55.12926"
6.	JO-117	27°20'20.46326"	70°38'56.72965"
7.	JO-116	27°20'20.29298"	70°38'11.28144"
8.	JO-109	27°20'20.12228"	70°38'25.8332"
9.	JO-108	27°20'19.95116"	70°38'40.38492"
10.	JO-99	27°20'19.77962"	70°38'54.93661"
11.	JO-118	27°20'07.46802"	70°38'56.53914"
12.	JO-115	27°20'07.29777"	70°38'11.09046"
13.	JO-110	27°20'07.1271"	70°38'25.64175"
14.	JO-107	27°20'06.956"	70°38'40.193"
15.	JO-100	27°20'06.78448"	70°38'54.74421"
16.	JO-114	27°19'54.30255"	70°38'10.89951"
17.	JO-111	27°19'54.1319"	70°38'25.45033"
18.	JO-106	27°19'53.96083"	70°38'40.00111"
19.	JO-101	27°19'53.78934"	70°38'54.55185"
20.	JO-112	27°19'41.1367"	70°38'25.25893"
21.	JO-105	27°19'40.96566"	70°38'39.80925"
22.	JO-102	27°19'40.7942"	70°38'54.35952"
23.	JO-103	27°19'27.79905"	70°38'54.16723"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

LIMESTONE BLOCK PAREWAR SN-I, TEHSIL AND DISTRICT JAISALMER

S.No.	BORE HOLES	COORDINATES	
		LATITUDE	LONGITUDE
1.	DWD-18	27°18'20.07454"	70°42'44.36943"
2.	DWD-17	27°18'20.25254"	70°42'29.82249"
3.	DWD-20	27°18'20.43012"	70°42'15.27551"
4.	DWD-21	27°18'33.42495"	70°42'15.47408"
5.	DWD-16	27°18'33.24734"	70°42'30.02153"
6.	DWD-01	27°18'33.06932"	70°42'44.56895"
7.	DD-04	27°18'32.89087"	70°42'59.11632"
8.	DD-03	27°18'32.71201"	70°43'13.66366"
9.	DD-02	27°18'32.53272"	70°43'28.21096"
10.	DD-01	27°18'32.35302"	70°43'42.75823"
11.	PR-78	27°18'32.17289"	70°43'57.30546"
12.	PR-79	27°18'45.16752"	70°43'57.50736"
13.	DD-08	27°18'45.34768"	70°43'42.95966"
14.	DD-07	27°18'45.52741"	70°43'28.41192"
15.	DD-06	27°18'45.70672"	70°43'13.86415"
16.	DD-05	27°18'45.88561"	70°42'59.31634"
17.	DWD-02	27°18'46.06409"	70°42'44.7685"
18.	DWD-15	27°18'46.24214"	70°42'30.22061"
19.	DWD-22	27°18'46.41977"	70°42'15.67269"
20.	DWD-23	27°18'59.41459"	70°42'15.87134"
21.	DWD-14	27°18'59.23693"	70°42'30.41973"
22.	DWD-03	27°18'59.05885"	70°42'44.96808"
23.	DD-12	27°18'58.88035"	70°42'59.5164"
24.	DD-11	27°18'58.70143"	70°43'14.06468"
25.	DD-10	27°18'58.52209"	70°43'28.61292"
26.	DD-09	27°18'58.34233"	70°43'43.16113"
27.	PR-80	27°18'58.16215"	70°43'57.7093"
28.	PR-81	27°19'11.15676"	70°43'57.91127"
29.	DD-16	27°19'11.33.697"	70°43'43.36263"
30.	DD-15	27°19'11.51676"	70°43'28.81396"
31.	DD-14	27°19'11.69613"	70°43'14.26524"
32.	DD-13	27°19'11.87508"	70°42'59.71649"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

33.	DWD-04	27^{0}19'12.0536"	70^{0}42'45.16771"
34.	DWD-13	27^{0}19'12.23171"	70^{0}42'30.61888"
35.	DWD-24	27^{0}19'12.4094"	70^{0}42'16.07002"
36.	DWD-25	27^{0}19'25.4042"	70^{0}42'16.26874"
37.	DWD-12	27^{0}19'25.22649"	70^{0}42'30.81807"
38.	DWD-05	27^{0}19'25.04835"	70^{0}42'45.36737"
39.	DD-20	27^{0}19'24.8698"	70^{0}42'59.91663"
40.	DD-19	27^{0}19'24.69082"	70^{0}43'14.46585"
41.	DD-18	27^{0}19'24.51143"	70^{0}43'29.01503"
42.	DD-17	27^{0}19'24.33161"	70^{0}43'43.56418"
43.	PR-82	27^{0}19'24.15137"	70^{0}43'58.11329"
44.	PR-83	27^{0}19'37.14598"	70^{0}43'58.31534"
45.	DD-24	27^{0}19'37.32624"	70^{0}43'43.76576"
46.	DD-23	27^{0}19'37.50609"	70^{0}43'29.21614"
47.	DD-22	27^{0}19'37.68551"	70^{0}43'14.66649"
48.	DD-21	27^{0}19'37.86451"	70^{0}43'00.1168"
49.	DWD-06	27^{0}19'38.04309"	70^{0}42'45.56707"
50.	DWD-11	27^{0}19'38.22127"	70^{0}42'31.01723"
51.	DWD-10	27^{0}19'51.21603"	70^{0}42'31.21649"
52.	DWD-07	27^{0}19'51.03784"	70^{0}42'45.76673"
53.	DD-28	27^{0}19'50.85923"	70^{0}43'00.31693"
54.	DD-27	27^{0}19'50.6802"	70^{0}43'14.86709"
55.	DD-26	27^{0}19'50.50075"	70^{0}43'19.41722"
56.	DD-25	27^{0}19'50.32088"	70^{0}43'43.9673"
57.	PR-84	27^{0}19'50.14058"	70^{0}43'58.51735"
58.	PR-85	27^{0}20'03.13517"	70^{0}43'58.71948"
59.	DD-32	27^{0}20'03.31549"	70^{0}43'44.16896"
60.	DD-31	27^{0}20'03.49539"	70^{0}43'29.6184"
61.	DD-30	27^{0}20'03.67487"	70^{0}43'15.06781"
62.	DD-29	27^{0}20'03.85393"	70^{0}43'00.51717"
63.	DWD-08	27^{0}20'04.03257"	70^{0}42'45.96665"
64.	DWD-09	27^{0}20'04.29973"	70^{0}42'31.41579"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

LIMESTONE BLOCK PAREWAR SN-III, TEHSIL RAMGARH & JAISALMER, DISTRICT JAISALMER

S.No.	BORE HOLES	COORDINATES	
		LATITUDE	LONGITUDE
1.	DWD-137	27°18'47.47677"	70°40'48.38431"
2.	DWD-112	27°18'47.30168"	70°41'02.93238"
3.	DWD-88	27°18'47.12616"	70°41'17.48041"
4.	DWD-65	27°18'46.95022"	70°41'32.0284"
5.	DWD-50	27°18'46.77386"	70°41'46.57636"
6.	DWD-32	27°18'46.59708"	70°42'01.12428"
7.	DWD-136	27°18'34.4818"	70°40'48.18845"
8.	DWD-113	27°18'34.30673"	70°41'02.73605"
9.	DWD-87	27°18'34.13124"	70°41'17.28361"
10.	DWD-66	27°18'33.95533"	70°41'31.83113"
11.	DWD-49	27°18'33.779"	70°41'46.37862"
12.	DWD-33	27°18'33.60225"	70°42'00.92607"
13.	DWD-135	27°18'21.48682"	70°40'47.99262"
14.	DWD-114	27°18'21.31178"	70°41'02.53975"
15.	DWD-86	27°18'21.13632"	70°41'17.08684"
16.	DWD-67	27°18'20.96044"	70°41'31.63389"
17.	DWD-48	27°18'20.78414"	70°41'46.18091"
18.	DWD-34	27°18'20.60742"	70°42'00.72789"
19.	DWD-134	27°18'08.49183"	70°40'47.79683"
20.	DWD-115	27°18'08.31682"	70°41'02.34349"
21.	DWD-85	27°18'08.14139"	70°41'16.89011"
22.	DWD-68	27°18'07.96554"	70°41'31.43669"
23.	DWD-47	27°18'07.78927"	70°41'45.98324"
24.	DWD-35	27°18'07.61258"	70°42'00.52975"
25.	DWD-133	27°17'55.49684"	70°40'47.60108"
26.	DWD-116	27°17'55.32185"	70°41'02.14727"
27.	DWD-84	27°17'55.14644"	70°41'16.69342"
28.	DWD-69	27°17'54.97061"	70°41'31.23953"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

29.	DWD-46	27°17'54.79736"	70°41'45.78561"
30.	DWD-36	27°17'54.61769"	70°42'00.33165"
31.	DWD-132	27°17'42.50195"	70°41'47.40342"
32.	DWD-117	27°17'42.32526"	70°42'01.94901"
33.	DWD-83	27°17'42.14815"	70°42'16.49456"
34.	DWD-70	27°17'41.97062"	70°42'31.04008"
35.	DWD-45	27°17'41.79267"	70°42'45.58556"
36.	DWD-37	27°17'41.6143"	70°43'00.131"
37.	DWD-131	27°17'29.50705"	70°41'47.2058"
38.	DWD-118	27°17'29.33038"	70°42'01.75092"
39.	DWD-82	27°17'29.15329"	70°42'16.296"
40.	DWD-71	27°17'28.97578"	70°42'30.84105"
41.	DWD-44	27°17'28.79785"	70°42'45.38606"
42.	DWD-38	27°17'28.6195"	70°42'59.93103"
43.	DWD-130	27°17'16.51215"	70°41'47.00822"
44.	DWD-119	27°17'16.33551"	70°42'01.55287"
45.	DWD-81	27°17'16.15845"	70°42'16.09748"
46.	DWD-72	27°17'15.98097"	70°42'30.64206"
47.	DWD-43	27°17'15.80307"	70°42'45.1866"
48.	DWD-41	27°17'15.62475"	70°42'59.7311"
49.	DWD-129	27°17'03.51724"	70°41'46.81067"
50.	DWD-120	27°17'03.34063"	70°42'01.35485"
51.	DWD-80	27°17'03.1636"	70°42'15.89899"
52.	DWD-73	27°17'02.98615"	70°42'30.4431"
53.	DWD-74	27°17'02.80828"	70°42'44.98717"
54.	DWD-42	27°17'02.62999"	70°42'59.5312"
55.	DWD-128	27°16'50.52232"	70°41'46.61316"
56.	DWD-121	27°16'50.34574"	70°42'01.15687"
57.	DWD-79	27°16'50.16874"	70°42'15.70054"
58.	DWD-76	27°16'49.99132"	70°42'30.24418"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

LIMESTONE BLOCK PAREWAR-A, TEHSIL JAISALMER, DISTRICT JAISALMER

S.No.	BORE HOLES	COORDINATES	
		LATITUDE	LONGITUDE
1.	PR-31	27°18'05.09437"	70°45'24.17869"
2.	PR-32	27°18'18.08885"	70°45'24.38334"
3.	PR-33	27°18'31.08332"	70°45'24.58802"
4.	PR-34	27°18'44.07778"	70°45'24.79274"
5.	PR-35	27°18'57.07224"	70°45'24.9975"
6.	PR-36	27°19'10.06669"	70°45'25.2023"
7.	PR-96	27°19'23.06114"	70°45'25.40714"
8.	PR-95	27°19'36.05557"	70°45'25.61202"
9.	PR-94	27°19'49.05"	70°45'25.81693"
10.	PR-93	27°20'02.04443"	70°45'26.02188"
11.	PR-92	27°20'02.22727"	70°45'11.47159"
12.	PR-91	27°19'49.23282"	70°45'11.26711"
13.	PR-90	27°19'36.23836"	70°45'11.06266"
14.	PR-37	27°19'23.2439"	70°45'10.85826"
15.	PR-38	27°19'10.24942"	70°45'10.65389"
16.	PR-39	27°18'57.25495"	70°45'10.44956"
17.	PR-40	27°18'44.26046"	70°45'10.24527"
18.	PR-41	27°18'31.26597"	70°45'10.04101"
19.	PR-42	27°18'18.27147"	70°45'09.8368"
20.	PR-43	27°18'05.27696"	70°45'09.63262"
21.	PR-44	27°18'05.45913"	70°44'55.08652"
22.	PR-45	27°18'18.45366"	70°44'55.29023"
23.	PR-46	27°18'31.44819"	70°44'55.49397"
24.	PR-47	27°18'44.44271"	70°44'55.69775"
25.	PR-48	27°18'57.43723"	70°44'55.90157"
26.	PR-49	27°19'10.43174"	70°44'56.10543"
27.	PR-50	27°19'23.42624"	70°44'56.30933"
28.	PR-51	27°19'36.42073"	70°44'56.51326"
29.	PR-88	27°19'49.41521"	70°44'56.71724"
30.	PR-89	27°20'02.40969"	70°44'56.92125"

Sr. Draftsman
Jaisalmer

Sr. Geologist
Jaisalmer

Geological Report

RP-9/2004

FORM-BB

(See rule 3E)

Progress report of reconnaissance survey in respect of Lead, Zinc, Copper, Gold and associated minerals for Six Month;

Period: 6th July 2010 to 5th January 2011

To,

1. The Controller General,
   Indian Bureau of Mines,
   Indira Bhawan, Civil Lines
   NAGPUR - 440 102

2. The Regional Controller of Mines
   Indian Bureau of Mines,
   Type IV, Block B/9
   IBM Colony, Adarsh Nagar
   Balupura road, Ajmer
   Ajmer-308002

3. Controller of Mines
   Indian Bureau of Mines
   Makhupura Industrial area
   Nasirabad road,
   Ajmer-305002

4. The Director Mines and Geology
   Government of Rajasthan
   Khaniz Bhawan
   Shastri Circle
   Udaipur (Raj)

RP-9/2004, Pur-Mandal Block

1.	Name of the Permit Holder	Hindustan Zinc Ltd.
2.	Name of firm	Hindustan Zinc Ltd.
3.	Address of the Firm	Swaroop Sagar, Yashad Bhawan UDAIPUR – 313 004
4.	Area under Permit	312 sq km
5.	Location	
	i) Topo sheet No.(s)	45K/7, 8,11,12,
	ii) Co-ordinates of corner points	Please see the attached map(Fig.1)
	iii) District(s)	Bhilwara
	iv) State	Rajasthan
6.	Date of grant of permit	23.10.2008
7.	Period of Permit	3 years, 06.01.09 to 05.01.2012
8.	Reconnaissance survey work done (A brief description of the work involved along with particulars of the machines and instruments used would be given against each of the following items)	Please see enclosed Report.
	i) Regional Survey	Regional geological mapping and bedrock/rock chip sampling completed.
	ii) Aerial Survey	Nil. No aerial survey required as the area is already covered by earlier OHR survey.
	iii) Geological mapping including area covered and scale	
	iv) Geophysical	.Interpretation of Titan Resistivity, IP & MT survey covering 12 line km in pur-dariba
	v) Geochemical	601 drill-core Samples Analyzed for 31 elements. Analysis Method: ICP-OES

vi)	Test drilling: Number, area of influence, meters drilled and sampling.	Test drilling : Number:3 holes, Area: Pur-Dariba-Suras, Meters: 2678.35m approx, Sampling in progress Rig: CDR-100 & Dyna 100
9.	Nature and structure of the ore body	Veins, disseminations and narrow lensoidal.
10.	Analysis of the ores or minerals	Al, Ba, Bi, Ca, Cd, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, S, Sb, Sn, Sr, Ti, W, Zn, Cs, Ga, In, Te, Tl, Hg, Ag, As, Au
11.	If abandonment	No
i)	Date of abandonment	Not applicable.
ii)	Reasons for abandonment	Not applicable

Signature : Dhrubajyoti Nath

Place: Udaipur
Date:

Name in full: Dhrubajyoti Nath
Designation: Geologist.

Reconnaissance Permit No.9/2004 (Pur-Mandal) over 312 sq km

(Report for 6th July 2010 to 5th January -2011)

Introduction:

The RP was applied on 25th October 2004 over 424 sq km area and 312 sq km was granted in favor of Hindustan Zinc Limited by Rajasthan government on 23rd October 2008.The RP was executed on 6th January 2009.

Location Map is given in Fig.1.

During the 4th six-monthly period from 6th July 2010 to 5th January 2011 of RP tenure, the following activities were undertaken:

- Interpretation of Geophysical Survey (Titan Resistivity, IP & MT survey covering 12 line km in Pur-Dariba)
- Test Drilling on the basis of Titan Resistivity, IP & MT survey.
- RP Relinquishment by 50%

Geophysical Survey:

As previously reported in 3rd six-monthly report (i.e. 6th January 2010 to 5th July 2010), a Titan-24 survey was carried out over the Pur-Dariba area from 11th March to 22nd March 2010 covering 12 line km. Along with this 49.55 line km of ground magnetic survey was also carried out covering the titan survey lines.

The survey grid included five (5) DC/IP and MT lines. All lines were surveyed with pole-dipole geometry and 100m dipole spacing. A MT remote site was used to increase the data quality. The data were inverted using 2D inversion algorithms to produce section maps of DC and MT resistivity and chargeability of the subsurface.

Details of survey grid are given below:

Line	Array coordinate start	Array coordinate end	UTM coordinate start		UTM coordinate end	
			Easting	Northing	Easting	Northing
LPB1	-1200	1200	451230.325	2803336.624	453196.636	2801959.653
LPB2	-1200	1200	451345.389	2803499.816	453310.966	2802123.724
LPB3	-1200	1200	451526.769	2803756.264	453492.450	2802379.576
LPB4	-1200	1200	451640.882	2803920.416	453607.370	2802543.791
LPB5	-1200	1200	451756.234	2804083.700	453721.874	2802706.898

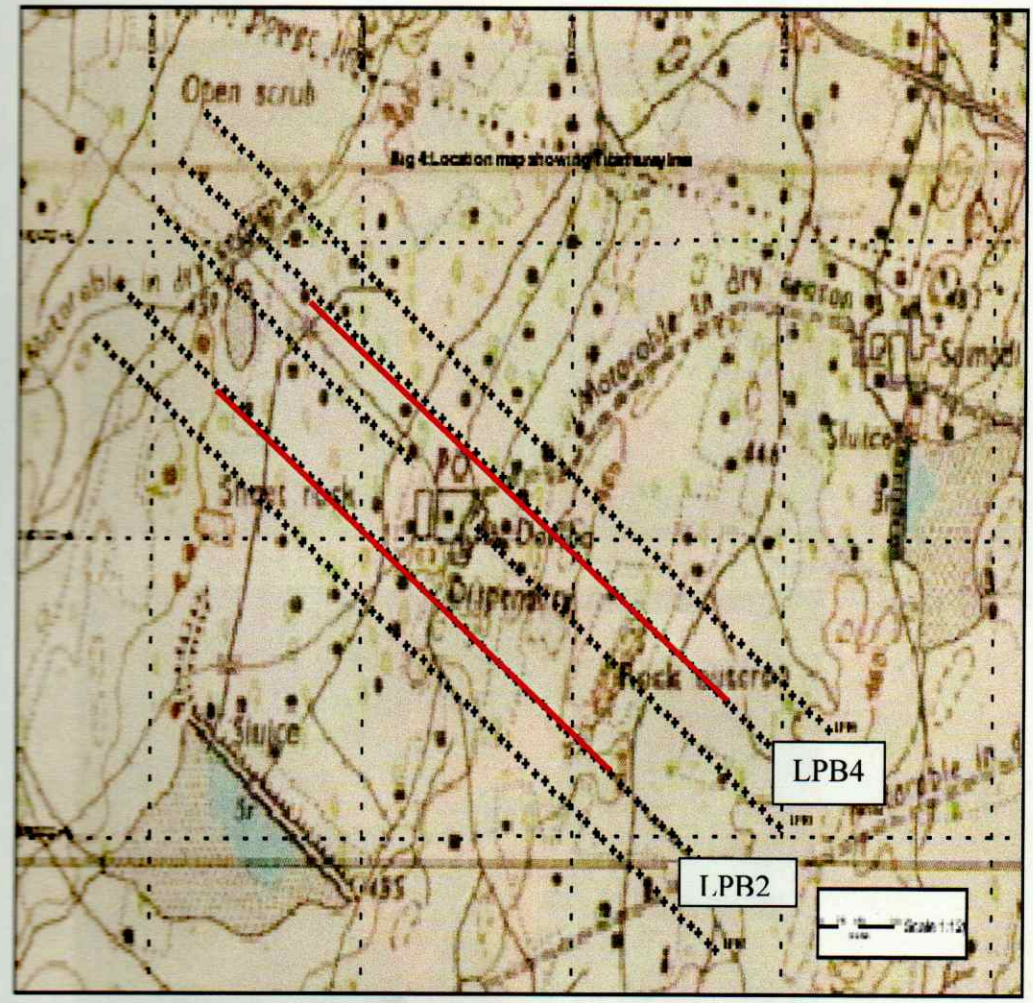


Fig.2 : Pur-Dariba grid line location map of Titan Survey

Modeling and Data Integration:

The results (resistivity & chargeability values) obtained from the survey were modeled in 3D using geosoft and then incorporated in Datamine. The values were filtered on the basis of resistivity and chargeability values along with the geological information and anomalous zones were identified. MT anomalies showing the possibility of deep occurrence of mineralization were considered for test drilling.

The MT response along lines LPB2 and LPB4 is given in Fig.3 & Fig.4. The bright color shows MT anomaly with resistive signature in background.

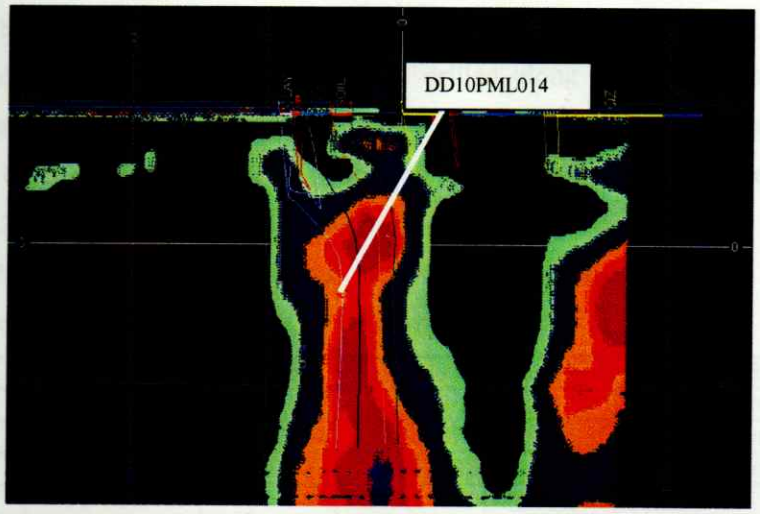


Fig.3: Section along line LPB2 showing MT conductive zones in Datamine:

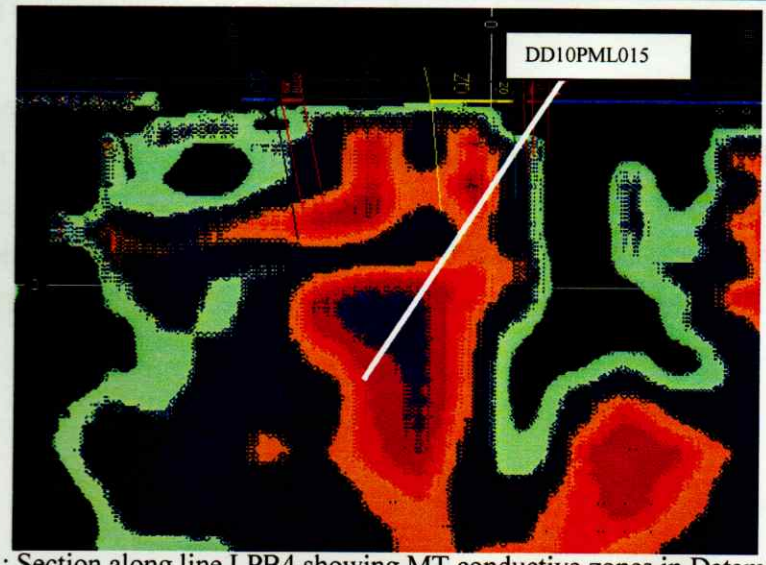


Fig.4: Section along line LPB4 showing MT conductive zones in Datamine:

The MT signatures along line LPB2 & LPB4 also show southern plunge geometry. This inference is in line with the trend of the lineations observed in calc silicate outcrops further north.

Test Drilling:

On the basis of IP, Resistivity & MT anomalies and from the geological interpretations of earlier drilling further test drilling was planned in the RP area.

A total of 2678.35 meters drilled (in three holes) in Pur-Dariba-Suras area. First two holes were drilled 500m apart along lines LPB2 & LPB4. Location map showing drillhole locations is attached in Fig.5

The first borehole (DD10PML014) drilled along line LPB2 intersected very trace amount of chalcopyrite and pyrrhotite.

The second borehole (DD10PML015) was drilled along line LPB4 and intersected low grade mineralization (mainly chalcopyrite) with some minor amount of pyrrhotite at about 600 m depth.

The third borehole (DD10PML016) was put to test plunge extension at a depth of 700m between the lines LPB2 & LPB4 along LPB3 and intersected minor sulphides.

Thus the MT anomalies are explained by presence of sulphides.

Collar Coordinates of boreholes are given below:

SNO.	HOLE NO.	EASTING	NORTHING	DEPTH(m)	REMARKS
1	DD10PML014	452757	2802504	837.20	trace amount of sulphides
2	DD10PML015	453064	2802978	899.15	minor amount of sulphides
3	DD10PML016	452973	2802793	942.00	minor amount of sulphides
			TOTAL	**2678.35**	

(Logging and sampling are in progress)

RP Relinquishment:

The area was investigated through geological traversing/mapping, rock chip sampling, ground magnetic survey, IP, Resistivity, MT survey and test drilling. On basis of the above work 154 sq km area is retained and the remaining area of 157.18 sq km is relinquished as shown in the map enclosed. (Fig.6). The RP relinquishment report is attached along with in Annexure I.

Person engaged for work:

One full time Geologist, one full time Geophysicist and two field assistants with driver were deployed. Helpers as and when required were hired locally.

Expenditure:

The total expenditure for the six months is ~Rs 130.00 lakhs.

Relinquishment Report:

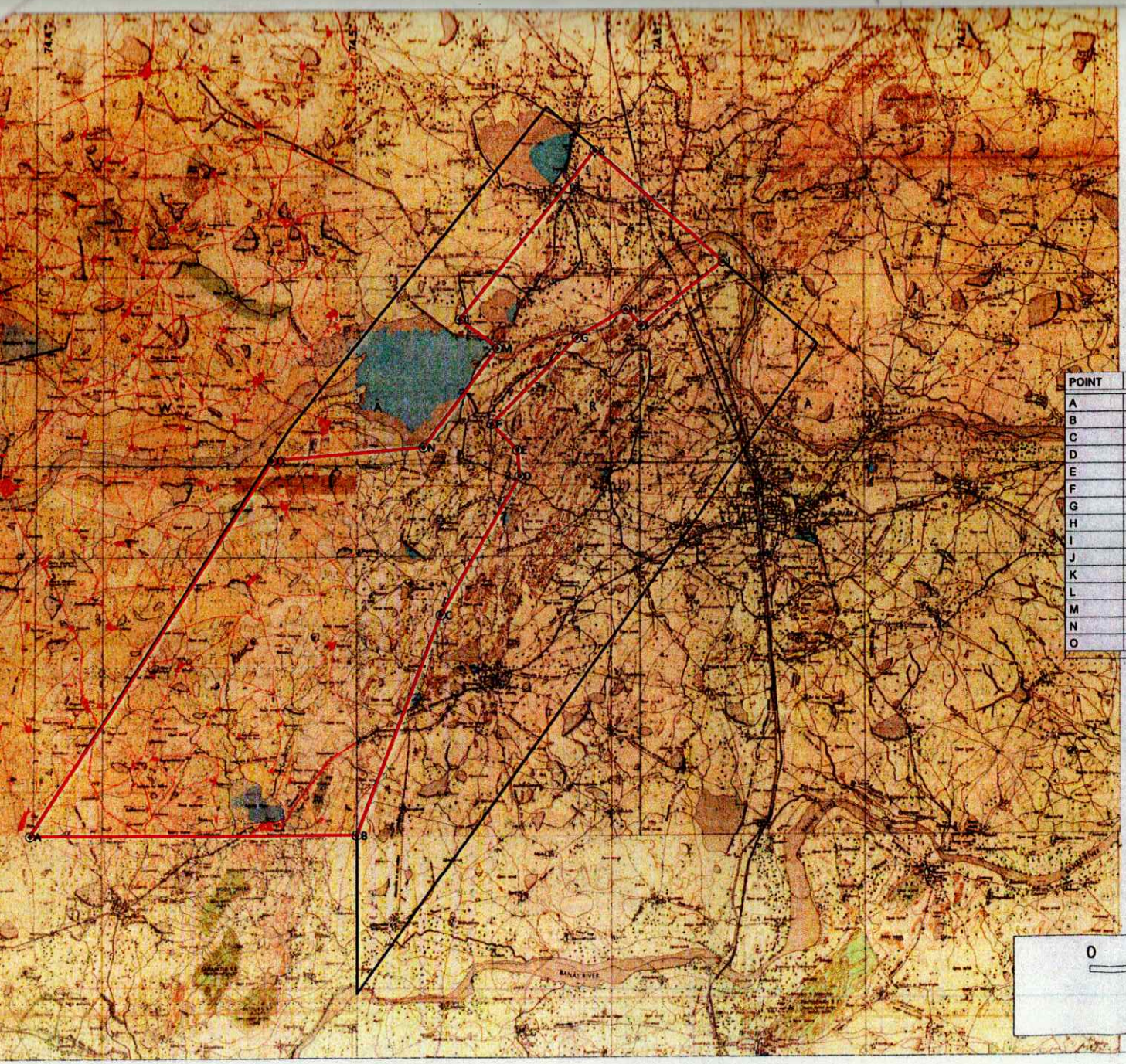
The Reconnaissance Permit ,RP-9/2004, Pur-Mandal Block over 311.18 sq km was granted to HZL by Government of Rajasthan through order No.F.18(5)Mines/Gr.2/2005 dated 23rd October 2008 and RP was executed by HZL on 06.01.2009.

The area was investigated through, geological traversing, geological mapping, rock sampling, ground magnetic survey, IP, Resistivity, MT survey and drilling. After integration and study of all the available data the area which was found to be low in potential is relinquished. The retained area comprises of one Block composed of 154 sq km area.

Retained Block:
The block is covering the western part of RP with an area of 154 sq km. The retained area comprises of the southern part of the western band of Banded Magnetite Quartzite belt for copper from Kotri-Dariba-Salempura-Kochriya to Gurla.

Relinquished Block:
The relinquished area (157.18 sq km) comprises of the eastern half of the RP area covering the eastern band of Banded Magnetite Quartzite and part of western BMQ (Banded Magnetite Quartzite) band. The major blocks covering the area are Dedwas, Samodi and Tiranga block of Eastern Band and Dhulkhera and Suras block of western band.

Details of the Retained block is given in the figure attached alongwith.



LEGENDS:

- Retained area: A-B-C-D-E-F-G-H-I-J-K-L-M-N-O (154 sq.km)
- Original RP (area:311.18 sq. km.)
- Points

POINT	LONG_DD	LAT_DD	LONG_DMS	LAT_DMS
A	74.3931	25.25	74 23 35	25 15 00
B	74.5	25.25	74 30 00	25 15 00
C	74.5277	25.3156	74 31 39	25 18 56
D	74.5534	25.3569	74 33 12	25 21 25
E	74.5527	25.3647	74 33 10	25 21 53
F	74.5442	25.3724	74 32 39	25 22 20
G	74.5723	25.398	74 34 20	25 23 53
H	74.5883	25.4084	74 35 18	25 24 23
I	74.5933	25.4016	74 35 35	25 24 06
J	74.6203	25.4206	74 37 13	25 25 14
K	74.5784	25.4537	74 34 42	25 27 13
L	74.5338	25.4035	74 32 01	25 24 12
M	74.5463	25.395	74 32 46	25 23 42
N	74.522	25.3654	74 31 19	25 21 55
O	74.4723	25.3617	74 28 20	25 21 42

Part of Toposheet 45K/7, 8,11,12

Scale 1:250,000

(K. PANDWAL)
COMPANY SECRETARY
HINDUSTAN ZINC LIMITED
Yashad Bhawan, Udaipur

0 10.00
kilometers

RP-9/2004

FORM-BB

(See rule 3E)

Progress report of reconnaissance survey in respect of RP-9/2004 [the name of the mineral(s) Lead, Zinc, Copper, Gold and associated minerals for the year 2011

IMPORTANT

This Form fully filled-in must reach the concerned authorities within thirty days after expiration of one year from the date of execution of reconnaissance permit or the expiry of reconnaissance permit or abandonment of reconnaissance operations, whichever is earlier

To,

1. The Controller General,
   Indian Bureau of Mines,
   Indira Bhawan, Civil Lines
   NAGPUR - 440 102

2. The Regional Controller of Mines
   Indian Bureau of Mines,
   Type IV, Block B/9
   IBM Colony, Adarsh Nagar
   Balupura road, Ajmer
   Ajmer-308002

3. Controller of Mines
   Indian Bureau of Mines
   Makhupura Industrial area
   Nasirabad road,
   Ajmer-305002

4. The Director Mines and Geology
   Government of Rajasthan
   Khaniz Bhawan
   Shastri Circle
   Udaipur (Raj)

RP-9/2004, Pur-Mandal Block

1.	Name of the Permit Holder	Hindustan Zinc Ltd.
2.	Name of firm	Hindustan Zinc Ltd.
3.	Address of the Firm	Swaroop Sagar, Yashad Bhawan UDAIPUR – 313 004
4.	Area under Permit	312 sq km
5.	Location	
	i) Topo sheet No.(s)	45K/7, 8,11,12,
	ii) Co-ordinates of corner points	Please see the attached map
	iii) District(s)	Bhilwara
	iv) State	Rajasthan
6.	Date of grant of permit	23.10.2008
7.	Period of Permit	3 years, 06.01.09 to 05.01.2012
8.	Reconnaissance survey work done (A brief description of the work involved along with particulars of the machines and instruments used would be given against each of the following items)	Please see enclosed Report.
	i) Regional Survey	Regional geological mapping and bedrock/rock chip sampling completed.
	ii) Aerial Survey	Nil. No aerial survey required as the area is already covered by earlier HZL, BHP & OHR survey.
	iii) Geological mapping including area covered and scale	
	iv) Geophysical	Ground Magnetic Survey covering 49.55 line km. Titan Resistivity, IP & MT survey covering 12 line km in pur-dariba Machine used: Geometrics G-859 magnetometer and Scintrex. ENVI magnetometer. Interpretation of Titan Resistivity, IP & MT survey covering 12 line km in pur-dariba.

v)	Geochemical	1748 drill-core Samples Analyzed for 31 elements. Analysis Method: ICP-OES
vi)	Test drilling: Number, area of influence, meters drilled and sampling.	Test Drilling Commenced, Number:12 holes, Area: Dedwas, Pur-Dariba-Suras, Meters:7195m, Samples:1748 samples,sampling in progress, Rig:Dyna-600, CDR-100, Dyna-100.
9.	Nature and structure of the ore body	Veins, disseminations and narrow lensoidal.
10.	Analysis of the ores or minerals	Al, Ba, Bi, Ca, Cd, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, S, Sb, Sn, Sr, Ti, W, Zn, Cs, Ga, In, Te, Tl, Hg, Ag, As, Au
11.	If abandonment	No
i)	Date of abandonment	Not applicable.
ii)	Reasons for abandonment	Not applicable

Signature:

Name in full: Dhrubajyoti Nath
Designation: Geologist.

Place: Udaipur
Date:

Date: 2/2/2011

Reconnaissance Permit No.9/2004 (Pur-Mandal) over 312 sq km

Introduction:

The RP was applied on 25th October 2004 over 424 sq km area and 312 sq km was granted in favor of Hindustan Zinc Limited by Rajasthan government on 23rd October 2008.The RP was executed on 6th January 2009.

Location Map is given in Fig.1.

The Regional Geological map of the area is given in Fig.2.

During the 2nd year of RP tenure, following activities were undertaken:

- Test Drilling
- Geophysical Survey (Titan Resistivity, IP & MT survey covering 12 line km in Pur-Dariba Ground Magnetic Survey along titan lines 49.55 line km)
- Interpretation of Geophysical Survey (Titan Resistivity, IP & MT survey covering 12 line km in Pur-Dariba)
- Test Drilling on the basis of Titan Resistivity, IP & MT survey.
- RP Relinquishment by 50%

Test Drilling:

Results of previous drilling at Pur-Dariba-Suras were reviewed. It emerged that additional exploratory drilling was required to establish possibility of any economic potential in depth and strike. Wide spaced test drilling (approx.200m) up to 400m depth was undertaken. First six holes intersected insignificant to minor amount of sulphides (however the drill-cores showed alteration mineralogy). The 7th and the 9th hole intersected 19m @ 4.55% Cu (550m below surface) and 14.9 m @ 1.31% Cu at (450m below surface) respectively.

Collar Coordinate of boreholes given below:

SNO.	HOLE NO.	EASTING	NORTHING	DEPTH(m)	REMARKS
1	DD10PML005	452618	2802893	537.90	trace amount of sulphides
2	DD10PML006	452607	2802666	315.50	Abandoned
3	DD10PML007	452578	2802905	405.60	trace amount of sulphides
4	DD10PML008	452553	2802586	410.20	trace amount of sulphides
5	DD10PML009	452708	2802828	578.55	minor amount of sulphides
6	DD10PML010	452614	2802673	479.35	trace amount of sulphides
7	DD10PML011	452708	2802828	610.00	19m @ 4.55% Cu
8	DD10PML012	452770	2802928	617.65	trace amount of sulphides
9	DD10PML013	452664	2802751	562.55	14.9 m of 1.31% Cu
			TOTAL	4517.30	

Location Map showing drill locations attached in Fig.3

As the geology from the drill core showed alteration mineralogy was conducive to host mineralization, an integrated titan survey (IP, Resistivity& Magneto-Telluric) was undertaken to guide likelihood of mineralization in depth.

Geophysical Survey:

A Titan-24 survey was carried out over the Pur-Dariba area from 11th March to 22nd March 2010. The survey comprise 12 line km in five lines. Along with this ground magnetic survey (49.55) was also carried out. Location map with Titan Survey Lines is shown in Fig.4.

Details are given in Annexure I (3rd Six monthly Report)

Survey Grid coordinates are given below:

Line	Array coordinate start	Array coordinate end	UTM coordinate start		UTM coordinate end	
			Easting	Northing	Easting	Northing
LPB1	-1200	1200	451230.325	2803336.624	453196.636	2801959.653
LPB2	-1200	1200	451345.389	2803499.816	453310.966	2802123.724
LPB3	-1200	1200	451526.769	2803756.264	453492.450	2802379.576
LPB4	-1200	1200	451640.882	2803920.416	453607.370	2802543.791
LPB5	-1200	1200	451756.234	2804083.700	453721.874	2802706.898

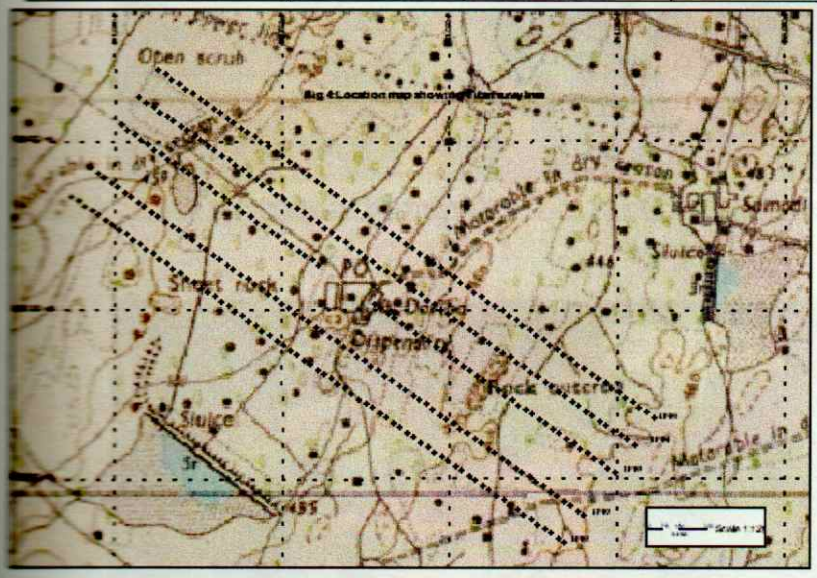


Fig.4: Location Map showing Titan Survey Lines

Modeling and Data Integration:

The results (resistivity & chargeability values) obtained from the survey were modeled in 3D using geosoft and then incorporated in Datamine. The values were filtered on the basis of resistivity and chargeability values along with the geological information and anomalous zones were identified. MT anomalies showing the possibility of deep occurrence of mineralization were considered for test drilling.

The MT response along lines LPB2 and LPB4 is given in Fig.5 & Fig.6. The bright color shows MT anomaly with resistive signature in background.

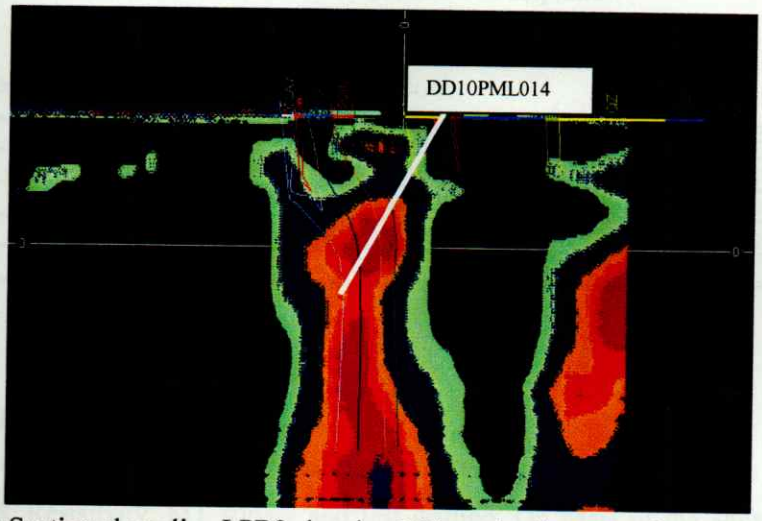


Fig.5: Section along line LPB2 showing MT conductive zones in Datamine:

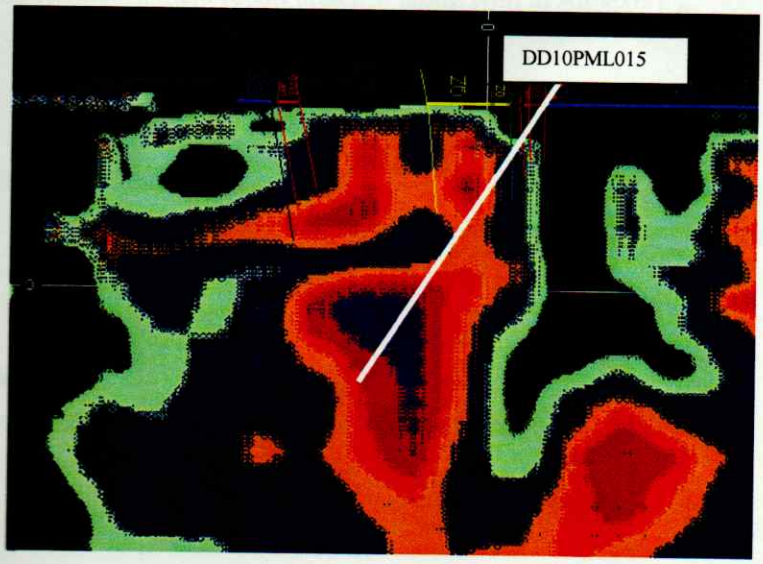


Fig.6: Section along line LPB4 showing MT conductive zones in Datamine:

The MT signatures along line LPB2 & LPB4 also show southern plunge geometry. This inference is in line with the trend of the lineations observed in calc silicate outcrops further north.

Test Drilling:

On the basis of IP, Resistivity & MT anomalies and from the geological interpretations of earlier drilling further test drilling was planned in the RP area. (Fig.3). A total of 2678.35 meters drilled (in three Holes) in Pur-Dariba-Suras area while logging and sampling are in progress. All the three boreholes planned to ascertain the MT anomalies intersected trace to minor amount of sulphide (chalcopyrite and pyrrhotite).

Thus the MT anomalies are explained by presence of sulphides.

Collar Coordinates of boreholes are given below:

SNO.	HOLE NO.	EASTING	NORTHING	DEPTH(m)	REMARKS
1	DD10PML014	452757	2802504	837.20	traces of sulphides
2	DD10PML015	453064	2802978	899.15	minor amount of sulphides
3	DD10PML016	452973	2802793	942.00	minor amount of sulphides
			TOTAL	**2678.35**	

RP Relinquishment:

The area was investigated through geological traversing/mapping, rock chip sampling, ground magnetic survey, IP, Resistivity, MT survey and test drilling. On basis of the above work 154 sq km area is retained and the remaining area of 157.18 sq km is relinquished as shown in the map enclosed (Fig.7).The Relinquishment report attached along with in Annexure II.

Person engaged for work:

One full time Geologists, Two full time Geophysicists and four field assistants with driver were deployed. Helpers as and when required were hired locally.

Expenditure:

The total expenditure for the one year is ~Rs 344 lakhs.

Relinquishment Report:

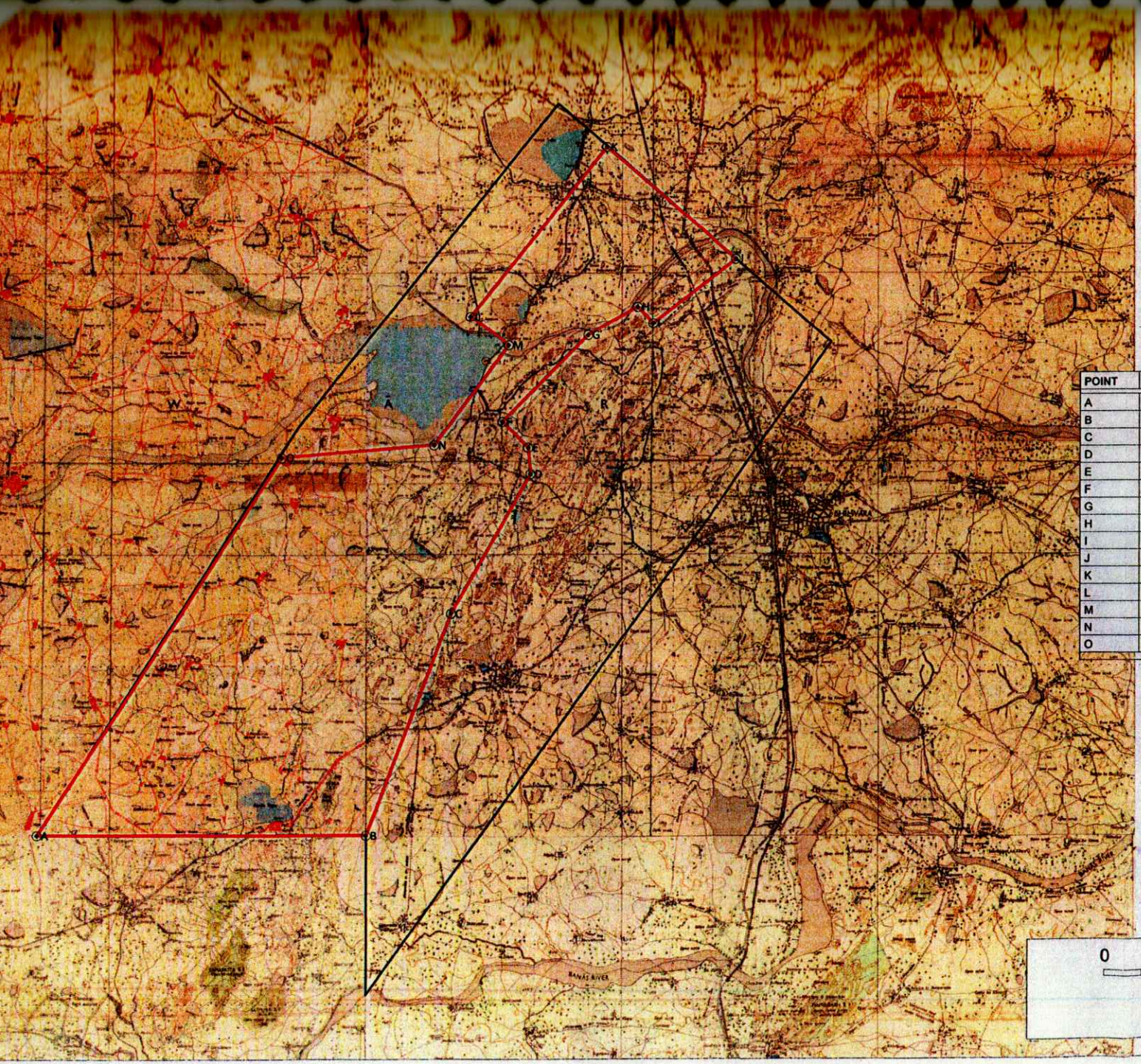
The Reconnaissance Permit ,RP-9/2004, Pur-Mandal Block over 311.18 sq km was granted to HZL by Government of Rajasthan through order No.F.18(5)Mines/Gr.2/2005 dated 23rd October 2008 and RP was executed by HZL on 06.01.2009.

The area was investigated through, geological traversing, geological mapping, rock sampling, ground magnetic survey, IP, Resistivity, MT survey and drilling. After integration and study of all the available data the area which was found to be low in potential is relinquished. The retained area comprises of one Block composed of 154 sq km area.

Retained Block:
The block is covering the western part of RP with an area of 154 sq km. The retained area comprises of the southern part of the western band of Banded Magnetite Quartzite belt for copper from Kotri-Dariba-Salempura-Kochriya to Gurla.

Relinquished Block:
The relinquished area (157.18 sq km) comprises of the eastern half of the RP area covering the eastern band of Banded Magnetite Quartzite and part of western BMQ (Banded Magnetite Quartzite) band. The major blocks covering the area are Dedwas, Samodi and Tiranga block of Eastern Band and Dhulkhera and Suras block of western band.

Details of the Retained block is given in the figure attached alongwith.



LEGENDS:

Retained area:
A-B-C-D-E-F-G-H-I-J-K-L-M-N-O
(154 sq.km)

Original RP (area:311.18 sq. km.)

Points

POINT	LONG_DD	LAT_DD	LONG_DMS	LAT_DMS
A	74.3931	25.25	74 23 35	25 15 00
B	74.5	25.25	74 30 00	25 15 00
C	74.5277	25.3156	74 31 39	25 18 56
D	74.5534	25.3569	74 33 12	25 21 25
E	74.5527	25.3647	74 33 10	25 21 53
F	74.5442	25.3724	74 32 39	25 22 20
G	74.5723	25.398	74 34 20	25 23 53
H	74.5883	25.4064	74 35 18	25 24 23
I	74.5933	25.4016	74 35 35	25 24 06
J	74.6203	25.4206	74 37 13	25 25 14
K	74.5784	25.4537	74 34 42	25 27 13
L	74.5338	25.4035	74 32 01	25 24 12
M	74.5463	25.395	74 32 46	25 23 42
N	74.522	25.3654	74 31 19	25 21 55
O	74.4723	25.3617	74 28 20	25 21 42

Part of Toposheet 45K/7, 8,11,12

Scale 1:250,000

(K. PANDWAL)
COMPANY SECRETARY
HINDUSTAN ZINC LIMITED
Yashad Bhawan, Udaipur

0 10.00
kilometers

RP-9/2004

FORM-BB

(See rule 3E)

Progress report of reconnaissance survey in respect of RP-9/2004 [the name of the mineral(s) Lead, Zinc, Copper, Gold and associated minerals for the year 2011

IMPORTANT

This Form fully filled-in must reach the concerned authorities within thirty days after expiration of one year from the date of execution of reconnaissance permit or the expiry of reconnaissance permit or abandonment of reconnaissance operations, whichever is earlier

To,

1. The Controller General,
   Indian Bureau of Mines,
   Indira Bhawan, Civil Lines
   NAGPUR - 440 102

2. The Regional Controller of Mines
   Indian Bureau of Mines,
   Type IV, Block B/9
   IBM Colony, Adarsh Nagar
   Balupura road, Ajmer
   Ajmer-308002

3. Controller of Mines
   Indian Bureau of Mines
   Makhupura Industrial area
   Nasirabad road,
   Ajmer-305002

4. The Director Mines and Geology
   Government of Rajasthan
   Khaniz Bhawan
   Shastri Circle
   Udaipur (Raj)

RP-9/2004, Pur-Mandal Block

1.	Name of the Permit Holder	Hindustan Zinc Ltd.
2.	Name of firm	Hindustan Zinc Ltd.
3.	Address of the Firm	Swaroop Sagar, Yashad Bhawan UDAIPUR – 313 004
4.	Area under Permit	312 sq km
5.	Location	
	i) Topo sheet No.(s)	45K/7, 8,11,12,
	ii) Co-ordinates of corner points	Please see the attached map
	iii) District(s)	Bhilwara
	iv) State	Rajasthan
6.	Date of grant of permit	23.10.2008
7.	Period of Permit	3 years, 06.01.09 to 05.01.2012
8.	Reconnaissance survey work done (A brief description of the work involved along with particulars of the machines and instruments used would be given against each of the following items)	Please see enclosed Report.
	i) Regional Survey	
	ii) Aerial Survey	
	iii) Geological mapping including area covered and scale	Detailed Mapping of Pur-Dariba Block; Jipiya Block
	iv) Geophysical	EM49.55 line km. Machine used:

v)	Geochemical	250 drill-core Samples and 51 rockchip samples Analyzed for 31 elements. Analysis Method: ICP-OES
vi)	Test drilling: Number, area of influence, meters drilled and sampling.	Test Drilling Commenced, Number: 15 holes, Area: Dedwas, Pur-Dariba-Suras, Ragaspuria-Gurla, Jipiya, Meters: 8057m, Samples: 300 samples, sampling in progress, Rig: Dyna-600, Dyna-120, Dyna-100.
9.	Nature and structure of the ore body	Veins, disseminations and narrow lensoidal; Banded.
10.	Analysis of the ores or minerals	Al, Ba, Bi, Ca, Cd, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, S, Sb, Sn, Sr, Ti, W, Zn, Cs, Ga, In, Te, Tl, Hg, Ag, As, Au
11.	If abandonment	No
i)	Date of abandonment	Not applicable.
ii)	Reasons for abandonment	Not applicable

Signature:

Place: Udaipur
Date:

Name in full: Dhrubajyoti Nath
Designation: Geologist.

Date: 2/2/2012

Reconnaissance Permit No:9/2004 (Pur-Mandal) over 312 sq km

3rd yearly report

Introduction:

The RP was applied on 25th October 2004 over 424 sq km area and 312 sq km was granted in favor of Hindustan Zinc Limited by Rajasthan government on 23rd October 2008.The RP was executed on 6th January 2009. 154 sq km area is retained and the remaining area of 157.18 sq km is relinquished at the end of the second year i.e 5th Jan 2011.

Location:

Pur-Mandal RP comprises of 312 sq km area lies around the Gurla in South and Mandal in North. The area lies within the top sheets no.45K/7,45K/8,45K/11,45K/12.(Fig.-1).The area is well connected with road network and state highway passes through the eastern part of the RP area. Nearest railway station is at Bhilwara Town, located 10 km of Pur village.

Topography:

The area comprises of the narrow elongated ridges with moderate relief and shallow valleys trending NE-SW surrounded by extensive plains form the topography of the area. The ground is mostly rocky with thin soil cover. Kothari River flowing from west to east forms a loop in the area and flows about 1.5km NW of Dedwas Prospect in the area is the main drainage.

Vegetation:

The nature of soil is non-fertile to semi-fertile in the area. The area is devoid of thick vegetation but shows grassy growth over thin soil cover. The vegetation is scanty in the plain area and mostly comprises the thorny trees and bushes. The trees are mainly of babul (Acacia arabica), bilayti babul (zuli flora), khejra (Acacia leucopholoca), neem (Margos indica), mango (Mangifera indica), cactus (Cactus cacti), berries (Zuzupha zuzuba), 'dhak' (Buteafrondesa) and various other small thorn bearing shrubs. The main crops consist of wheat, maize and pulses but are grown mainly during rainy season or where there are proper irrigation facilities. No wild animals are seen in the area except foxes, jackal, snakes and birds. There is an acute shortage of water in the area and water table remains 30 m to 40 m below the surface.

Climate:

The climate is semi arid and the area experiences the cold season from December to February followed by the hot season from March to June. The mean daily maximum and minimum temperatures in summer are about 40°C and 27°C respectively, although the maximum temperature may reach upto 45°C. In winter, the mean daily maximum and minimum temperatures are 23°C and 8°C respectively; at times the minimum temperature may decrease upto 3°C.The rainy season viz. south-west monsoon follows summer season and lasts till mid September. The period mid-September to the end of November constitutes the post-monsoon season. The annual rainfall is between 600-700mm. About 87% of the rainfall is received during July & August. Relative humidity is generally over 60% in the monsoon period. In the rest of the year the air is dry. During summer, humidity decreases upto 20%.

Geology:

The 60 km long, 5 km wide, NNE trending Pur-Banera belt occurs within the Precambrian Aravalli-Delhi Oroganic Complex in Rajasthan, India. Middle Proterozoic Amphibolite grade rift related metasediments of both the Pur-Banera Group and underlying Mangalwar Complex is well exposed in the belt.

The Pur-Banera Group unconformably overlies the Mangalwar Complex and can be divided into six mappable units. From base to top these are Quartzite, Calc Silicate, Banded Magnetite Quartz (BMQ), Pelitic Psammite 1, Marble and Pelitic Psammite 2. The main structural feature of the belt is a N30° trending dextral shear zone with associated drag folding which in the north dies out into a number of N20°-N350° fault splays. A unit of graphitic-quartz-mica schist within the Pelitic Psammite 1 unit is regionally conductive, particularly within the shear zone where the graphite content has probably been upgraded and smeared along fracture planes.

Historical information and geological scanning concludes:

- The Pur – Banera belt marks the eastern limb of a major synclinorium consisting of a series of synforms without corresponding antifoams. The geological formations consist of a succession of meta-sediments of pelitic, psammatic and calcareous nature. Calcareous meta-sediments contain some bands rich in magnetite.
- The sulphide mineralization in the belt is localized into two main zones Lead – Zinc Zone of Tiranga–Samodi– Dedwas –Devpura–Bhadalikhera in the eastern part;
- Copper Zone of Dariba–Suras–Banera on the western part. The mineralization is confined mainly to the calcareous rocks and overlying quartz-biotite-muscovite- garnet schist; the rocks representing the two major stratigraphy units in the area.

The Regional Geological Map Showing structural and lithogeochemical information is attached in Fig.2

During the 3rd year of RP tenure, following activities were undertaken:

- Detailed Mapping of Pur-Dariba Block.
- Ore- body Correlation, Block Modelling and resource estimation of Pur Dariba Block.
- Study of Ground magnetic surveys and Historic Gravity Survey
- Detailed Map of Jipiya Block
- Geophysical Survey (EM Survey)
- Test Drilling
- Preparation and application of ML, PL applications in identified blocks.

Detailed Mapping of Pur-Dariba Block:

Detailed geological map was prepared for 1 sq.km area in Pur-Dariba block at 1:2000 scale for submission with ML application.

The ground is mostly covered by the mine debris and slag heaps with scanty exposure of calc-gneisses. The calc-gneisses contain bands of calcite and dolomite with biotite, tremolite, hornblende, diopside and magnetite.

The lithounits of the area have been grouped under the Pur-Dariba Group of lower Proterozoic age. An area of 1 sq.km. was studied by large scale mapping on 1:2,000 scale. The various rocktypes encountered in the area are follows:

1. Quartzite
2. Quartz Mica Schist with sericite
3. Calc-Silicates/Calc amphibole gneiss
4. Banded Magnetite quartzite.

The rock units strike from N20° E to N30° E with dips of 70° to 80° towards southeast.

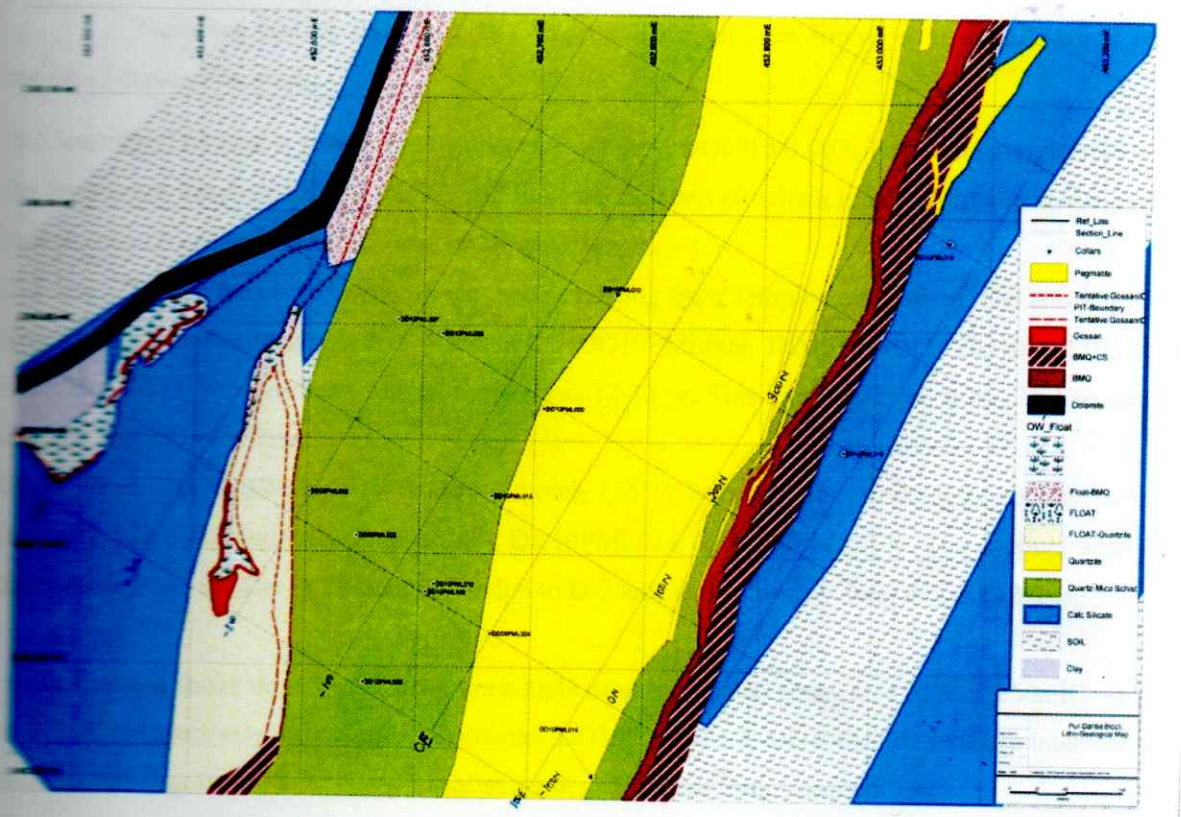


Fig.3: Detailed Map of Pur-Dariba Block with borehole locations

Ore- body Correlation, Block Modelling and resource estimation of Pur Dariba Block.

The results were evaluated in the light of Phase-I and Phase-II drilling. All the three boreholes (drilled during Phase-II) planned to ascertain the MT anomalies from titan survey intersected trace to minor amount of sulphide (chalcopyrite and pyrrhotite).

Sulphide mineralization in Pur-Dariba block comprises namely chalcopyrite, pyrrhotite, pyrite and traces of bornite, covelite, galena and arsenopyrite. The mineralization occurs in calc-silicates and in chlorite-sericite-schist. The shear fractures traverse both along the mineralization zones and in their close vicinity. The sulphides are very largely mobilized/re-emplaced along these zones of shearing. The copper lodes mainly as chalcopyrite in the area occur as discontinuous lensoidal bodies dipping 60 to 85° northeasterly.

Three ore bodies, D-1, D-2, D-2W were identified over 500 m of strike line based on the results of exploration work:

D-1 lens: The D-1 lens is intersected by only one borehole DD09PML003. The correlation is made using the intersected borehole DD09PML003 and the existing open pit which is 200 m long in strike. D-1 ore body is considered from 400mRL and 190m strike length.

D-2 lens: The D-2 lens is 65□-70□ dipping body starting from 350m below surface. The lens is 250 m long in strike and is intersected in 4 boreholes (DD10PML009, DD10PML011, DD10PML012 and DD10PML013). The average width of the body is 12-13 m. This lens is parallel to D-2W lens and is towards east of D-2W lens.

D-2W lens: The D-2W lens is shallow dipping (55□) body starting from 300m below surface intersected in 3 boreholes (DD10PML009, DD10PML011 & DD10PML013). The average width of the body is 5 to 6 m. The D-2W lens is parallel to D-2 lens and is towards west of the D-2 lens.

Apart from the above three bodies there are couple of un-correlated zones at -150 and -250mRL at 500 N & 300N respectively intersected in boreholes DD10PML015 & DD10PML016. These intersections indicate opening of similar new ore lenses at depth and require further exploration.

The resource estimation is done by the ore body modeling in Datamine.

Grade Estimation: Estimation is the process whereby numerical values typically mineralization grades are estimated for block model cells based on a set of 3D sample data and using defined interpolation methods and associated sample search and estimation parameters. Inverse Power of Distance method (power 2) is selected for grade estimation for all the three ore-bodies.

Grade Calculation(D-1 lens): Search radius taken for grade calculation is 50m in X-direction, 500m in Y-direction Axis and 250m in Z-direction with minimum sample numbers in the ellipsoid taken are 3 and maximum 25.

The first, second and third rotation angle for search ellipsoid was taken 0, 85, 30 degrees.

Parent cell estimation is used for Grade calculation. Average Density is taken as 2.95 as measured during sample preparation.

Grade Calculation (D-2 lens): Search radius taken for grade calculation is 50m in X-direction, 500m in Y-direction Axis and 250m in Z-direction with minimum sample numbers in the ellipsoid taken are 3 and maximum 25.

The first, second and third rotation angle for search ellipsoid was taken 0, 60, 30 degrees.

Parent cell estimation is used for Grade calculation. Average Density is taken as 2.95 as measured during sample preparation.

Grade Calculation (D-2W lens): Search radius taken for grade calculation is 50m in X-direction, 500m in Y-direction Axis and 250m in Z-direction with minimum sample numbers in the ellipsoid taken are 3 and maximum 25.

The first, second and third rotation angle for search ellipsoid was taken 0, 60, 30 degrees.

Parent cell estimation is used for Grade calculation.

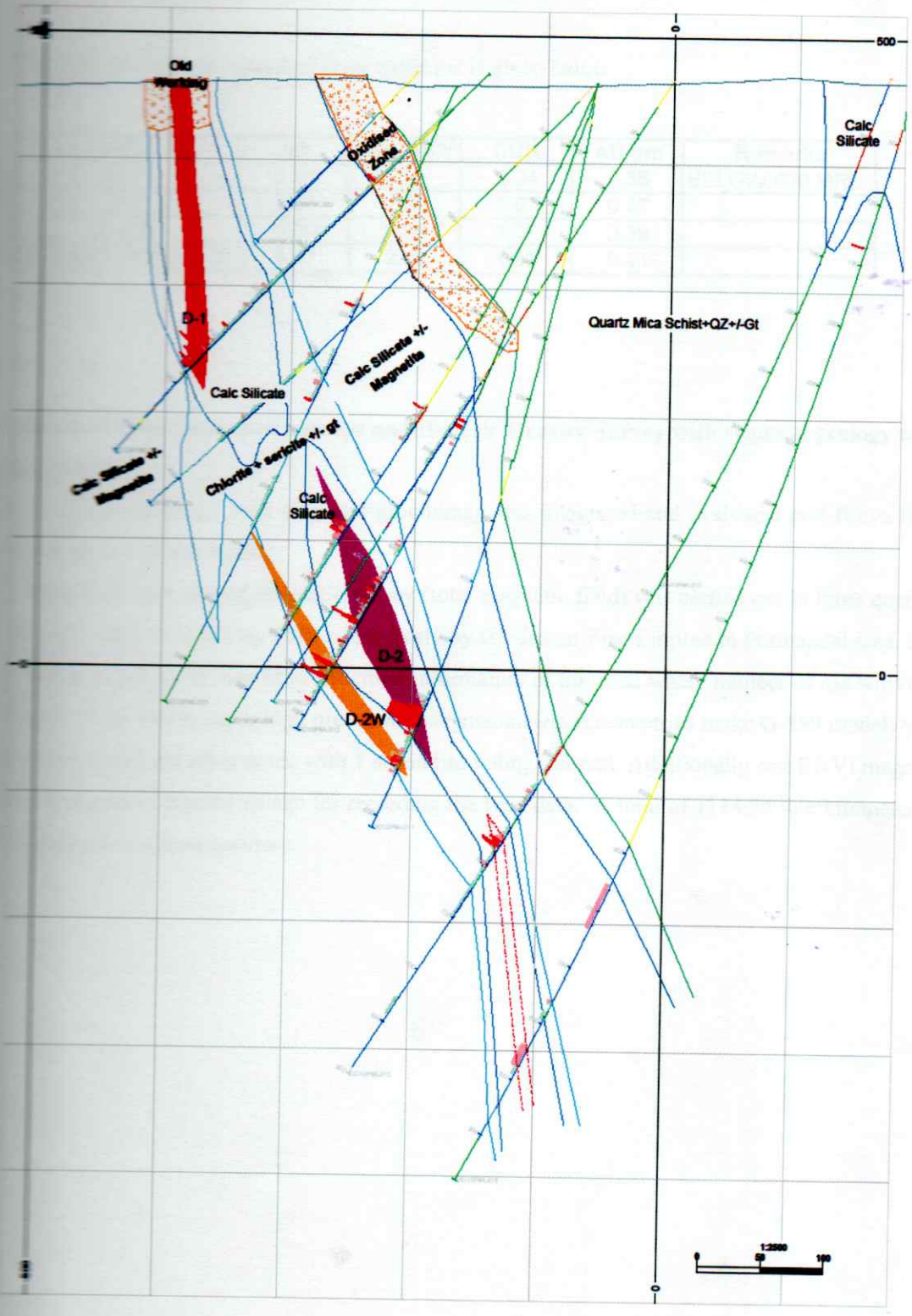


Fig 4: Representative Transverse Geological Section showing all the drillholes without clipping:

The inferred resource estimated from datamine is given below:

LENS	Mt	DENSITY	CU%	AU gm	Remarks
D-1	0.86	2.95	2.04	0.36	BELOW 400 MRL
D-2	2.81	2.95	1.97	0.47	
D-2W	0.80	2.95	1.05	0.39	
TOTAL(D-1+D-2+D-3)	**4.47**	**2.95**	**1.82**	**0.43**	

Study of Ground magnetic surveys and Historic Gravity Survey with regional geology to identify new targets:

The regional geology, rock chip and groundmag was integrated and evaluated and Jipiya Block was identified for further work.

A high resolution ground magnetic survey (total magnetic field) was carried out in three quarters from 4th July 2009 to 18th May 2010 respectively by Hindustan Zinc Limited in Purmandal area, Rajasthan with an objective to map litho structural information of the area, where number of old workings were found. Two Cesium vapor high precession magnetometers (Geometrics make G-859 model) were used on continuous recording mode with 1 second sampling interval. Additionally one ENVI magnetometer was fixed near Ghordas village for recording the base data. A total of 1114.54 line kilometers of data was acquired in three quarters.

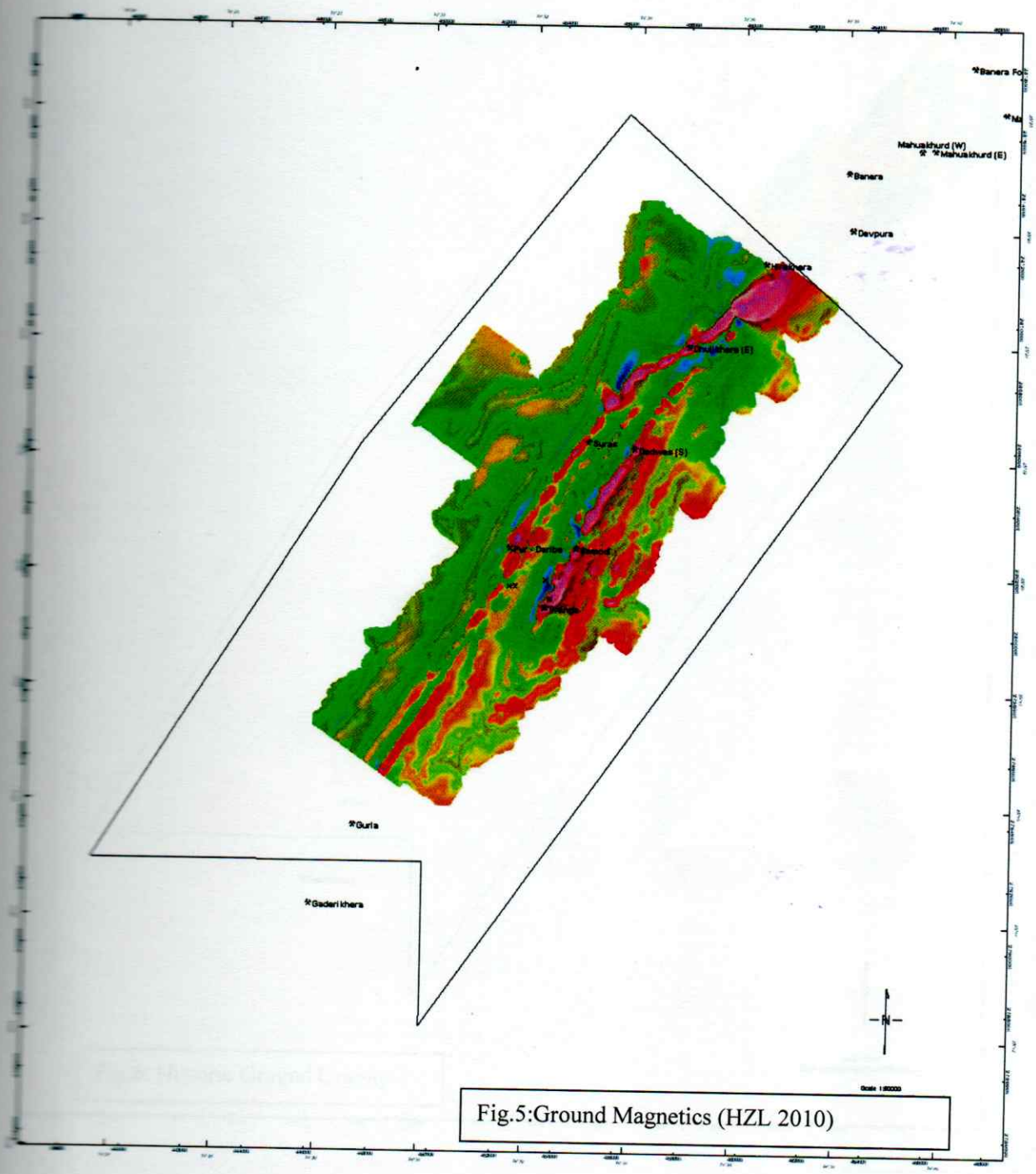


Fig.5:Ground Magnetics (HZL 2010)

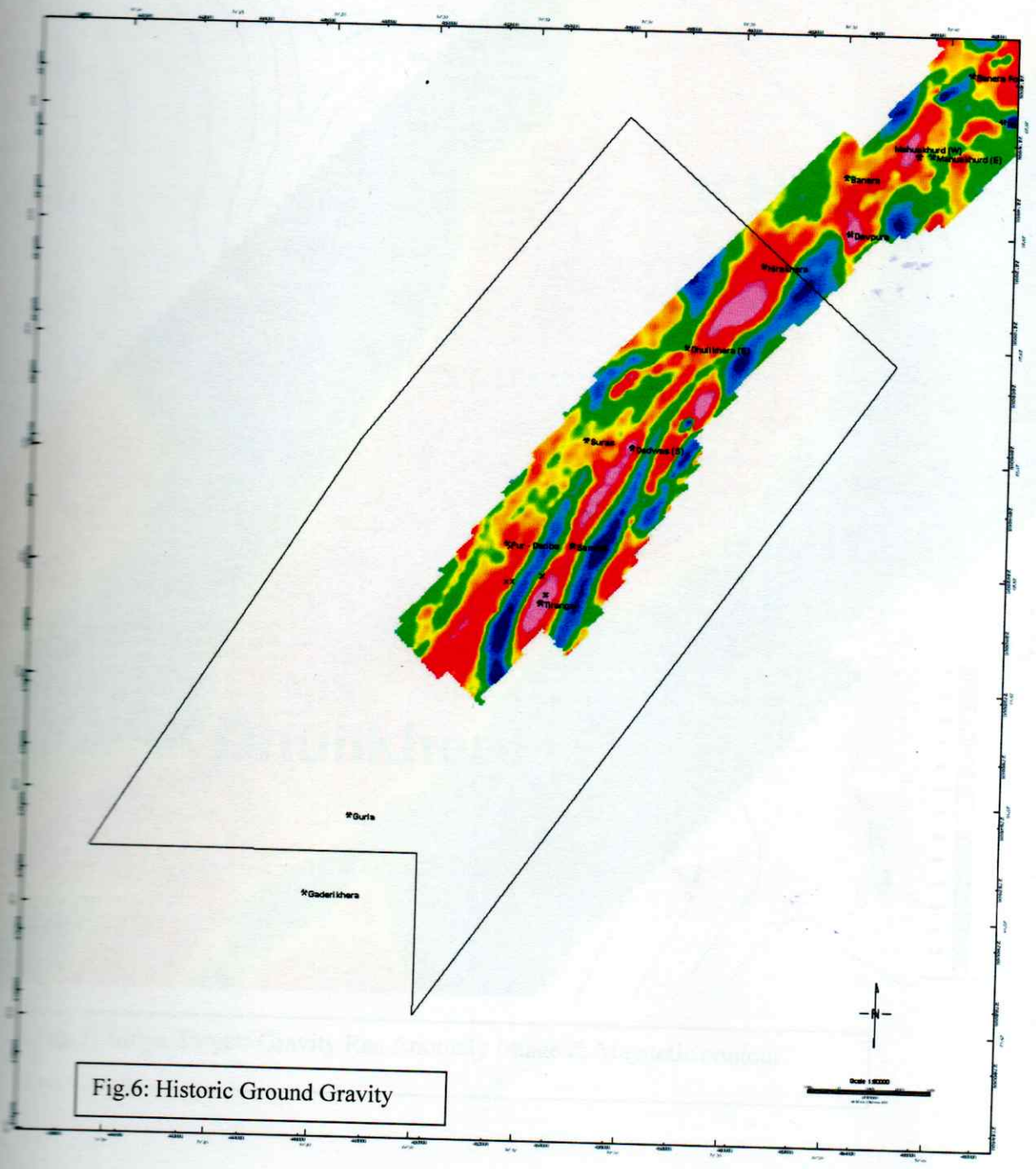


Fig.6: Historic Ground Gravity

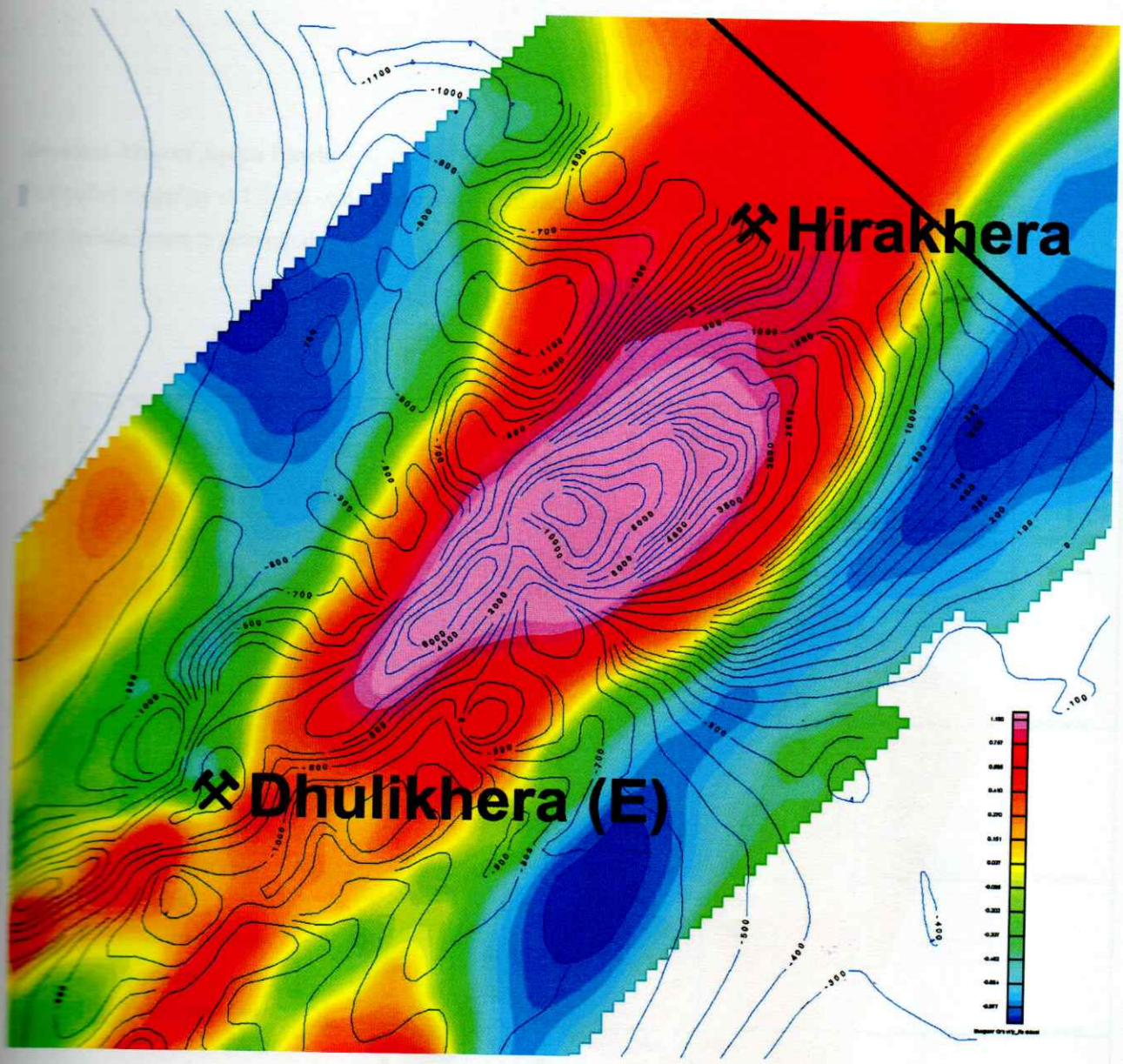


Fig.7: Jipiya Target: Gravity Res Anomaly Image & Magnetic contour

The Anglo Gravity data was reprocessed by HZL and interpreted along with the high resolution in-house ground magnetic data. Magnetic survey responded well to BMQ bands and huge Magnetic high of the order of > 20,000 gammas recorded in certain areas. There are certain coincident Gravity Residual anomalies of the order of > 3 m Gal with Mag high areas. Jipiya (Near Dhuli Kheda) area is one such high priority target with Mag & Gravity anomalies having a extension of about 2 – 2.5 km with 100 – 200m thick high dense and high susceptibility units

Detailed Map of Jipiya Block:

Ddetailed mapping at 1:1000 scale is carried out at the hinge portion of western BMQ band near Jipiya and detailed map is generated.

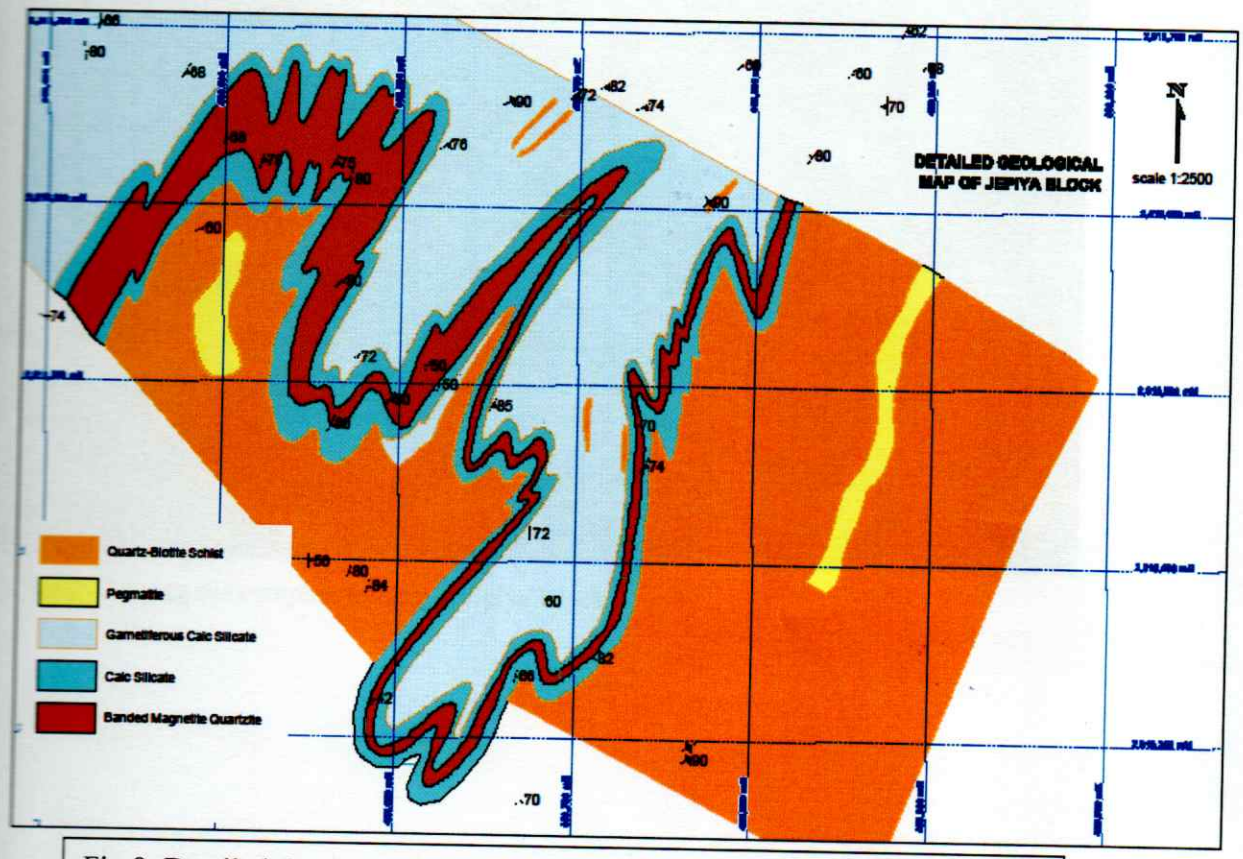


Fig.8: Detailed Geological Map of the Hinge area in Jipiya Block

The two BMQ bands come close to one another near the Jipiya village at the northern end of the RP area. It was observed that separation between the two BMQ units decrease to almost 100 meters or so near the Jipiya village (Figs. 6.1, 6.2). The eastern BMQ unit runs almost straight whereas an asymmetric Z-fold has affected the map pattern of the western unit near Jipiya. Smaller order tight disharmonic mesoscopic scale folds (PLATE – 1) are present within the BMQ at the hinge zone of the Z fold . Thick alluvium cover is present in the area to the north of the village, and therefore continuity

and disposition of these two bands further to the northeast could not be tested. Ground geophysical survey proved useful in testing the possibilities of continuity and thickness of these two units.

Fig9: Snap Showing the complex folding in Jipiya Block

Geophysical Survey (EM Survey)

A time domain EM survey was conducted in three blocks in Purmandal RP. The description of the survey is attched in Annexture I.

The results were studied separately for the three areas and accordingly drilling was planned.

Rajaspuriya-Gurla Block: The conductivity patterns show two main trends. One is seen on all the survey lines beneath the western loops of lines 1, 3, 5 and 7. It seems to be either a very conductive wedge of conductive overburden, or perhaps a thick sequence of conductive sedimentary rocks such as mudstones or graphitic shales. Its size and linear extent makes this a poor drill target.

The second trend which is also seen on all survey lines is located more or less in the middle of the lines, in between the two separate loops. It is modelled with a thin steeply dipping plate. As mentioned it is seen on all the lines and the long strike length suggests a formational type of conductor.

Kotri Block: The EM bodies indentified in Kotri block were found to be mainly formational contacts and hence no drilling is planned in this target.

Salempura Block: At least two conductors are detected by the survey. The first has a minimum strike length of 1000 metres as it is detected on all six 200 metre spaced survey lines. The conductance of this conductor is moderate with generally a dip of about 60 to 70 degrees to the grid east. A second conductor, parallel to the first is detected over lines 800, 1000 and 1200. It is not well resolved and may be due to a thickening of the first conductor. As it is not well resolved, it was given the same attitude as the first conductor. Drilling is planned to ascertain the identified target.

Test Drilling:

Pur Dariba Block: Results of previous drilling at Pur-Dariba-Suras were reviewed. It emerged that the three boreholes drilled during previous year to ascertain the MT anomalies intersected trace to minor amount of sulphide (chalcopyrite and pyrrhotite). Thus the MT anomalies are explained by presence of sulphides and further two more drillholes were drilled on MT anomalies. One borehole (DD11PML017) was drilled on further strike at 600N which intersected minor sulphide zones. The second borehole (DD11PML019) was drilled in western MT anomaly which gone negative.

SNO.	BHID	XCOLLAR	YCOLLAR	ZCOLLAR	DEPTH	AZIMUTH	DIP	REMARKS
1	DD11PML017	453201	2803082	467.6	1010	301	63	minor zones of cpy band intersected
2	DD11PML019	453616	2802797	467.6	700.2	300	73	no significant sulphides intersected; fracture zone intersected near the anomalous target
				TOTAL	1710			

Jigiya Block: On the basis of high ground magnetic values and corresponding high gravity, HZL drilled one hole (DD11PML018) of 519 meters on across the high mag and gravity anomaly at 250 mRL. The hole intersected multiple zones of massive magnetite. These intersections prove continuity of magnetite from surface to 250 meter below surface.

Further another seven boreholes were drilled that intersected thick zones of magnetite.

SNO.	BHID	XCOLLAR	YCOLLAR	ZCOLLAR	DEPTH	DIP	AZIMUTH	REMARKS
1	DD11PML018	459941	2810417	435.881	600.2	50	300	thick magnetite zones intersected
2	DD11PML020	460190	2810522	434.5	700.3	50	300	thick magnetite zones intersected
3	DD11PML022	459878	2810428	440	500.8	45	300	thick magnetite zones intersected
4	DD11PML024	459815	2810290	432.9	528.7	45	300	thick magnetite zones intersected
5	DD11PML026	460011	2810660	436	586.1	45	300	thick magnetite zones intersected
6	DD11PML027	458914	2810170	444	353	35	120	thick magnetite zones intersected
7	DD11PML029	459171	2810420	439.9	323	35	120	thick magnetite zones intersected
8	DD11PML031	459405	2810728	434.6	460.6	35	120	thick magnetite zones intersected
				TOTAL	4052			

Logging and Sampling of the boreholes are in progress.

Salempura Block: The two conductors detected by the EM survey was integrated with the ground magnetics to identify some targets for drilling. One borehole (DD11PML021) is planned and drilled to hit the identified target. The borehole intersected minor disseminations of sulphides.

SNO.	BHID	XCOLLAR	YCOLLAR	ZCOLLAR	DEPTH	AZIMUTH	DIP	REMARKS
1	DD11PML021	451242	2800289	435	549.9	300	50	minor disseminations of cpy and ga and thin BMQ bands
				TOTAL	549.9			

Ragaspuria-Gurla Block: On the basis of geological traverse and EM survey four boreholes were drilled in the area. The boreholes intersected wide zones of minor disseminations of chalcopyrite, galena and pyrhotite along with Magnetite and this encourages possibility of concealed deposit in the area for which detailed work is required. Logging and sampling of the four boreholes are in progress.

SNO.	BHID	XCOLLAR	YCOLLAR	ZCOLLAR	DEPTH	Azimuth	Dip	REMARKS
1	DD11PML023	447660	2795110	458.8	540.7	115	55	wide zones of minor disseminations of galena and cpy with thin bands of BMQ
2	DD11PML025	447579	2794888	469.3	501.05	115	55	wide zones of minor disseminations of galena and cpy with thin bands of BMQ
3	DD11PML028	447911	2795361	469.3	397.5	115	60	wide zones of minor disseminations of galena and cpy with thin bands of BMQ
4	DD11PML030	448085	2795732	469.3	424.35	115	50	wide zones of minor disseminations of galena and cpy with thin bands of BMQ
				TOTAL	1864			

(Fig.10: Location Map with the borehole locations is attached)

Ore body correlation and resource estimation of Jipiya Block:

Resource Estimation is done taking consideration of the litho-structural mapping of magnetite bearing unit (BMQ), validated by ground magnetic survey and gravity data and results of the drillhole DD11PML018.

The magnetite unit is extending for over 1.2km. However the estimates are done for a strike length of 400m upto a depth of 500 m. There are three prominent zones with true widths varying from 5 to 50 meters. Specific gravity factor of 3.8 g/cc is used to convert volume into tonnage.

The present estimates are 106 Mt, which are likely to enhance to 200Mt with the ongoing drilling. Presently logging and sampling are in progress and a final resource can be established after that receiving the analysis.

Preparation and application of ML, PL applications in identified blocks.

From the integrated geological, geochemical and geophysical surveys and from encouraging results the following applications have been applied.

1. Mining Lease – 2 MLs for Iron, lead, zinc, copper, gold and associated minerals –(1) Jipiya (no. 1032/2011, Area 7.99 Sq.kms, Submitted 11.11.2011) & (2)Pur-Dariba (no. 293/2011 Area 7.52 Sq.kms, submitted 04.08.2011).

2. Prospecting License – 2 PLs for Iron, lead, zinc, copper, gold and associated minerals – (1)Jipiya (No.1/2012, Area 1.05 Sq.kms, submitted 02.01.2012) & (2)Ragaspuria (2/2012, Area 8.07 Sq.kms, submitted 02.01.2012)

Person engaged for work:

Three full time Geologists, Two full time Geophysicists and four field assistants with driver were deployed. Helpers as and when required were hired locally.

Expenditure:

The total expenditure for the one year is ~Rs 370.19 lakhs.

ANNEXTURE I:

Introduction:

Time domain electromagnetic surveys have proven to be very efficient tool in mineral exploration for detection of hidden deposit characterized by higher conductivities, or conversely, lower resistivities, than the medium in which they are embedded. Time domain systems have superior depth penetration to the frequency domain systems, and are therefore the tool of choice in mineral exploration, particularly for the detection of good conductors' e.g. massive sulphides.

To explore the presence of massive sulphides in Pur Mandal RP, Fugro Nexterra carried out a Time Domain EM survey using SMARTEM system over Gurla, Kotri and Salampura targets .

A total of 24 lines were covered in all three Targets with Dual-loop TDEM survey using 25m*200m grid.

The lines were read twice, each time with a different loop. 600*400 m rectangular loops were used.

Survey Instrumentation:

SMARTem system consists of five major units:

1) Transmitter GGT-10 Zonge
   It sends controlled current into the wire coil laid on the ground with programmable durations and charges the ground and the conductive bodies at depth

2) Transmitter-Controller
   It controls the current wave forms, duty cycles powering ZT 30 for charging ground and synchronizes with the SMARTem 24 system

3) 3D3 Geonics Coils
   It is air-cored induction coils used for acquiring three component data and sending it to SMARTem 24 for recording.

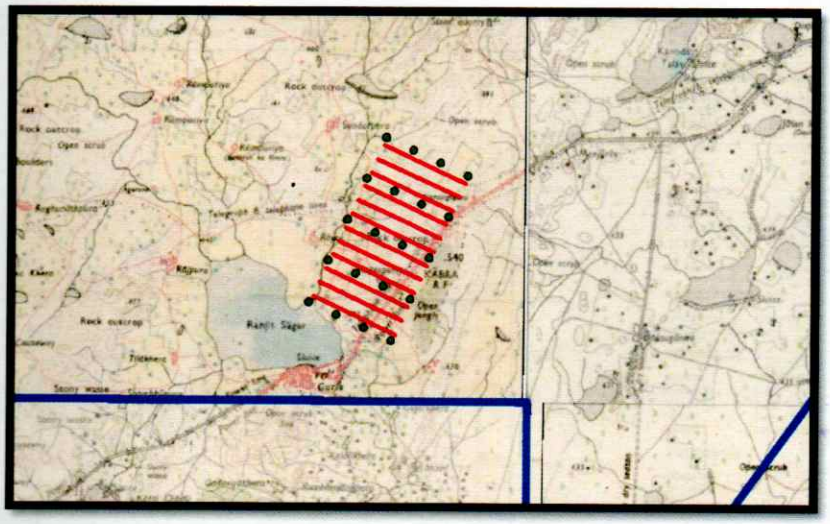
4) Receiver
   It is a 24 bit data recording system (input from 3D-3 LF coil) with a built-in tablet touch screen for displaying and controlling survey configuration and the processed data.

GGT-10, ZONGE

SMARTem24, EMIT

Survey Parameters:
Target 1: Gurla

S.No	Description	
1.	Line direction & length	NW-SE: Bearing 114° 36´ 53˝, 1200m
2.	Line interval	200m
3.	Receiver station interval	25m
4.	Transmitter Loop Size	600*400
5.	No. of Turns of transmitter Loop	1
6.	Transmitter Current	15A
7.	Transmitter Base Frequency	6.25 HZ
8.	Total Lines	12



Location Map: Gurla Target

Survey Results:

The survey data was processed and modelled using a software package called Maxwell from EMIT, Australia. Maxwell uses thin plates to model the measured responses. All the lines done in Gurla target area along with loop are shown in the Plate-1.

Overall, the conductivity patterns show two main trends. One is seen on all the survey lines beneath the western loops of lines 1, 3, 5 and 7. It seems to be either a very conductive wedge of conductive overburden, or perhaps a thick sequence of conductive sedimentary rocks such as mudstones or graphitic shales. Its size and linear extent makes this a poor drill target.

The second trend which is also seen on all survey lines is located more or less in the middle of the lines, in between the two separate loops. It is modelled with a thin steeply dipping plate. As mentioned it is seen on all the lines and the long strike length suggests a formational type of conductor.

The Modelled view is shown in Plate 2.

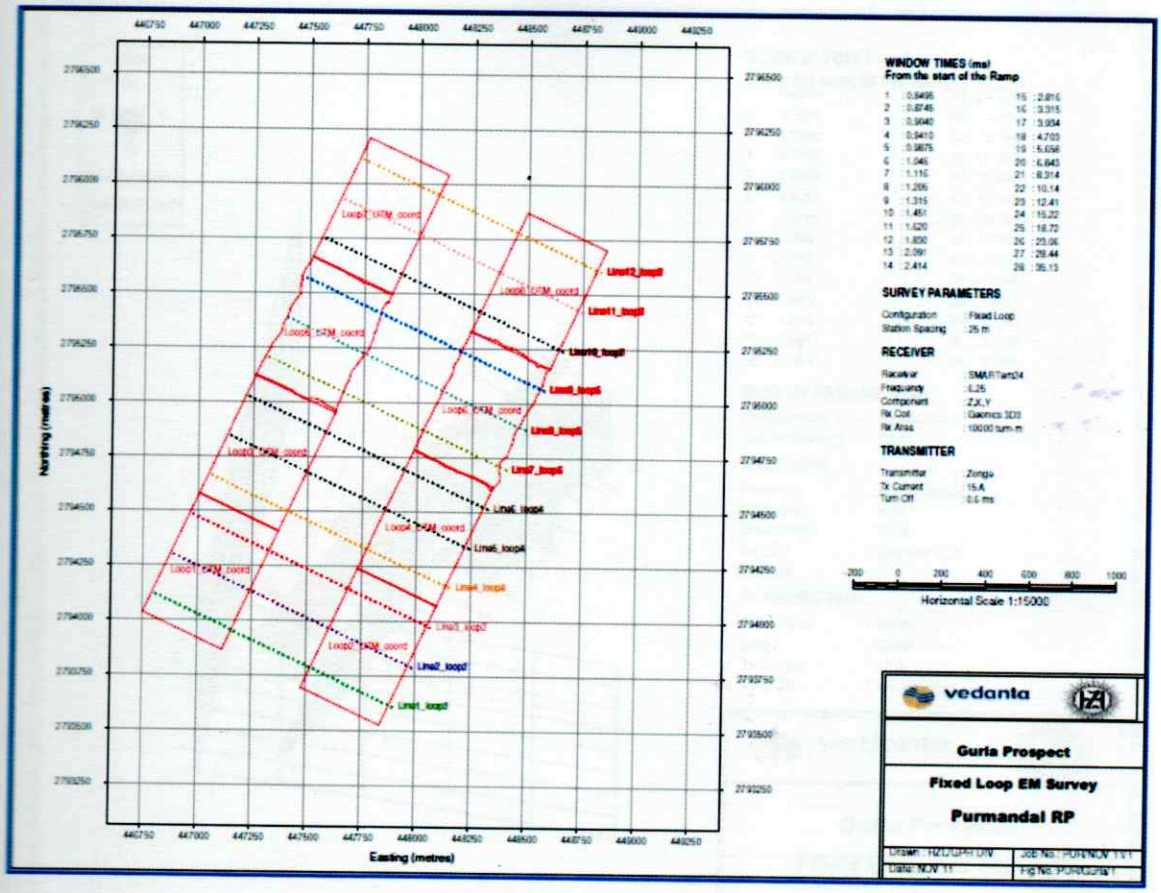


Plate 1: Plan View, Gurla TDEM

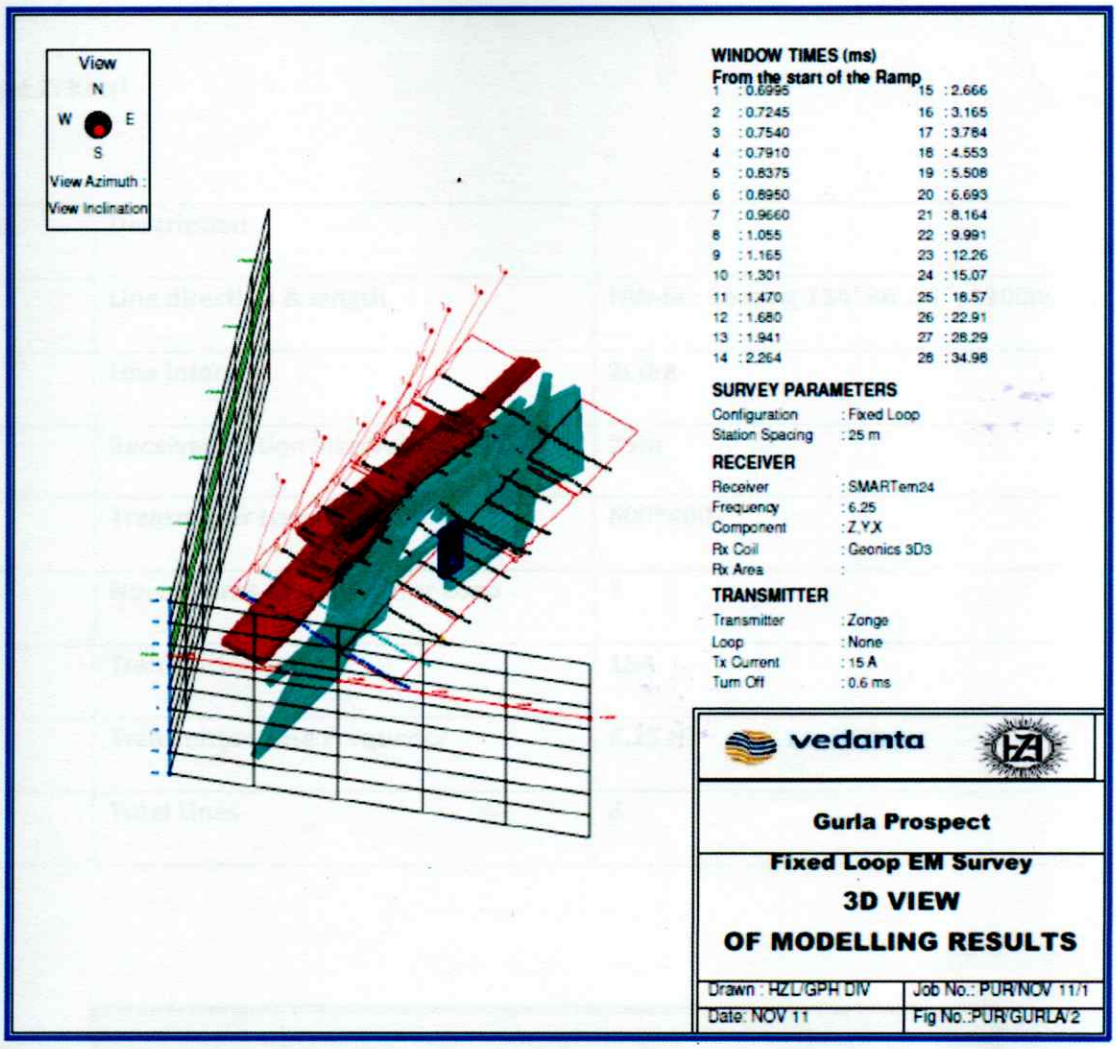
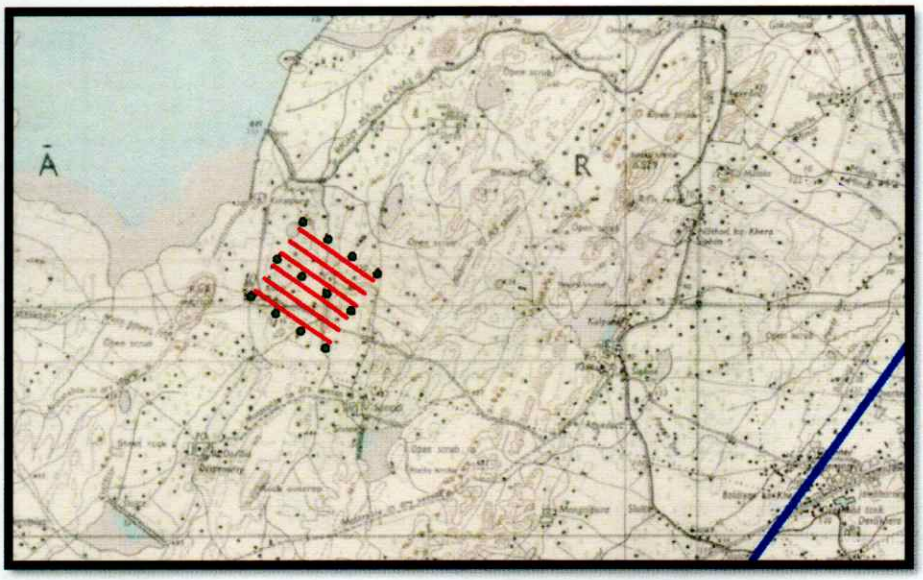


Plate 2: Modelled View, Gurla TDEM

Target 2: Kotri

S.No	Description	
1.	Line direction & length	NW-SE: Bearing 114° 36′ 53″, 1200m
2.	Line interval	200m
3.	Receiver station interval	25m
4.	Transmitter Loop Size	600*400
5.	No. of Turns of transmitter Loop	1
6.	Transmitter Current	15A
7.	Transmitter Base Frequency	6.25 HZ
8.	Total Lines	6



Location Map: Kotri Target

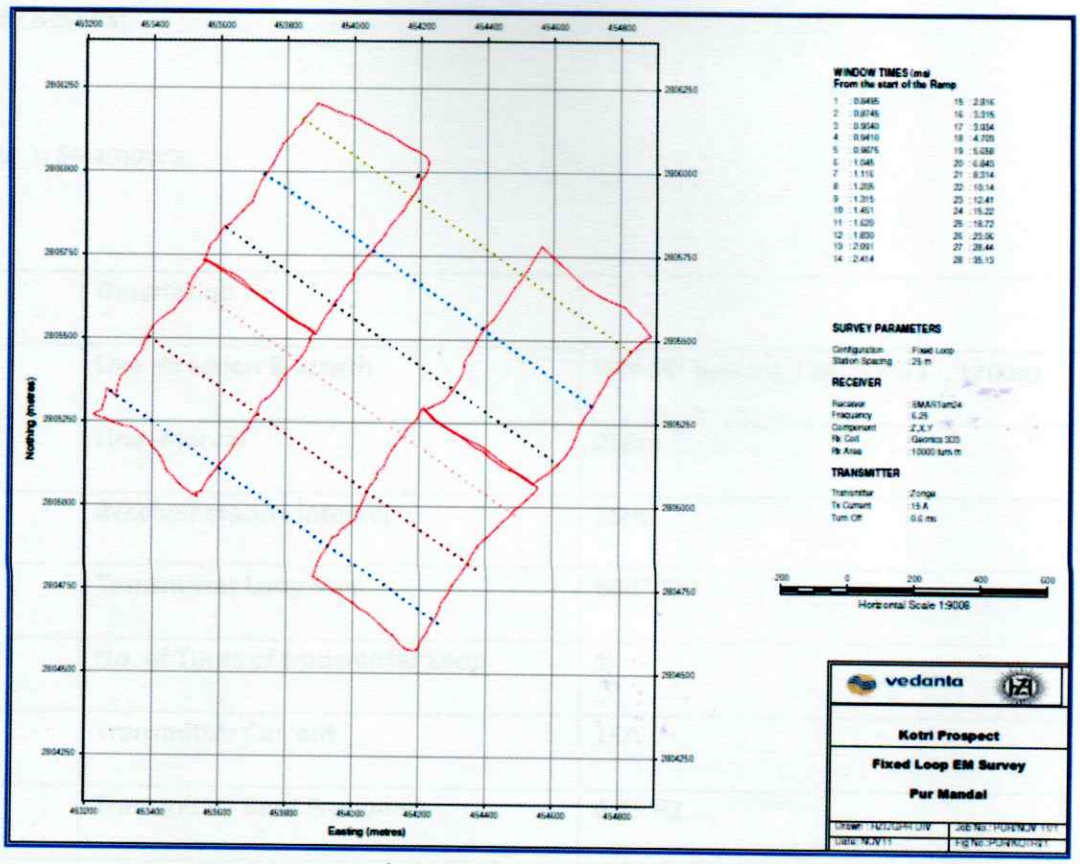


Plate 1: Plan View, Kotri TDEM

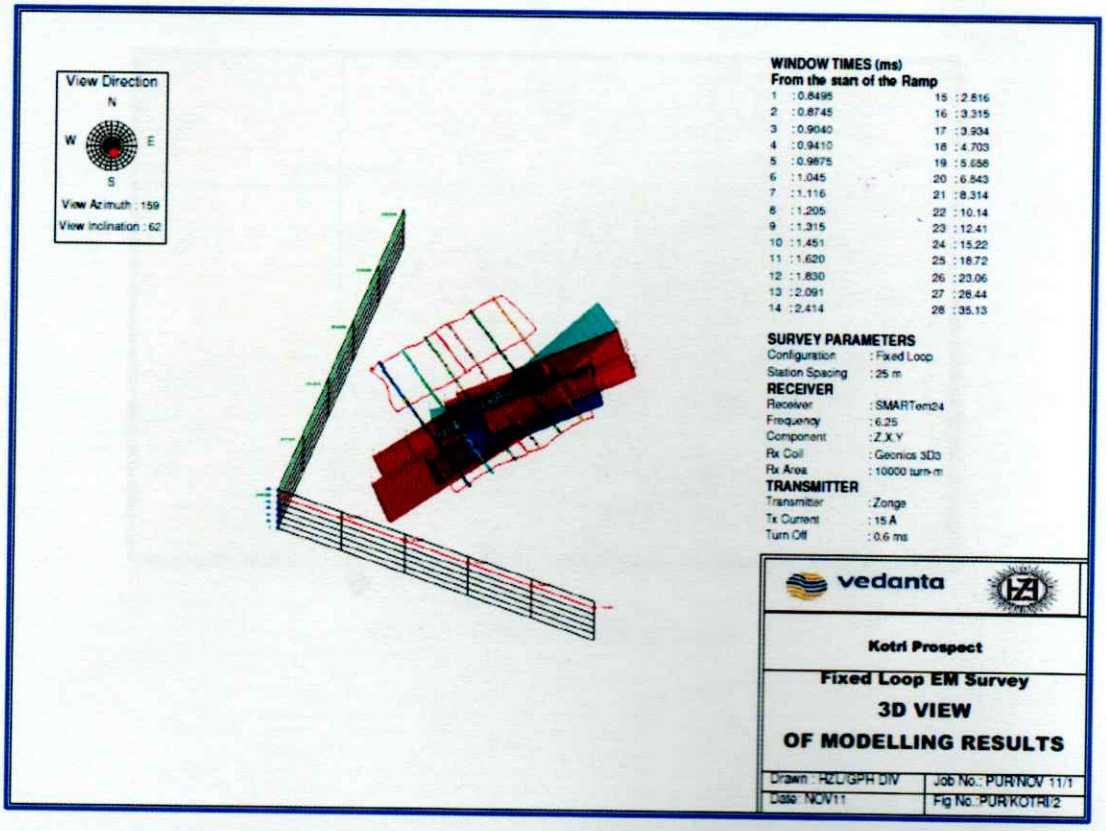
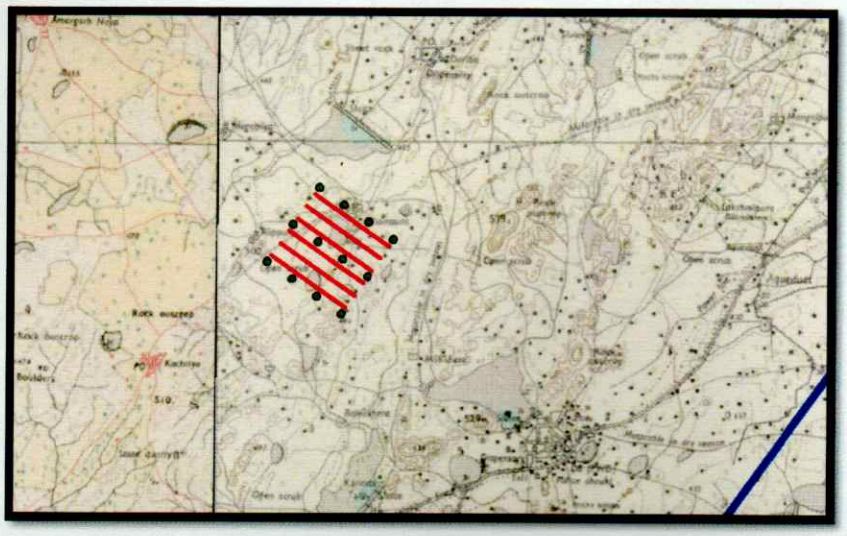


Plate 2: Model View, Kotri TDEM

Survey Results:

Target 3: Salampura

S.No	Description	
1.	Line direction & length	NW-SE: Bearing 114° 36′ 53″, 1200m
2.	Line interval	200m
3.	Receiver station interval	25m
4.	Transmitter Loop Size	600*400
5.	No. of Turns of transmitter Loop	1
6.	Transmitter Current	15A
7.	Transmitter Base Frequency	6.25 HZ
8.	Total Lines	6



Location Map: Salampura Target