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SUMMARY

Proven technical leadership and project management experience using modern analytical laboratory instrumentation in support of chemical, environmental, geological, oil & gas, pharmaceutical, polymer, and semiconductor projects. Global experience training international colleagues and working hands-on to validate analytical methods. Outstanding team building, proactive problem solving, and presentation skills.

TECHNICAL ACCOMPLISHMENTS

- ◆ Provided technical leadership to add laboratory capabilities for support of cementing and drilling fluids in new regional laboratory.
- ◆ Led in hands-on technical introduction of new polymer-based aqueous drilling fluids, creating new business opportunities for Baroid Drilling Fluids / Halliburton Energy Services.
- ◆ Managed modern analytical service laboratory (ICP, ICP-MS, AA, UV/Vis, GC, GC-MS, FTIR, HPLC, NMR, XRD) with annual budget of \$1,250,000, including 12 chemists and technicians.
- ◆ Set up two new labs and trained personnel on multiple visits to Argentinean production sites.
- ◆ Initiated and implemented statistical process control (SPC) techniques to validate analytical methodologies and production quality control measurements for global labs.
- ◆ Installed new Agilent-4500 ICP-MS instrument and was first to earn SC DHEC approval for use in environmental analyses. Trained technicians to operate and maintain the instrument.
- ◆ Developed ultra-trace analytical methods in support of large R&D effort to develop a new low-cost route to commercial production of semiconductor grade Si.
- ◆ Designed and built laser excited photoluminescence spectrometer to measure sub-part-per-billion impurities in semiconductor grade GaAs – outperformed later commercial units.
- ◆ Directed β -test program for the commercial introduction of Perkin-Elmer Plasma II ICP atomic emission spectrometer. Worked closely with their design and production teams to optimize the instrument's performance in an actual R&D laboratory setting.
- ◆ Coordinated analytical effort for \$3 million research project that pioneered the use of a modified industrial product for pharmaceutical use. All work was done under GMP/GLP regulations.

BUSINESS ACCOMPLISHMENTS

- ◆ Identified new business opportunities, resulting in restructuring and consolidation of business and marketing efforts. Member of three man interdisciplinary team (chemist, chemical engineer, and marketing manager) that analyzed critical success factors for expanding plastics additives business.
- ◆ Managed migration and enhancement of computerized IDEA database, which was used as focal point for submitting new project ideas. Set standards for user-interface and data structures which were adopted by subsequent projects.
- ◆ Defined Idea Development Process and co-authored seventy-page manual to guide projects from conception to commercialization. Applied Stage/Gate principles to our business needs.
- ◆ Managed the design, programming and installation of a computerized client/server database application to provide enterprise-wide access to R&D project information. Resulted in efficiency improvements of \$250,000 annually.

ANALYTICAL TECHNIQUES and SAMPLE MATRICES

Cementing Support: iPRO HPHT consistometer, iPRO UCA, fluid loss, and other special and standard tests on cement slurries.

Drilling Fluids Support: Fann 75 (HPHT viscosity), Fann 90 (dynamic filtration), Fann 50 (viscosity under programmed temperature control), and other special and standard test on water based and oil based drilling fluids.

Atomic Spectroscopy Expertise: AA, DC-Arc, DCP, ICP, ICP-MS and laser fluorescence.

Additional Techniques: DSC/TGA, FTIR, GC, GC-MS, HPLC, IC, microscopy, NMR, titrations, total carbon, UV/Vis, wet chemical, XRD & XRF.

Projects & Sample Matrices: antioxidants, battery materials, brine and water samples, ceramics, flame retardants, hydrocarbon and siloxane based fluids and oils, lithium chemistry, metallurgical samples, pharmaceuticals, plant and animal tissues, plastics, polymers, rare-earth catalysts, semiconductor grade Si and GaAs, surfactants, zeolites and many other matrices.

Sample Preparation Techniques: Acid Digestion, Dry Ashing, FIA, High Temperature Fusion, High Pressure Asher, Microwave Digestion, Parr Bomb, Plasma Asher.

Procedures and Protocols: ASTM, EPA, FDA, GLP, GMP, ISO, NDA, SPC, and USP.

CAREER HISTORY

Baroid Drilling / Halliburton – Sr. Scientist / Chemist – Denver & Brighton, CO	2001 – 2004
Duke Energy – Manager of Trace Metals Lab, Duke Power – Huntersville, NC	1998 – 2001
FMC Lithium Division – Research Assoc. / Group Leader – Bessemer City, NC	1996 – 1998
General Engineering Labs – Consulting Chemist – Charleston, SC	1995 – 1996
G R E E N, Inc. – President, Consultant – Baton Rouge, LA	1994 – 1995
Ethyl Corp. / Albemarle – Steady progression of titles – Baton Rouge, LA	1980 – 1994
Sr. R&D Specialist / New Project Development Team Leader	1990 – 1994
Sr. Analytical Chemist / Atomic Spectroscopy Group Leader	1985 – 1990
Analytical Chemist / Atomic Spectroscopy Group Leader	1980 – 1985

EDUCATION

Ph.D., Analytical Chemistry, (GPA 3.86/4.0), Iowa State University, Ames, IA
 Dissertation: "Laser Excited Atomic Fluorescence as a Tool for Chemical Analysis"
 Professor: Edward S. Yeung, Ph.D.

B.S., Chemistry, *Magna Cum Laude*, (GPA 3.62/4.0) Harding College, Searcy, AR

A.S., Science, *Magna Cum Laude*, (GPA 3.76/4.0) York College, York, NE

--- Professional Addendum ---

COMPANY SPONSORED MANAGEMENT TRAINING

- Quality Improvement Process (Deming)
- Innovation in Research
- Marketing Basics & Tactics
- Marketing Research Techniques
- Industrial Marketing Research
- Advanced Leadership Development
- New Opportunity Analysis
- Technical, Professional & Business Writing
- T.I.P.S. -- Training in Interpersonal Skills
- Time Management Systems

OFF-SITE SPECIALIZED TRAINING

- ◆ Cementing for Engineers 2-week course, Halliburton / Duncan, OK
- ◆ Baroid's Drilling Fluids Technology 11-week course & labs, Halliburton / Houston
- ◆ X-Ray Spectrometry ACS sponsored course
- ◆ Intro. to Polymer Science & Technology SPE sponsored course
- ◆ Basic Principles of Pulp and Paper Dr. Alfred H. Nissan / Westvaco Corp.
- ◆ Project Management Fred Pryor Seminar
- ◆ Foundations of Relational Database Theory Ken Hunter, Borland Conference
- ◆ Client/Server Overview Michael Irwin, Borland Conference
- ◆ Introductory and Advanced C Programming LSU Continuing Education, two courses

COMPUTER EXPERIENCE

Operating Systems: Windows XP, Windows 9x, VAX/VMS, Unix/Xenix/Idris

Internet applications: HTML web authoring, Macromedia DreamWeaver Studio MX

Interface & Network Protocols: Novel, Pathworks/DECnet/Ethernet, RS-232, IEEE-488

Databases: PC -- Access, Paradox (DOS & Windows), PowerBuilder

Languages: C / C++, BASIC, Visual BASIC, FORTRAN

PC Software: MS Office XP (Word, Excel, Access, PowerPoint), StatGraphics

PROFESSIONAL MEMBERSHIPS

- ◆ SPE – Society of Petroleum Engineers
- ◆ ACS – American Chemical Society
- ◆ ALMA – Analytical Laboratory Managers Association
- ◆ SAS – Society for Applied Spectroscopy, former member
- ◆ SPE – Society of Plastics Engineers, former member
- ◆ TAPPI – Technical Association of the Pulp and Paper Industry, former member

PRESENTATIONS and PUBLICATIONS

"**Functional Design of a Project Management System,**" invited paper, 18th Annual Computing Roundtable, Chemical Process Directors Group Meeting, 1992, New Orleans, LA

"**Precision Improvements in the Analysis of Major Components by Internal Standard Based ICP Atomic Emission Spectroscopy,**" Winter Conference on Plasma Spectrochemistry, 1986, Kailua-Kona, HI

"**Atomic Fluorescence Spectrometry with a Wavelength-Modulated Continuous Wave Dye Laser,**" D. A. Goff, E. S. Yeung, Anal. Chem., 50, 625 (1978)