### RHITWIK CHATTERJEE

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Technical assignments in geosciences in the field of mineral exploration (coal), hydrogeology, environment and sustainability with an organisation of repute.

# **CAREER PRECIS**

- 13+years of experience in Geohydrological exploration, Water Resource Management, Mineral exploration (COAL) & Coal Mining and team management.
- Adept at activities pertaining to geo-exploration for coal deposits, groundwater, exploration data management, drilling project management.
- Conversant with **geophysical well logging & surface geophysical techniques** pertinent to ground water & coal exploration.
- Proficiency in geological mapping, core drilling, geophysical logging preparation of geologic models & mine excavation plans for stratified deposits using state-of-the-art software like MINEX 6.1, SURV CAD & AUTO CAD.
- Conversant with **JORC**, **CMMI-CRIRSCO & UNFC** codes for reporting of Mineral resources & reserves & **MOC** guidelines for coal exploration.
- Well versant with relevant clauses of Mineral Concession Rules (1960), MMRD Act (2010), WB Ground Water Resources (MCR) Act 2005 and rules thereof of 2006 & many other legislations pertinent to Geoscientific services industry in India.
- An enterprising leader with proven abilities in leading teams towards the achievement of organisational goals and industry best practices like time bound cost effective geoscientific services.
- Commendable interpersonal, analytical and troubleshooting skills.

### SCHOLASTICS

- Presently pursuing PhD on part time basis from Department of Earth & Environmental Studies, National Institute Of Technology (NIT), Durgapur.
- M.Sc. Geology (1st class) with specialization in Sedimentology from University of Calcutta in the year 2005.
- B. Sc (Geology, Honours.) with First Class from University of Calcutta in the year 2003.
- M.Sc. thesis on TERRACE STRATIGRAPHY AND SEDIMENTOLOGY OF BALASON RIVER, SILLIGURI, NORTH BENGAL, under Dr .Jyotishankar Roy of CU and Dr. Tapan Chakraborty of ISI Kolkata.
- Post Graduate project on EASTERN KOLKATA WETLANDS.
- Summer School on natural sciences at INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE, Kolkata.

## CAREER CONTOUR

> <u>State Water Investigation Directorate (SWID)</u>, <u>under, Water Resources Investigation</u> & Development Department, Govt. of West Bengal(GoWB), India.

Brief profile of the organisation: State Water Investigation Directorate (SWID), is an independent Directorate under the Water Resources, Investigation & Development Department, Government of West Bengal, headed by the Director assisted by Engineering Wing, Geological Wing, Hydrological Wing, Meteorological Wing, Chemical Wing, Data Processing, Storage & Retrieval Wing, a Geophysical unit, to carry out investigation and quantitative & qualitative assessment of water resources in the State. It is responsible for assessment of groundwater resources at the state level, exploration and legislation

within the state (<2000 ha). It also shares expertise with various government developmental agencies in various groundwater and surface water projects for agriculture, industrial and drinking water development in the State including augmentation of water resources through implementation of various conservation/artificial recharge schemes.

### **POSITION**:

- 1. Geologist in-charge at Murshidabad district of West Bengal from October 2013 to Still
- 2. Geological Assistant from June 2007-May 08.

### **PORTFOLIOS:**

- 1. **Member Secretary** of District Level Ground Water Resources Development Authority (DLA), Murshidabad.
- 2. **Member Secretary** of District Level Expert Appraisal Committee (**DEAC**) for according Environmental Clearance to B2 category mining projects
- 3. **District Mining Officer (DMO)** responsible for vetting the Pre-feasibility Report and mining plans for mining of river bed sand and gravels.
- 4. State Public Information Officer (SPIO) for Sub-division IIIB, SWID.
- 5. **Technical Expert Member** of District Committee for Competitive Bidding (DCCB) of Minor Mineral Blocks and District Level Environmental Impact Assessment Authority (DEIAA)
- 6. **Principal Investigator (PI)** for World Bank Funded purpose driven study on Arsenic contamination in Murshidabad District, under National Hydrology Project, Phase III, project code; WB-1\_2016\_1.

### **TECHNICAL ROLES:**

Ground water exploration and development for creating Irrigational potential and delineation of safe and sustainable water resources for irrigation purpose, Installation and maintenance of Permanent Hydrograph stations (with DWLR) for real-time data generation on groundwater level and subsequent monitoring of their fluctuation, groundwater sampling following USGS, 1985, 1987 protocol, for monitoring of groundwater quality, Periodical Census of Minor Irrigation Schemes, Estimation of Ground water Resources, as per Ground Water Estimation Committee (GEC), 2015 norms jointly with Central Ground Water Board (CGWB), Government of India, Implementation of West Bengal Ground Water Resources (Management, control & regulation) Act2005 & rules thereof of 2006 in the Murshidabad district of West Bengal, Exploration of ground water prospects by drilling of exploratory tube wells & Observation wells for conducting pump tests & slug injection tests and determination of aquifer parameters by Aquifer performance tests, Implementation of pilot schemes for artificial recharge of ground water, Conducting study on hydro-geochemical pattern of arsenic pollution in the alluvial aquifers of Murshidabad district.

### ADMINISTRATIVE, TECHNICAL & MANAGERIAL ACCOMPLISHMENTS:

- 1. Issued 2000 licenses to minor irrigation schemes (CCA, 2000ha), both government and private as per the provisions of the West Bengal Ground Water Resources (Management, control & regulation) Act2005 & rules thereof of 2006.
- 2. Issued environmental clearances (EC) to about 500 B2 category mining projects (<5Ha) for minor minerals (sand and brick earth).
- 3. Resolved >400 legal matters, on for the department, pertaining to the matters of groundwater legislation, right and stewardship. Trying to come up with a publication regarding the endeavour, in a reputed journal dealing with groundwater policy and research.
- 4. Created additional 6000 hectares (in aggregate) of irrigational potential within Murshidabad district, through groundwater exploration & management activities.
- 5. Developed comprehensive aquifer map and groundwater quality maps (district scale) of Murshidabad district as a decision support tool for the administrative authorities.

- 6. More than 70 % progress achieved within 2 years, in the World Bank funded PDS project, titled Hydrochemical and Mineralogical evaluation of arsenic affected shallow (<50 m) Holocene aquifers of Murshidabad, West Bengal, and its effect on food chain (Project Code-WB-1 2016\_1).
- 7. Commendable success accomplished **in utilisation of government funds** for the bonafied sake of public interest through completion/implementation of government schemes/projects in a time bound and cost effective manner.

## > JSW BENGAL STEEL LIMITED

POSITION : ASSISTANT MANAGER (GEOLOGY) at Ichhapur Coal Exploration Project.

PERIORD : July 2010-September 2013.

### **RESPONSIBILITIES:**

- 1. Due diligence for compilation of background geological & geotechnical information regarding JSW coal blocks in Raniganj Coal field area, overall exploration planning & budgeting.
- 2. Supervision of exploration activities, viz. Mapping, planning & deployment of rigs, drilling, core logging, sampling, geological & geophysical correlation, analytical correction of litho logs & advice preparation for composites at Ichhapur coal block to complete 40,000metrs of drilling in stipulated period of 1 year.
- 3. Active Participation in the 3D HRSS survey conducted by CC5C (China) at Ichhapur coal block, successfully completed first time in India, in coal industry parlance. Played pivotal role through liasoning at the local village level& with local administration for successful completion of the job.
- 4. Interpretation of 3D HRSS data, in the form of time slice, depth slice & seismic sections in association with the Chinese experts.
- 5. Preparation of correlation schemes, graphic litho logs (detailed log & shot logs), sections, fence diagrams, seam structure, floor contour, seam folio plans (consisting of isochore, isoparting, isograde lines &ash & GCV contours), seam detail plans, sections, fence diagrams using AUTO CAD & bore hole data base to facilitate preparation resource model using GEMCOM MINEX 6.1 software. Played instrumental role in preparation in house interim Geological Report (GR) as per MOC guidelines.
- 6. Geohydrological exploration through geophysical (resistivity) interpretation, pump tests & falling head tests, drill stem tests & slug injection tests & interpretation of data obtained thereof, to predict the mine inflow (for shaft & gallery), so as to facilitate mine design for the upcoming JSW coal mines.
- 7. Due diligence for Limestone & Iron ore prospects at different parts of India.
- 8. **OVERSEAS:** Conducted 2000m drilling for coal prospect at a concession near, Zumbo district, Tete province Mozambique during Oct 2011 to Nov2011. Also conducted reconnaissance surveys of mineral properties at Indonesia and South Africa.

# > INTEGRATED COAL MINING LIMITED (A Subsidiary of CESC Ltd, flagship of

## RPG Group)

**POSITION** : ASSISTANT MANAGER (GEOLOGY) at Sharshatali Opencast Coal Mine.

**PERIORD** : October 16th, 2008-May 2010.

**FUNCTOINS**: In-pit Drilling, Sampling, geological mapping, preparation of Geologic models & monthly Excavation plans, Environmental monitoring and quality control.

## > DRILLTECH CONSULTANT PVT LTD.

POSITION : JUNIOR GEOLOGIST from June 2005 to January 2006 GEOLOGIST from February 2006

to May 2007

PERIORD : JUNE 2005-MAY 2007.

**FUNCTIONS** : Mapping, logging, sampling, laboratory analysis, and Preparation of Geological

reports following JORC codes etc.

## PROFFESSIONAL TRAINNING

- Successfully Completed training on SURV CADD (2002 & 2009 version) software & Geological Modelling & Mine Planning using Surv Cadd Software from Norwest Corporation Inc. USA at ICML mine site office.
- Successfully Completed training on Geological Modelling & Mine Planning using Gem Com Minex 5.3 software from Gemcom, Australia at ICML mine site office.
- Successfully completed short term training course on ROCK MECHANICS from IIT KHARAGPUR from JAN 11th-15th, 2012.
- Successfully completed short term training course on EIA: MINING PROJECTS from CENTRE FOR SCIENCE & ENVIRONMENT, NEW DELHI from FEB13<sup>th</sup>-17<sup>th</sup>, 2012.
- Successfully completed, World Bank funded International Training Workshop on Borehole Geophysics for Ground Water, held at IIT Kharagpur from November 11th to 21st, 2014, in collaboration with USGS.
- Successfully completed, World Bank funded International Training Workshop on Surface Geophysics for Ground Water, held at CSIR-NGRI from Dec 2nd to 12th, 2014, in collaboration with USGS.
- Successfully completed, Tier-II training course on "Sustainable Development and Management of Ground Water Resources" held at Berhampore, Murshidabad, W.B, India, from February 9th 2015 to February 15th 2015, conducted by Central Ground Water Board, Eastern Region under Ministry Of Water Resources, River Development & Ganga Rejuvenetation, Government of India.
- Successfully completed, training on Geophysical Investigations: Data Acquisition, Processing, Interpretation and Reporting, held at ICMARD Bidhannagar, Kolkata during July 13th -17th 2015 conducted by CSIR-NGRI, in collaboration with WBADMIP & WRIDD.
- Successfully completed, Distance Learning Course in Basic Hydrologic Sciences for the Asian Region, from October 16<sup>th</sup> 2017 to November 30<sup>th</sup> 2017, organised by National Water Academy, CWC in collaboration with World Meteorological Organization, MoWR, GOI, COMER, UCAR.

## SOFTWARE PROFICIENCY

Operating System : MS-DOS, WINDOWS95/98/2000, WINDOWS XP.

Geological Software : Georient, Rose-3, Map-info, Map source, Gemcom Minex 5.3, SURV CADD 2002,

CARLSON 2009, AUTO CADD 2002, 2007, AUSLOG, WELL CAD,

*Others* : MS word, Excel Power Point, and ADOBE PHOTOSHOP.

## PROFFESSIONAL MEMBERSHIP

1.	QUALITY CIRCLE FORUM OF INDIA	Life Member	Membership No: 04099042784
<i>2</i> .	INDIAN SCIENCE CONGRESS ASSOCIATION	Life Member	Membership No: L18171
3.	MINING, GEOLOGICAL &METALLURGICAL	Life Member	Membership No: L10106
	INSTITUTE OF INDIA, KOLKATA CHAPTER.		
4.	INDIAN ASSOCIATION OF HYDROLOGISTS	Life Member	Membership No: LM1815

## PERSONAL DOSSIER

Sex: MaleMarital Status: MarriedD.O.B: 27th June, 1981Nationality: IndianEthnicity: AsianBlood Group: B+

**Permanent Communication Address** 

: Rhitwik Chatterjee, C/O Smt. Runu Chatterjee. 23 Haltu School Road, Kolkata, West Bengal, India. Pin- 700 078 (Near Nimtala Kalibari).

**Present Communication Address** 

: Office of the Geologist, Geological Sub-division IIIB, State Water Investigation Directorate (SWID), Water Resources Investigation & Development Department (WRIDD), Government of West Bengal, 2<sup>nd</sup> floor, WRIDD Administrative building, Station Road, Swarnamoyee, Berhampur, Murshidabad, West Bengal, India. Pin: 742101, Ph.; 03482274931. (Beside SANCHARIKA).

## EXTRA CURRICULARS

- •Penned many articles in Bengali journals on theory of isostasy, geochemistry etc.
- •Participated in many seminars related to Basin Analysis, petroleum geology, GIS and its applications, forums and their applications In hydrocarbon exploration held at University of Calcutta, Jadavpur University and Indian Institute of chemical Biology.
- •Seminars presented on GENERAL GEODESY AND FIGURE OF THE EARTH, and FLOODPLAIN PROCESSES AND PRODUCTS, RIVER TERRACES AS EYEWITNESS OF NEOTECTONISM and NUMERICAL TAXONOMY.
- •Awarded NCC A certificate from no 4 Bengal Technical Air Squdn, Kolkata, West Bengal.
- •Lectures delivered on;
  - ➤ Ground water resources of Murshidabad district; Plenty or plenary; on March 5<sup>th</sup>,2019, at a public interaction programme organized by Central Ground Water Board, under Ministry of Water Resources, River Development and Ganga Rejuvenation, Govt.Of India.
  - ➤ Needs and Challenges of Green Energy; organized by Department of Geography, S.C.Bose Centenary College, Lalbagh, Murshidabad, West Bengal, India on March 23<sup>rd</sup> 2019.
  - Field Measured and Best Management Practises for Environmental Hazards in the context of Groundwater contamination; on May 24<sup>th</sup> 2018.at Department of Geography, S.C.Bose Centenary College, Lalbagh, Murshidabad, West Bengal, India.
  - ➤ Water Quality & Its implications in water resource management; General outline & a case study from Murshidabad district, West Bengal, at Administrative Training Institute, Kolkata, on December, 21<sup>st</sup>, 2018, organized by Irrigation and waterways Dte. GoWB, India.
  - Research Methodology; at National Institute of Technology, Durgapur, West Bengal, India, in the year 2017.

## AWARDS & ACHIEVEMENTS

- Secured 1st position in the merit list, of Public Service Commission, West Bengal, for selection of Geologists at State Water Investigation Directorate, under Water Resources Investigation & Development Department, Govt. Of West Bengal.
- Received the Top Student Award at the World Bank funded International Training Workshop on Surface Geophysics for Ground Water, held at CSIR-NGRI, in collaboration with USGS.
- Secured 9th rank in the all India M.Sc. entrance exam at IIT Bombay and topped the merit list in the M.Sc.-Tech entrance Exam at ISM Dhanbad in the year 2003.

### REFERENCE

1. Dr. KALYAN ADHIKARI	PROFFESSOR, EES, NIT, DURGAPUR	MOB: 09434788091
2. Dr. ABHIJIT MUKHERJEE	ASSOCIATE PROFFESSOR, IIT KHARAGPUR	MOB: 09007228876
3 Mr. DIPANKAR KHAN	AGM-GEOLOGY, ADITYA BIRLA GROUP.	MOB: 09111006004
4. Dr. P.C.CHANDRA	CONSULTANT, WORLD BANK	MOB: 08800840406
5. ER. SUBROTA HALDER	NODAL OFFICER, NATIONAL HYDROLOGY PRO	OJECT, MOB: 08443868830
	WEST BENGAL, GROUND WATER	
6 Dr. AVIJIT SAHA	DIRECTOR, I&WD Dte.	MOB: 09433509798
	GOVERNMENT OF WEST BENGAL	
7. Dr.BIBHAS BARMAN	ASSISTANT DIRECTOR, I&WD Dte.	MOB: 08240927287
	GOVERNMENT OF WEST BENGAL	
Date:		
Place:		
		RHITWIK CHATTERJEE