



## Professional Resume for Bill A. Hancock

### *Technologies*

- Process development and engineering, mineral process and water-wastewater.
- Operations and process auditing.
- Mineral flotation and mineral separations development, optimization and trouble shooting.
- Water and wastewater treatment process troubleshooting and optimization.
- Chemicals and application and optimization.
- Solid/Liquid – Process optimization, coagulant and flocculant testing and development, trouble shooting and process development:
  - Filtering.
  - Thickening.
  - Clarification.
  - Filtration.
- Equipment efficiency and effectiveness analysis and optimization.
- Development of innovative and new technologies, technically and marketing.
- Dispersant and antiscalant systems.
- Waste treatment/metals removal.
- Process water investigations.

### *Marketing*

- Technical program development and management.
- Chemicals/reagents sourcing and manufacturing.
- Marketing plan development and implementation.
- Business planning.
- Sales planning.

### *Management*

- Technical services management.
- Operator and technical training: flotation, solids/liquid, marketing and sales.

## **Work Experience**

### **President, Founder and Owner**

Argo Consulting, LLC & Zeroday Enterprises, LLC

Argo: Technical and marketing consulting support and engineering services company to a wide range of industries and processes but with a particular focus on the mining industry: resolving process, water and waste water problems, leadership in capturing technical and commercial opportunities and development and implementation of marketing-sales strategies for the mining and basic industries.

Zeroday: Provides high quality, innovative and unique chemical and equipment products and solutions, particularly for medium and smaller applications. The company sells water treatment and wastewater solutions with unique products and treatment programs strongly supported by high levels of technical expertise and know how.

### **Vice President, Technical Services**

Great Western Chemical Company

Led up to 21 technical and legal professionals in Technical Marketing and Technical Center departments in developing and supporting specialty and technically based commodity chemical business for the Mining, Oil and Gas, Semiconductor, Printed Circuit Board, Metal Finishing, Food, Forest Products business units; focus on R&D, technical support, technical marketing, product/program development and manufacturing for process chemistries, cleaning and sanitation and water treatment programs, waste water and clarification products and programs, primarily with specialty chemical and private label programs; developed and instituted project management and financial analytical tools for managing technical projects and programs in alignment with quantitative corporate objectives; drove increased laboratory efficiencies/commercial effectiveness through innovative computer technologies, outsourcing non-core work, strategic investment in analytical capabilities and implementation of project financial and strategic justification protocols.

### **Technical Marketing Manager**

Great Western Chemical Company

Developed and implemented private label chemical programs: GW PREVENT™ (mining antiscalant), GW POLYCLEAR™ (flocculants and coagulants), GW REAGENT (mining flotation reagents), GW DustDown™ (polymeric dust control products and program) and GW DRILLFLOC™ (oil drilling flocculant), which included product sourcing/manufacturing, marketing material development, personnel training, industry support and commercialization involvement; developed and heavily involved in the successful implementation of a comprehensive global marketing strategy for the Mining Business; implemented soil management flocculant programs for the agriculture and erosion control industries; introduced the SOILPAM™ program and lead business development efforts.

### **Senior Metallurgist & Account Manager.**

Cytec Industries, Inc.

Senior level specialty chemical technical mining and industrial chemical sales representative requiring excellent technical skills and process knowledge and capabilities – flocculants, flotation reagents, surfactants, and process water treatment chemicals; industry coverage included metallic and nonmetallic

mining, food production, municipal treatment, and various other industries; developed a distributor and private label reseller program for the Mining Business and then established and managed a strong supply chain network.

**Research Coordinator, Operating Engineer & Metallurgical Engineer.**  
Cleveland Cliffs Iron Company

Supervisory/managerial positions in operations and applications R&D for iron ore and uranium divisions – project development, process optimization, reagent development and evaluations and operating problem study and resolution; involvement in a plethora of production optimization and cost reduction projects in iron ore and uranium, particularly related to study and resolution of highly complex, very high profile technical process and product quality problems related to clay and phosphorous contamination problems and metallurgical leadership on a uranium solution mining project.

**Adjunct Instructor, Marketing and Management Department**  
Northern Michigan University

Taught university level management courses.

**Education & Certifications**

- Mineral Engineering, B.S.  
University of Minnesota
- Masters of Business Administration  
Northern Michigan University
- Registered Professional Engineer (State of WI, #23639-6)
- Registered Member (securities registration, SME)
- Qualified Professional (securities registration, MMSA)

**Primary Awards & Recognitions**

- Society of Mining Engineers (SME) Distinguished Member, 2000.  
(Recognition for distinguished industry technical and SME contributions)
- Mill Man of Distinction, 2003.  
(SME Mineral Processing and Extractive Metallurgy Division recognition)
- SME Presidential Citation, two times:
  - Dramatically reorganizing, leading the Government, Education and Mining program, 1996.
  - Development and implementation of SME Tech Online course program, 2010.
- Great Western Chemical Presidential Award.  
(Significant leadership leading company into high value add market niches)
- SME Environmental Division Best Paper Award for the paper “Mitigating the Impact of Synthetic Drilling Mud on Hecla Limited’s Lucky Friday Mine Water Treatment Plant” presented at the 2011 Denver Annual SME Meeting.

## **Professional Contributions**

- Patents:
  - Patent No. 5,261,539, “Flotation Process for Purifying Calcite”.
  - Patent No. 5,360,600, “Treatment of Mineral and Alkali Carbonate Slurries” (using newly developed flocculant chemistries).
- Various conference papers and publications, including:
  - “Uranium In Situ Leaching: Its Advantages, Practice, Problems and Computer Simulation”, presented at the *1977 AIME-SME Annual Meeting, Atlanta*.
  - "Progress in Developing a Flotation Phosphorous Reduction Process at the Tilden Iron Ore Mine" , *1988 IMPC Conference, Stockholm*.
  - “Influence of Debt, Capital Intensity and Company Size on Mining and Processing Industry Profitability Levels”, paper presented at the *1989 Midwest Business Administration Association in Finance and Insurance*.
  - “Potash Flotation and Process Optimization at Great Salt Lake Minerals”, presented at the *1993 Flotation Plants: Are They Optimized? Symposium*
  - ”Technical and Technological Research Needs of the Mineral Industry – Perspective from the Suppliers of Chemical Products”, *1999 SME Research Forum Panel Discussion, Denver*.
  - “A New Industrial Mineral Sand Mine Near Coos Bay, Oregon”, *Mining Engineering*, October 2010, pp 29-39.
  - “Updating the Lucky Friday Mill – Experiences in Revamping a Historic Milling Operation”, presented at the *2011 CMP Conference Ottawa, January 2011*.
  - “Mitigating the Impact of Synthetic Drilling Mud on Hecla Limited’s Lucky Friday Mine Water Treatment Plant”, *2011 SME Denver Annual Meeting*.
  - “LTM Probes: A Significant Advancement in Flotation Bank and Sump Pulp Level Control”, *2013 SME Denver Annual Meeting*.

## **Society of Mining Engineers Contributions**

- National Board of Directors (three times).
- SME Foundation Board Trustee & member Executive Committee.
- President of OneMine.org & Board Trustee.
- Mineral and Metallurgical Processing Division (MPD) Chair.
- General Program Chair, 1999 SME Denver Annual Meeting.
- SME Products and Structure, Governance Strategic Committees, Chairs.
- Editorial Board, “Mineral and Metallurgical Processing Journal”.

- Symposia Organizing Committees:
  - “Reagents for Better Metallurgy”
  - Copper ‘99/Cobre ‘99 (and Proceedings Editor)
  - “Political Metallurgy”
  - 2007 Precious Metals Processing: Advances in Primary and Secondary Processing
- Government, Education and Mining (GEM) National Chair.
- Chair of SME Tech Online.

**Australian Institute of Mining and Metallurgy (AusIMM)**

Elected AusIMM Fellow.

**Mining and Metallurgical Society of America**

Invited and elected to this selective mining society.

**Canadian Institute of Mining (CIM)**

Member.

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