

BIODATA OF PRINCIPAL INVESTIGATOR

(PROJECT CRRC, DST)

- A. Name:** JATINDER KUMAR BHALLA,
B. Date of Birth: 18.07.1946 (76 +years).
C. Institution: 1. Accentus Exploration Pvt.Ltd.New Delhi
2. Global Hydrogeological Solutions, Faridabad
D. Whether belongs to SC/ST: No
E. Academic and Professional Career:

i. Academic Career:

<u>Degree</u>	<u>Year</u>	<u>Institute</u>
B,Sc (Hons), Geology	1966	Panjab University, Chandigarh
M.Sc(Hons.) geology	1967	Panjab University, Chandigarh

ii. Professional Career:

F. Award/Prize/Certificate won by investigator; Nil

G. Publications (Numbers only)

a) Publications in scientific journals-6 (SIX)

b) Unpublished but significant reports:

i. Geological Survey of India (GSI 1972-1998): Generated several unpublished reports onfield and laboratory data intensive geological investigations in GSI.

ii. GSI (1998-2005): Supervisory position: Participated as member and Member Secretary of committees for recommendations and executing organizational changes.

iii. Birla Technical Services, New Delhi (2007-2009), Earth Science Solutions, Faridabad (2009-2018): Accentus Exploration Pvt. Ltd. New Delhi (2009-till date): Carried out investigations providing geological inputs for minerals and oil exploration in different parts of India.

iv. Associated with Global Hydrogeological Solutions (2005-till date); A Non-Government Organization (NGO) and Present Applicant. Presently performing as Secretary GHS for the year 2022-23.

v. Participated in several duly completed projects funded by DST and others. Some notable ones are listed below in (H). Details/references can be provided, if advised to do so.

H. An illustrative LIST of Completed/Ongoing/Submitted projects with participation as Team Member/PI/Co-PI for Global Hydrogeological Solutions, as well as those done for other government and private organizations:

1. “Geophysical Survey for Bed rock Configuration and Aquifer Geometry in Delhi”. (DST)
2. Training Module of Watershed Management for Grassroot Level Organization. (CAPART)
3. “Establishing Relationship between seismicity and behavior of different Aquifer Systems in Delhi”. (DST)
4. “Developing eco-water literate society involving training and capacity building about management of groundwater reservoirs in district Bharatpur, Rajasthan”. (DST).
5. “Study of Hydrogeological Anomalies as pre-cursor to seismicity in Himachal Pradesh and Uttarakhand Regions of Himalayas”. (DST).
6. “Study on Identification of Deep Underground Aquifers and their suitability for Carbon dioxide Sequestration”. (DST)
7. “ Developing Eco-Water literate society through capacity building and training of social groups for management of Groundwater resources in Bharatpur district, Rajasthan”. (DST)
8. Water management plan for the proposed Mahadevpuram township, Manesar, Gurgaon, Haryana”. (PSG Group)
9. “Development of an integrated spatial database for sustainable groundwater management plan for Bharatpur District, Rajasthan.” (DST)

10. “Groundwater management, Artificial Recharge, and Identification of Deep Aquifers for sustainability of water resources in Water stressed Jhunjhunu District, Rajasthan”. (DST).
11. “Working document for resolution and management of village ponds”. (DST)
12. “Drainage for Optimization of water Conservation and Recharge Structures in Nimbahera Watershed, Chittorgarh, Rajasthan and Impact of climate change on coastal aquifers of Gujarat”. (DST)
13. “Development of LZH and study of of the slide zones and other problems thereof around Rawana village, Rajgarh Tehsil, Sirmour district, H.P.” (DST)
14. “Impact of Climate change on groundwater resources-Future Scenario”. (DST)
15. “Development of screening criteria for saline aquifers and other geological Sinks in ganga basin and adjoining Rajasthan and Vindhyan Basin for Carbon dioxide sequestration.” (DST)
16. “Groundwater system Analysis, Sustainable Development plan, and Pilot Project on InSitu Purification (ISP) Technology for water supply. Village Dighal, Jhajjar district, Haryana” (DST)
17. “Management Plan for sustainable development of Un-identified, heterogenous Aquifer System of Ghaziabad district”. (DST)
18. “Pre- feasibility Report on Restoration of Badkhal Lake”. (Manav Rachna University, Faridabad)
19. “Design of Railway alignment Castle Rock to Kulem-geological mapping , geophysical survey, and remote sensing study”. (AECOM)
20. “Analytical Work and Technical Assistance to Support Strategic basin planning for Ganga River Basin in India”. (AECOM)
21. “Study on Identification of deep underground aquifers and their suitability for CO₂ sequestration”. (DST)
22. “Eco Next Initiative for capacity building in districts of Chamba and Sirmour in Himachal Pradesh”. (DST)

Submitted Project Proposal:

“Strengthening and capacity building for S&T communication among stakeholders in three industrial hubs in Himachal Pradesh and Rajasthan for sustainability of natural resources and environment”,

Submitted to NCSTC Division, DST, Government of India.

Cost: INR 23,54 lakhs. Decision Awaited.

SALIENT ASSIGNMENTS AND ACTIVITIES IN ADDITION TO THOSE RELATED TO GLOBAL HYDROGEOLOGICAL SOLUTIONS.

1. **Accentus Exploration Pvt. Ltd., New Delhi (Director since 2012).** A registered individually owned private company providing consultancy on hydrocarbon exploration planning and resources estimation.
 - a. Provided technical assistance to *VBPR Norway-ONGC India* joint project involving deciphering of hydrocarbon potential of volcanic basins of western offshore areas of India by reinterpretation of seismic data.
 - b. Provided technical assistance to *Archimedes Consulting, Australia* for deciphering multiple geological horizons in Indian sedimentary basins through reprocessing and reinterpretation gravity-magnetic data.
 - c. Provided technical and scientific assistance in the joint *Spectrum Geo UK-DGH India* multi-client project in eastern offshore basins of Andaman Islands by reprocessing and reinterpretation of seismic data and assess their hydrocarbon potential.

2. **Earth Science Solutions (ESS) Faridabad- (Partner since 2008):** ESS is a registered private firm providing consultancy services in geological sciences and has on its panel, a large number of earth science experts, covering major lines of inquiry into earth science problems including mineral exploration programs, reserves estimation and prognosis, geological mapping, environmental issues.
 - a. Carried out updating of existing geo-scientific data of five major sedimentary basins of India namely, *Himalayan Foreland, Spiti-Zaskar, Karewa, Bastar, and*

- Chhatisgarh* for their hydrocarbon resource assessment and recommending further course of investigations as a contractual project with *Directorate General of Hydrocarbons, India*.
- b. Collaborated with *RMSI Private Limited, India* in the project for preparing *Strategic Assessment and Management Plan for Mining in Aravalli Range of Rajasthan* under contract with *Federation of Indian Mineral Industries (FIMI)*.
 - c. Provided geo-scientific assistance on contractual basis to *Aurum Ventures Private Limited, Mumbai* in studies pertaining to genesis and estimation of gold reserve in parts *Tanzania*.
 - d. Providing geo-scientific inputs in a large number of geotechnical projects undertaken by *Indian Geotechnical Services, New Delhi, Rodic Consultants Private limited, New Delhi, Pan India Consultants Private Limited, Gurugram*, and several other organizations and enterprises.
3. **Birla Technical Services (BTS), New Delhi – (Consultant: 2007-2009):** A CK Birla Group company providing various services in oil exploration and GIS technologies for crop forecasting.
- a. Provided technical and scientific assistance in the joint *Spectrum Geo UK-DGH India* multiclient project in western offshore basins of India through reprocessing and reinterpretation of seismic data and assess their hydrocarbon potential.
 - b. Associated with *BTS- RMSI-Ministry of Commerce, GOI* project on crop forecasting through study of satellite imagery and field confirmation.
4. **Geological Survey of India (GSI), Ministry of Mines, Government of India (1972-2005).** Retired (VR) Director (Geology) in July 2005.
- a. *In Supervisory position in GSI (1998-2005)*
 - i. Established and maintained petrology laboratories and upgrading them by procurement and installation of state-

of-the-art instruments like Thermal Ionization Mass Spectrometer (TIMS), Gas Source Mass Spectrometer, Electron Probe Micro Analyzer (EPMA), XRF Spectrometer, and others to work out geochemistry, petrogenesis of mineral deposits, and unraveling crustal evolution of large number of geological provinces of India. These laboratories at Kolkata and Faridabad have generated data comparable with international standards and published in reputed journals.

- ii. Established and maintained technical liaison with scientific institutions/exploration agencies/academic institutions/data users of GSI heading the Liaison Office in Delhi
- iii. Liaison with controlling and other ministries and statutory Government bodies for smooth interaction with GSI.
- iv. Personnel and Cadre Management of Scientific Group 'A' & 'B' cadres numbering around 2600 in GSI.

b. As a Geologist in GSI(1972-1998)

- i. Large scale mapping of sedimentary and metamorphic rocks of Delhi Supergroup and associated igneous rocks in Haryana (1990-1994).
- ii. Special Thematic Mapping, petrography, geochemistry, isotope studies of rock types in geological provinces of Ladakh Himalaya, Sikkim Himalaya, Arunachal Himalaya, Granulite province of Tamil Nadu, Bundelkhand Gneissic Complex, Gneisses of Goa and Karnataka, Shillong Plateau. Associated with establishing, maintenance, and operation of laboratories (1977-1990).
- iii. Systematic geological mapping in parts of Coimbatore, Madurai, and Nilgiri districts of Tamil Nadu and mineral exploration for magnesite.

5. Research Scholar, University Grants Commission, India:

Worked projects on isotopic dating of Western Himalayan granitic rocks as well as establishing isotopic dating laboratory in Department Physics, Panjab University, Chandigarh in collaboration with BARC before joining GSI in 1972.

Illustrative Scientific Reports Generated During Service in GSI.

(Note: Listed below are only a few reports representing the diverse nature of assignments handled and geological domains in which projects were carried out. The detailed list of publications and reports can be provided, if required).

1. Report on Petro-Mineralogical Studies in Tungsten Mineralisation Bhurkhola Area, District Gaylegphug, Bhutan (1988); GSI Report
2. Report on Investigation of magnesite occurrence near DoddakombaiHalla, Sathmangalam Taluk, Coimbatore District, Tamil Nadu (1979). GSI Report
3. Report on the Systematic Mapping of areas represented in Sheets of 58A/13 and 58A/14 in parts of Sathymangalam Taluk. (1979) GSI Report.
4. Report on Geochronology and Geochemistry of Granite plutons from East Khasi Hills, Meghalaya. (1989) GSI Report.
5. Report on Geochronology and Geochemistry of Granitoids of Bundekhand Gneissic Complex. (1986). GSI Report
6. Report on Study of Carbonatites and associated Intrusives in Delhi Supergroup of Rocks in Mahendergarh District, Haryana. (1994). GSI Report
7. Report on Geochronology and Geochemistry of Granitoids of Kameng and Subansiri Districts, Arunachal Pradesh. (1991). GSI Report.
8. Report on K-Ar Isotopic data on the Abor Volcanics, Arunachal Pradesh, NE Himalaya. (1992). GSI Report
9. Report on Geochronology and Geochemistry of Granites and Gneisses from Meghalaya Plateau. (1991) GSI Report

Illustrative Organizational Reports:

(Listed below are some of the Organizational Reports which were generated by esteemed groups of which undersigned was a Member/Member Secretary. Full details can be made available if required).

1. ' Meeting the Challenges'. Report by an Expert Committee set up by Ministry of Coal & Mines, Department of Mines, Government of India to formulate organizational structure and detailed action plan for implementation of revised Charter of GSI. (2002).
2. A Report on proposal to Introduce Flexible Complementing Scheme to Scientific and Technical Group A cadres in GSI. Justifications for declaring GSI as a scientific institution. (2002)
3. A Report on Proposed Modalities for implementation of Flexible Complementing Scheme in S&T, Group A streams of GSI. (2004)
4. A Report on Schedule of Charges for public in availing survey and laboratory facilities of GSI. (1985)
5. A Report on framing National Policy for Airborne Geophysical Surveys in India. (2007) Directorate General of Hydrocarbons (DGH).